

UNIVERSITÉ DU QUÉBEC À RIMOUSKI

**ANALYSE DES FORMES DE TRAVAIL ATYPIQUE DANS
LES ÉQUIPES DE PROJET EN CHINE
LE LIEN ENTRE LES FORMES DE TRAVAIL ATYPIQUE, LA
MOTIVATION ET LA PERFORMANCE**

Mémoire présenté

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RÉSUMÉ

Les formes de travail atypique sont de plus en plus adoptées dans les entreprises et les organisations de nombreux pays. Ce mémoire se concentre sur les formes de travail atypique dans les équipes de projet de haute technologie. Plus précisément, il s'interroge sur les relations entre les formes de travail atypique, la motivation et la performance des équipes de projet.

Plus précisément, en se basant sur la littérature, y compris les définitions des concepts importants, les théories, les principaux résultats des études passées liées au thème, ce mémoire étudie la relation entre les formes de travail atypique et la performance des travailleurs membres d'équipes de projet high-tech en Chine avec une méthodologie quantitative. En effet, la méthode d'enquête par questionnaire a été adoptée pour effectuer la recherche. L'analyse descriptive, ainsi que l'analyse de corrélation est appliquée aux données recueillies.

Avec la méthodologie quantitative, il est constaté que les employés de différentes équipes de projet de haute technologie et de différentes régions en Chine ont des perceptions diversifiées quant à leur motivation et leur performance. Cependant, la motivation au sein de l'échantillon semble plutôt élevée, la majorité des participants convenant qu'ils sont effectivement motivés à travailler dur et à se développer afin d'améliorer leur performance. En outre, les participants partagent le point de vue que leurs performances sont relativement bonnes. Les résultats des analyses de corrélation démontrent que les formes de travail atypique sont positivement liées à la motivation, que la relation entre la motivation et la performance est positive. Finalement, la performance est positivement liée à chacun des arrangements de travail formel et négativement au travail informel, mais les relations ne sont pas significatives.

Mots clés : Équipe de projet de haute technologie, modalités de travail atypiques, motivation, performance.

ABSTRACT

Atypical work arrangement is adopted in more and more enterprises and organizations in more and more regions and countries. This thesis focuses on the atypical work arrangement in high-tech project teams in China, trying to investigate the relationships between atypical work arrangement, motivation and the performance of the sample teams.

Based on the literature review including the definitions of important concepts, relevant theories, main findings in the past and other evidences related to the topic, the thesis studied the relationship between atypical work arrangement and workers performance in high-tech project team with quantitative methodology. The method of questionnaire survey is adopted to carry out the research. Descriptive analysis, as well as the correlation analysis is applied to further analyze the data collected.

With the quantitative methodology, it is found that employees from different high-tech project teams and different regions have diversified feelings on their teams' motivation and self performance, but in the sample high-tech project teams, the motivation condition is relatively good and at least more participants agree that they are effectively motivated to work hard and develop themselves to work better. In addition, participants share the view to a larger extent that their performances are relatively good. The results of the analyses of correlation demonstrate that the forms of atypical work are positively connected to the motivation, that the relation between the motivation and the performance is positive. The relationship between motivation and performance is positive and motivation has a remarkable influence on performance. Finally, the performance is positively connected to each of the arrangements of formal work and negatively to the informal work, but the relations are not significant.

Keywords: high-tech project team, atypical work arrangement, motivation, performance

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CHAPITRE 1

INTRODUCTION AU MÉMOIRE

1.1 INTRODUCTION

Le monde des affaires est dans un contexte de concurrence accrue. La gestion des coûts devient donc plus en plus importante pour les entreprises, tandis que les ressources humaines sont généralement perçues comme un coût très élevé pour ces entreprises. Dans ce cas, les entreprises sont susceptibles de faire appel à différentes formes d'emploi, telles que les formes de travail atypique, leur permettant de réduire les coûts relatifs à la main-d'œuvre. En outre, le développement de la technologie facilite la communication. Cette avancée technologique favorise l'accès à ces formes d'emploi dites atypiques. Toutefois, si les régimes de travail atypique sont perçus par les employeurs comme positifs au plan des coûts, il n'est pas certain qu'ils soient favorables à de bonnes performances. En conséquence, ce mémoire se concentre sur les modalités de travail atypiques chez les travailleurs membres d'équipes de projet de haute technologie, en s'attardant à des questions pertinentes comme la performance et la motivation dans le cadre de ce type d'arrangement.

1.2 ORGANISATION DU MÉMOIRE

Le chapitre 1 introduit le problème à l'étude dans ce mémoire. Le chapitre 2 présente la revue de la littérature, y compris les définitions des concepts importants, tels que l'emploi atypique, les équipes projet, la performance et la motivation, ainsi que les théories et les principaux résultats d'études sur ces thèmes. Cette partie constitue le fondement théorique pour le mémoire.

Le chapitre 3 présente la méthodologie adoptée pour effectuer la recherche. Les variables clés sont décrites; les questions de recherche et les objectifs sont énoncés; la stratégie de recherche est détaillée et les méthodes de collecte des données et d'analyse sont présentées dans ce chapitre.

Au chapitre 4, une synthèse des données recueillies et les résultats des analyses statistiques descriptives et des corrélations sont présentés. Les données y sont également interprétées.

Dans le chapitre 5, les conclusions finales clés, ainsi que l'évaluation des objectifs de recherche sont abordées. Les apports et les limites de la recherche y sont également présentées.

CHAPTER 2

LITERATURE REVIEW

2.1 PROJECT TEAM

As indicated, this section will introduce issues on the concept of project team with the help of representative literatures. It contains different understandings of project team and concluded characteristics of a project team.

2.1.1 WHAT IS A PROJECT TEAM?

From different perspectives, there are different kinds of definitions of project team. From the viewpoint of modern project management, a project team refers to a central management group of a project that is gathered by a group of full-time or part-time members, and these people share the responsibility and goal of the project, and report to the project manager (Scott-Young and Samson, 2008).

Concerning the process of project management, a project team involves full-time and part-time personnel that are assigned to work for deliverable outcomes and goals of the project (Lewis, 2006). To be specific, they are responsible for completing tasks in the project; if needed, they have to make more detailed plans for the assigned tasks; moreover, they need to finish the assigned task within budget, time limit and quality standard; they need to report to the project manager of the problems, any changes, and the concerns related to project risks and quality; and the team communicate the project status actively and manage expected events actively (Maruping, Zhang and Venkatesh, 2009). Further, one or more functional departments or organizations can form a project team. An inter-departmental team is formed by members from multiple departments or organizations, involving even more complicated management. Besides, in a broad sense, a project team

also involves stakeholders of the project, such as project owner, project sponsor, and customers.

2.1.2 CHARACTERISTICS OF PROJECT TEAM

As a specific type of team, project team has its particular characteristics, some of which are like common teams while some of which are unique.

First, a project team has specific goal(s) (Liu and Farris, 2010). The mission of a project team is to complete a specific task, realize the set goals of the project and satisfy the needs of the customers. Furthermore, since the needs and wants of the project stakeholders are multifarious, the goals for the project team will also be diversified.

Second, a project team is a temporary organization (Liu and Farris, 2010; Maruping et al., 2009). Unlike other teams, a project team has a definite life cycle, determined by the duration of the project. Specifically, when the project is initiated, the project team is then built; when the project is ended, then the project team is dismissed.

Third, project manager is the leader of a project team (Liu and Farris, 2010). As a independent group or organization, project manager assigned to the project team is the absolute leader, directing and monitoring the processes of the team members working toward the project goals.

Fourth, a project team puts an even more great emphasis on the spirit of cooperation (Maruping et al., 2009). As indicated, a project team is a temporary organization formed by staff from different functional departments, which means there is limited time and conditions for them to get familiar with each other. In this situation, focusing on the spirit of cooperation is particularly important for the project team.

Fifth, it is more flexible for a project team to add or reduce its members (Maruping et al., 2009). Since a project team is established specifically and temporarily for a project, it is more flexible than other teams. In this case, according to the particular needs of the

project, the project team can add or reduce its members so as to ensure the effective performance of the team in facilitating the success of the project.

2.1.3 HIGH-TECH PROJECT

High-tech project is specific branch in the field of project team study and project management. In addition to basic features of general project, there exist special properties in high-tech project which relate to atypical work arrangement. This section will show the past research on project, project management and high-tech project.

2.1.4 PROJECT AND PROJECT MANAGEMENT

Project Management, as a newly developed field since 1990s, has already been a major branch of modern management, being more and more important. Through utilizing the knowledge and experience of project management, the work efficiency of project managers can be greatly promoted and improved. So what is Project Management? As indicated by Kerzner (2009), project management is to apply knowledge, skills, tools and techniques to various activities in project in order to meet various requirements of the project. Accordingly, there are four major elements in project management, which include People, Product, Process and Project.

Nowadays, many organizations have increasing interest in project management, for its resulting high efficiency, as well as its wide range of application in different kinds of projects. So what is a Project? A project is an endeavor implemented during a temporary period for specific objectives such as creating some product, service or result (Kerzner, 2009; Lewis, 2006). When those objectives are achieved, or the project is terminated for some reason, the project will be ended. Projects are not limited by size/scale – large or small, or time to complete – long or short. As in every project, there are mainly three kinds of goals, which are Scope goals, Time goals and Cost goals. Scope goals define the work range of the project, namely what should be done during the project. Time goals refers to the scheduling of the project, for example, how much time the project has to take to end, as

well as the scheduling of different phases of the project and various project activities. Cost goals means the project budget, namely, what and how much the project can cost. In project management, project managers have the obligation to balance and achieve these goals (Kerzner, 2009).

As indicated by Schmidt (2009), people is a most significant element of project management, especially for a successful project. This element involves two major parts – people management and stakeholders of the project. Managing people is key to the successful implementation of a project since it determines the work efficiency of the relevant staff on a project. The management of staff is especially important when highly-paid staffs or staffs with experience are not available. Managing people is the basic task for project managers. Another important part of project management is the stakeholders, which include senior managers, project managers, practitioners, customers and end users. Among these stakeholders, senior managers are to make decisions and determine major issues of business, which has direct influence on the project. Project managers are to plan specific project activities, and then organize, control and motivate the practitioners to work and achieve planned objectives of the project. Practitioners are to apply technical skills, tools and experience to various project activities, and finally achieve the objectives of the project, such as creating a product or service. Customers are to determine the requirements for the output of the project, and other stakeholders such as the end-users that have interest in the output. End-users are to use or experience the result of the project. Take real estate development as example, the final residents are the end-users of the project of a residential building.

In addition, Process is also an important element of project management, which involves different kinds of activities of a project. It has direct impacts on and will lead to particular output/result of the project, and it will also determine the inputs of the project, influencing on the achievement of cost goals of the projects (Atkinson, 1999).

2.1.5 HIGH-TECH PROJECT

The concept of high-tech (high technology) was present in 1970's. High technology refers to the newest sophisticated technology or cutting-edge technology based on science (Williams, 2002). However, new technology does not mean high technology, while new technology only represents a relatively new technique form during the developmental process of technology.

In terms of technical structure, high technology is sophisticated technology or cutting-edge technology, and its main principle is based on the most advanced scientific results, which is a kind of technology based on modern science (Williams, 2002). In terms of time, high technology is new technology, which is based on the newest or latest scientific results. In terms of relationship with science, high technology is generated based on the development of science, which is a kind of science-based technology.

As stated by Williams (2002), the internationally recognized high technologies involve six fields, which are biotechnology, information technology, new material/advanced material technology, new energy technology, space technology, and marine technology. Compared with ordinary technology, high technology has many features: advanced techniques, high innovation, high input, high benefit, high competition and high risk, as well as strong penetration.

2.2 ATYPICAL WORK ARRANGEMENT

This section describes through the literature the definition of atypical employment, its development, status and characteristics, as well as the atypical work in high-tech project teams.

2.2.1 DEFINITION OF ATYPICAL EMPLOYMENT/WORK

According to Vettori's definition (2007), the atypical employment is the generic name of the unstable employment mode with informal, temporary or part-time characteristics. Generally, this kind of work includes the part-time work, temporary work, contract work and any other non-permanent work.

The atypical employment not just gives the workers more job opportunities, but also provides the flexibility for the enterprise's human resource management. The atypical employment can reduce the labor cost of the enterprises, and make them full play their competitive advantages in the ever – fiercer market competition which the competition becomes more and more fierce (Burgess and Connell, 2004).

De Grip, Hoevenberg and Willems (1997) indicate that there are both advantages and disadvantages of adopting the atypical employment. The advantages of the atypical employment are that its form of employment is relatively flexible, the daily management is relatively convenient, the labor cost and the legal risks are relatively low, and it is particularly suitable for the enterprises which have needs for human resources' optimization. The disadvantages for the atypical employment are that its form of employment is unstable; the employee loyalty is low; it will make against the long-term projects' implementation; and there will be two payment standards within the company, these are all of the disadvantages. Based on these advantages and disadvantages, then it is the enterprise itself to weigh the pros and cons and then makes the decision about whether to use the atypical employment and how to use it.

2.2.2 DEVELOPMENT OF ATYPICAL EMPLOYMENT/WORK

As a new form of employment, the atypical employment differs from the typical employment mode whose main feature is the long-term stability. When the market is shrinking and the enterprises are running below capacity, the atypical employees will be the "labor adjustors" and could play their important function. Since 1950, the Toyota Company

has applied the combination employment form of “atypical employment plus typical employment” and successfully overcame the several economic decline and difficulties and has accumulated rich experience on applying these employment forms (Shao and Wang, 2009).

During the World War I, the complication and advancement of the arms industry’s organization urged the enterprises to train the high level skilled workers within the enterprises rather than merely relying the outside labor market. This change made the typical employment mode became the mainstream gradually, because the typical employment uses the long-term employment as its premise. The typical employment relation has three characteristics (Keller and Seifert, 2005): (1) the employment management is the individual covenantal relationship between the employers and the employees, the employers have the command power and the superintendence right, and the employees have the duty of submission; (2) the employment was established on the basis of full-time system; (3) if the employees were asked to continue the work or they were willing to continue the work, the employment relationship will continue to exist indefinitely or continue to be effective for some time. In 1970s, the restructuring, the downsizing and the mass layoffs were popular within many enterprises, but the number of part-time workers presented a trend of significant increase. When came to the 1980s, the labor dispatch and the terminable employees increased day by day. Under this history background, the researches for the atypical employment gradually increased, and in the international range there divided two schools: the European–Japanese school and the American school. These two schools offered different definitions about the atypical employment modes, and these definitions have differences in defining the modes of the atypical employment also.

The Europe and Japan always use the word “atypical” to describe the employment modes which different from the typical employment. The atypical employment modes in European countries often include: the part-time work, the terminable employment, the labor dispatch, the shift work, the midnight and holiday work, the calling out work, the professional traineeship, the soho work and the independent business running (Shao and

Wang, 2009). The atypical employment forms in Japan usually include the non-formal employees (the seasonal workers and the day workers), the part-time workers, the casual laborers, the labor dispatch workers (registered and long-term employed), the soho workers, the freelance, the independent businessmen which includes the family employees and the outsource workers etc (Addison and Surfield, 2009; Shao and Wang, 2009).

In recent years, the America often uses the term of “Non-standard employment”, and this definition means that these works are mainly arranged through the intermediaries, and the time, place and quantity of these works are potentially unpredictable (Shao and Wang, 2009). The atypical employment modes in America include the labor dispatch workers, the calling out workers, the contract workers, the short-term direct employment, the independent contract workers, the independent businessmen and the formal part-time workers (Addison and Surfield, 2009; Shao and Wang, 2009).

To have a general comparison, the Japanese unique atypical employment modes are more likely the casual laborers and the long-term labor dispatch. The European unique atypical employment modes are the professional traineeship and employment based on the employment policy. The Europe and the America all adopts harsh restrictions on using the atypical employment modes when the enterprises are hiring the workers, but in Japan which has relatively loose regulations, the atypical employment has been applied widely. This has played an important supporting role for Japanese large manufacturers’ sustainable development and their international competitiveness’ formation.

2.2.3 STATUS AND CHARACTERISTICS OF ATYPICAL WORK

The so-called atypical work of course will be different from the typical or traditional work. According to Addison and Surfield (2009) it is the kind of work, which the workers work for the employers or the enterprises in terms of part-time and near-term employment. Generally speaking, the part-time work, the fixed-term contract work, the dispatching work, the independent business running and the self-employer all belong to the range of atypical work. However, as the development and application of the information and communication

technology, the network and telex work could also be brought into the range of atypical work.

The reasons for the development of the atypical work are many, generally, the changes of the industrial structure, changes of the technology and the enterprises' flexible application of the human resources are all the important influential factors (Lewis, 2006). For example, in a service-oriented economic environment, it is very obvious that the labor is divided into the core and non-core labors; the former labors have full time job and their payment, welfares and promotion opportunities all have the guarantee, but the latter one only has the part-time job, and their working conditions and welfares do not have that guarantee. Of course, this distinction does not mean that the non-core workers' work is irrelevant to the development of the enterprises or the organizations, and it also does not mean that the core workers' work is closely related to the development of the enterprises or the organizations (Addison and Surfield, 2007; 2009). However, the reasons for the non-core workers' low payment and poor welfares are irrelevant to their productivity but related to the enterprises' feel of the needs, convenience and importance. Besides, the atypical work can meet the enterprises' needs for flexibility and enables the enterprises to adjust the labor using based on the market conditions. Therefore, the atypical work is closely related to the service industry and it is an important mechanism for the enterprises to apply the cost control.

The atypical work provides the enterprises the space for the human resources' flexible application, but it also affects the employments' stability. Generally, as for the workers who undertake the atypical work do not have the long-term employment relations with the enterprises, then these employments lack the stability (Addison and Surfield, 2009).

Secondly, the labors' work time and health sanitation rights may be adversely affected, because the supporting measures and regulations of the labor rights are lacking and the labor inspectors are understaffed (Addison and Surfield, 2009). These will have a

negative impact on the creation and maintenance of the supporting measures and regulations of the labor rights.

Thirdly, one influence of the atypical work on the labors is that it lacks the training opportunities, this makes some workers unable to find a long-term and stable job. Obviously, the labors' skills cannot be improved and promoted continually due to the lack of the training opportunities, and this will definitely affect the labors' opportunities for new jobs (Addison and Surfield, 2007).

At last, in terms of the impact on the collective labor and cost relations, according to the surveys, it shows that the labors that undertake the atypical work do not have the tendency of taking part in the labor union in both the attitude and the behavior aspects. Besides, some countries even use the legislations to limit these workers' opportunities of taking part in other labors' regulations and mechanism (Addison and Surfield, 2007; 2009). For example, the Netherlands, Norway and Sweden have limits on these workers' participation rights in the management council or the rights of choosing the labor representative in the board of directors. Due to the legislative restrictions and the practical difficulties of these workers' participation, the labors that undertake the atypical work do not have bright future on the collective labor relations' development. This will further threaten the formal labors' collective power's exertion.

2.2.4 THE ATYPICAL WORK IN HIGH-TECH PROJECT TEAMS

In a project team, there will be different kinds of functions needed so as to complete the required tasks for the project (Lewis, 2006). This means a number of employees or team members are recruited. These team members, as workers or employees can be full time employed by the organization; however, for most occasions, there will be part-time employees recruited for the project. In this case, atypical work arrangement happens in the project teams, including the high-tech project teams.

2.3 PERFORMANCE AND MOTIVATION

As stated in the introduction, this thesis wants to know whether the atypical work arrangement is effective and with good performance, so as relevant variables, performance and motivation need explanation.

2.3.1 DEFINITION OF PERFORMANCE

Cokins (2009) indicates that performance is a multi-dimension creature, and its conclusion varies if the angles of observation and measurement are different.

According to Cokins (2009), performance can be viewed from different perspectives, including management, economics and sociology. From the management point of view, performance is the result of organizational expectation. It is an effective output of the organizations in different levels to fulfill its goals, which includes personal performance and organizational performance. From the economics point of view, the performance and pay reflect an equal promise between the organization and staff, that is, performance is the staff's promise to the organization, and the pay is the organization's promise to the staff. From the sociology point of view, performance means that every member of the society should take his or her own responsibility according to the social division of roles. Every citizen's living right is ensured by others' performance and in return his or her performance can guarantee the others' living right

Performance can be divided into organizational and staff levels. The views in defining performance are mainly as follows:

Firstly, performance should be considered as a result. Aguinis (2008) agrees that performance should be defined as the achievement of the work, and all the results of the work are closely related to the strategic objectives, satisfaction of the customers as well as the investment. Spitzer (2007) points that performance is a relatively independent creature of one person. For all the above, we can assume that the opinion stating performance as a

kind of result means that performance is the achievement of the work and it is a record of one's work performance.

Secondly, performance is a personal behavior. Spitzer (2007) defines performance as follows: performance is a series of personal behaviors, which are related to the objectives of one's unit or organization. Aguinis (2008) states that the performance should be different from the result. Because the result should be affected by the system factors while the performance is a kind of behavior related to the organizational objectives that can be controlled, he also considers that only the behaviors related to the objectives can be considered as performance. Cokins (2009) advocates the organizational citizenship behaviors, and he states that organizational citizenship behaviors is a kind of extra-role action and attitude that is beneficial to the organization, which is not emphasized by the formal role nor included from the working rewards contracts. It just consists of a series of informal cooperation conducts, which can improve the organizational performance as a whole, such as helping the colleagues, protecting the organization and giving constructive suggestions, etc.

Thirdly, performance should be considered as competent features or competence (Cokins, 2009). This opinion is in line with the performance standard suggested by some enterprises and managers, which advocates "looking forward". That is, deciding personal performance by measuring one's competence. Because this opinion believes that only the staffs with competence have more possibility in achieving success. In the present circumstances of advocating "Sustainable Development", the observation of staff's competence is more and more emphasized.

2.3.2 DEFINITION OF MOTIVATION

Motivation is a very significant process to understand the behaviors (Robbins and Judge, 2010). In simple words, to understand the motivation is just to understand the reasons of a human's behaviors, namely, motivation is the cause, process and support of an individual's behaviors. As in an organization or a workplace, the effectiveness of a

manger's leadership ability is to some extent determined by how he or she can make use of motivation of the human resources to achieve the goals of the organization. And the theories of motivation are divided into two categories: content theories and process theories. Content theories focus on "what" motivates humans' behaviors (Robbins and Judge, 2010). These theories are also termed as need theories that meant to identify human's needs or desires and how they are functioned. While process theories focus on the differences in the humans' needs and identify "how" the humans' behaviors happen, namely the process of a behavior (Robbins and Judge, 2010).

The word motivation is derived from the Latin word "movere" with the meaning "to move". Motivation is considered as the internal factors that drives the humans' behaviors and gives them direction (Robbins and Judge, 2010). Motivation is rooted in the humans' needs, such as physiological needs, social needs, insurance needs, self-esteem needs and self-actualization needs. The study of motivation is very important to understanding of human behavior and the organizational behavior. The motivation theories such as the content and process theories will be useful in the organizational management to increase the motivation of the human resources, and promote the performance of individuals, teams, or organizations. The following parts are about the important motivation theories in history of management study.

Content theories of motivation

The content theories of motivation are also known as the need theories, which stress on the internal factors that drive and direct the human behavior. There are three major content theories of motivation, such as Maslow's hierarchy of needs, Alderfer's ERG theory and Herzberg's two-factor theory.

Of the different content theories, Maslow's hierarchy of needs is the most influential content theory and has been respected by other content theories (Robbins and Judge, 2010). In this theory, Maslow has introduced five levels of human needs, which are deficiency needs including physiological needs, insurance needs and social needs, and higher-order

needs including self-esteem needs and self-actualization needs. Maslow believed that these human needs are instinctive and so motivation is to a great extent an unconscious process, namely, most people are not aware of “what” motivate the behaviors and how it functioned. In this theory, Maslow argued that once a need at one of the five levels in the hierarchy is satisfied, the impact of the need on human behavior would be reduced. And then, the need at the next higher level in the hierarchy will be more influential on the human behavior. Reflected in the hierarchy, individuals are firstly motivated by physiological needs like needs for food and warmth; and if these needs are satisfied, people will be then motivated by insurance needs such like needs for protection. If these two basic needs are met, the next major impact on human behavior will be the social needs such like needs for supportive and positive relations with others like love relationship, and sense of belonging. With these deficiency needs satisfied, higher-order needs will have more powerful influences on the human behavior. The self-esteem needs include needs for receiving recognition and admiration from self and others. The ultimate needs in the hierarchy are the self-actualization needs, which is to develop an individual’s full potential. However, limited by the uneven distribution of satisfying jobs in society, Maslow believed only a few people can meet the needs at the ultimate level.

From Maslow’s theory, it seems that employees in an organization will never be satisfied, and they will be likely to need more from the employers. For instance, when jobs are limited, employees will be motivated by deficiency needs. While when jobs are easily available and secure, pay is good, the social needs will be the major motivators. Like this, the employers should constantly manage to satisfy the needs at all levels for their employees, so as to improve the productivity of the organizations.

Alderfer’s ERG theory has introduced three types of needs, which includes Existence needs, relatedness needs and growth needs (Arnolds and Boshoff, 2002). Existence needs are the nutritional and material requirements, such like working conditions and pay in the workplace. Relatedness needs are satisfied through relationships with family and friends, colleagues and supervisors. Growth needs are met through individual’s psychological

developments. Unlike Maslow's hierarchy theory, in this theory, Alderfer believed these three needs can influence on human behavior at the same time, namely, different needs can become motivators simultaneously. In addition, Alderfer believed if a need is not satisfied, it can turn to another direction, the other needs; unlike in the hierarchy theory, it will not stay at the same need all the time till it is satisfied. Therefore, this theory suggests the employers make relevant changes according to the changes of the needs of the employees.

Herzberg's two-factor theory has introduced two sets of factors that are related to job satisfaction and dissatisfaction (Herzberg, et al., 1959). One represents sources of satisfaction and it is called motivators which involved intrinsic aspects of work such like achievement, advancement, recognition and autonomy; the other one is termed as hygiene factors representing sources of dissatisfaction, which involved working conditions, salary level, job insurance, corporate policy, supervisors and interpersonal relations. The presence of motivators will cause motivation in the workforce, and their absence will not lead to job dissatisfaction; on the other hand, the presence of hygiene factors can increase job satisfaction in the workforce, but their absence, unlike the motivators, is likely to cause job dissatisfaction. Therefore, motivators have reflected people's higher-order needs such like self-actualization, while hygiene factors reflected the need to avoid unpleasant situations. Far than this, the theory has indicated that people can redesign their jobs to develop the potentials of motivators. Therefore, this theory is very attracting to managers that seek to motivate the employees by changing their jobs.

In the theories of Maslow, Alderfer and Herzberg, their ideas of growth needs, self-actualization and motivators have great influence on management theories and the management practices.

Process theories of motivation

The process theories of motivation are focusing on how human behavior happens. There are two major process theories of motivation: the equity theory and VIE theory.

Equity theory is much like Maslow's hierarchy of needs and Herzberg's two factors of motivation, stressing that there will be positive outcomes and employees will be highly motivated when they consider their treatment is fair. The equity theory focuses on a healthy balance between the inputs and outputs of the employees (Adams and Freedman, 1976). According to the equity theory, a healthy balance will create a stable and productive relationship between the employers and employees, motivating the employees and creating content results. Typically, the inputs of an employee include effort, ability, skill, flexibility, adaptability, loyalty, commitment, determination, tolerance, trust in supervisors, enthusiasm, and support of colleagues; while the outputs include financial rewards like salary, benefits, and intangibles like reputation, achievement, advancement, job insurance, recognition and responsibility and so on. The equity theory figures out subtle and variable factors can impact on an employee's perception and assessment of his or her relationship with work and the employer. If an employee feel his inputs are more than the outputs, he is likely to be de-motivated, both in the relationship with or and the employer.

VIE theory is also called as expectancy theory and the key elements of this theory are valence, instrumentality and expectancy (Lord et al., 2003). Valence refers to the value that an employee places on the rewards, which is based on his or her specific needs, goals and values. For example, whether the employee want a promotion, and whether it is worth for him or her to pay extra effort. Instrumentality refers to a belief that an employee can get a greater reward when he or she can meet the expectations. For example, will an employee can get a promotion if he or she contributes more to the organization. Expectancy refers to that an employee's effort will lead to expected performance based on self-confident, past experience and the acknowledgement of the performance. For example, will an employee contribute more if he or she can make more efforts? The expectation will conduct the behaviors of the employees and a given outcome will follow the behaviors; in addition, the potential outcome will also impact on the behaviors of the employees.

Application of motivation theories

Motivation is an important process in human resource management. In management practice, motivation refers to arouse the employees' motivation at work, namely, utilize various effective methods to promote the activity, creativity and productivity of the employees, so as to complete the tasks and achieve the goals. Therefore, managers should correctly conduct their employees and motivate them at work. In this situation, how to effectively apply motivation theories is a key issue for the managers. There are mainly three kinds of channels that the managers use to increase motivation in their teams, which are material motivation, spiritual motivation, and emotional motivation (Robbins and Judge, 2010; McClelland, 1965; Herzberg, et al., 1959).

First, material motivation means that the manager motivates the employees with material rewards. This is mainly used to meet the material demands of the employees. There is positive motivation such like salary, allowance and welfare, and negative motivation like penalty. Material demand is the primary need of humans and the basic driver for people's behaviors, so certain material guarantee is the key to increasing the motivation of the employees. To meet the employees' demands in life and remove their worries, they will be motivated to work more productively. It will also reduce absenteeism in the workplace. Therefore, material motivation is the major channel to increase motivation in a team.

Spiritual motivation refers to satisfying the psychological needs of the employees through spiritual rewards and encouragement. Humans need a sense of insurance and a feeling of beloved and understood; as well, they desire for cognition and trust, self-esteem and other's respect. These psychological needs cannot be satisfied by material motivation. So, spiritual motivation is used by the managers to increase the employees' motivation at a higher level.

Emotional motivation is that the managers strengthen emotional communication with the employees and respect them, to make the employees keep good emotions and motivate

their working enthusiasm. With good emotions, people will have opening thought, and be quick-minded, to solve problems fast.

2.3.3 MOTIVATION AND PERFORMANCE IN HIGH-TECH PROJECT

According to Williams (2002), innovation is critical for the motivation of team members in the high-tech project. Since technologies especially high technologies change fast, the climate in this field then requires the project managers or leaders to be aware of how to motivate the employees or team members to catch up with the innovations happened in the high-tech field. Williams (2002) indicates that high-tech project team members have a different viewpoint which is more pragmatic than other types of project teams, which means the forms of motivation should also be pragmatic. For example, certificates, plaques and other rewards or tokens are not motivators for these high-tech workers. Moreover, these high-tech team members are likely to have no confidence in the management or the motivations adopted by the project managers or leaders, as they sometimes desire for more authority in decision making, more autonomy, or more challenging work arrangement. In this case, high-tech project team leaders should take this situation into consideration so as to find out appropriate motivational forms.

2.3.4 MOTIVATION AND PERFORMANCE IN ATYPICAL WORK

As indicated above, the atypical work refers to a form of atypical employment that is unstable, involving temporary, part-time and other informal employment. In this situation, the atypical workers or employees are usually restricted by fewer rules adopted by the organization; otherwise, they do not develop in or embrace the same organizational culture like other formal team members. Therefore, they will be less likely to be influenced by the management of the project leaders, and their performance is also not ensured. Under these circumstances, the project leaders should try to develop effective motivation to encourage these atypical workers to increase their performance (Burgess and Connell, 2004). What

can be known from the above presentation is that few researches concern atypical work and related motivation. So in this thesis, it is hoped to reveal something through data analysis.

CHAPTER 3

METHODOLOGY

This chapter is to indicate the methodologies designed for and used in the research, for achieving research aim and objectives. This dissertation is aiming to investigate the link between performance and using atypical work arrangement in Hi-tech project team, which mainly involves the relationship with motivation. Accordingly, several key concepts related to and involved in this research aim need to be reviewed, which mainly include: 1) performance (dependent variable), which is the major research objective; 2) HRM-Work arrangement (independent variable) which is linked to the factor of motivation; 3) motivation (intermediate variable) which is determined among others by HRM-Work arrangement and then is in relation to the performance of the workers in the project team. Through the literature review, part of the research question can be answered, such as the relationship between motivation and performance. Furthermore, in order to further prove the answer and achieve the research aim and objectives, the questionnaire survey will be used. In particular, questionnaire will be conducted with some members of project teams. Data will be collected through the findings by these researches, while through discussion of the data, it will try to answer the research question and achieve the research objectives.

3.1 TYPES OF VARIABLES

In this research, three types of variables are involved, which are independent and dependent variables, as well as intermediate variables. These variables are related to each other, so as to work in the research framework.

Independent variable is the factor manipulated by the researcher in a research (Creswell, 2008). Correspondingly, dependent variables are those factors that are changeable as a response to the changes of independent variable (Creswell, 2008).

During this casual relationship between independent and dependent variables, an intermediate variable plays an intermediate role, which is varied due to the independent variable, and then causing variation in the dependent variables (Creswell, 2008). Therefore, it is a casual pathway connecting the relationship between independent and dependent variables.

When selecting variables, there are several principles need to be considered (Dodge, 2003). First of all, it is principle of importance. On the topic of atypical work arrangement for members of high-tech project team, there exist a lot of relevant factors and indicators but it is impossible and unnecessary to put all of them into the model. And factors differ from each other in the level they affect the problem, so it will be reasonable to choose the variables of more remarkable impact, which is also less complicated and easier to apply in the practice. Secondly, variables selected should be sensitive enough. Different indicators have different sensitivities to environment and kinds of changes. Some are quite sensitive and of foresight while some are hysteretic. In order to make the research more precise, it is crucial to choose those variables with high sensitivity. Besides, variables should have relative independence. If variables are badly dependent on each other, the problem of multi-collinearity may cause the conclusion away from accuracy. Therefore, researcher should avoid selecting the variables with above problems. Based on these rules, variables involved in the research are introduced in next part.

3.1.1 KEY VARIABLES OF THE RESEARCH

Based on literature study and practical logic of the topic researched, the following three variables are determined as the key variables of the research in this thesis.

HRM - work arrangement, along with the concept of variable classification, is the independent variable in this research, since it brings changes to other variables. Work arrangement here refers to the way organizations keep relation with its employees. More specifically, it can be formal and official or unstable. The formal one mainly is the permanent type of employment while the informal one is the employment mode with temporary or part-time characteristics including the part-time work, temporary work, contract work and any other non-permanent work.

Motivation is the intermediate variable in this research, linked to HRM - Work arrangement, which then is related to the performance of employees/workers in the team. As known, motivation is one of the most important tools in organization management to encourage people. And it has been studied a lot. Actually, motivation generates effect through various systems, measures or tools instead of motivation itself. In the context of this topic, the problem of whether or to what extent HRM-work arrangement be part of motivation and eventually achieves the managing goal and improve team performance.

Performance is the dependent variable in the research and also the major objective, since it is linked to the HRM – Work arrangement and also greatly influenced by the factor of motivation. To be frankly, all subjects in the field of management are to improve performance of large organizations or small teams or individuals, in which aspect performance is to be observed as dependent variable. It is the same in this research that the researcher wants to figure out that how much atypical work arrangement influences high-tech project team performance and is the influence positive or negative.

Therefore, the key variables of the research are HRM – work arrangement, motivation and performance.

3.2 RESEARCH QUESTIONS

Main question:

As proposed in the introduction, the core question of the research is as follows: What is the link between performance and atypical work arrangement in Hi-tech project team in China?

The atypical work arrangement possesses the advantages of both market transaction and hierarchy management. But meanwhile, it contains in the disadvantages of the both. If managed well, the atypical work arrangement will make good use of the advantages and avoid the disadvantages. Instead, things move in the opposite direction if it is used improperly.

Secondary questions:

Secondary questions can be thought as the intermediate question the research wants to get answered. The secondary question is the bridge and a direction guiding the researcher to figure out the main question and finally achieve the goal of the research. After the secondary questions are clearly determined, the researcher is able to understand definitely the main question and get close to the answer of the main question. And the secondary questions are:

What is the link between atypical work arrangement and motivation in Hi-tech project team in China?

What is the link between employees' motivation and the performance of the atypical workers in the project team in China?

After the research and further analysis, the answers of the above questions will be found and stated later.

3.3 RESEARCH OBJECTIVES

The research is designed to find a way knowing more about atypical work arrangement and its effect especially on the performance of high-tech project team. And the findings will provide a context for discussion on employment management as well as some suggestions for high-tech project team managers.

Main objective

The main objective of the research is to explore the relationship between characteristics of atypical employment and performance of the atypical workers in the project team.

Secondary objectives

The secondary objectives are as follow:

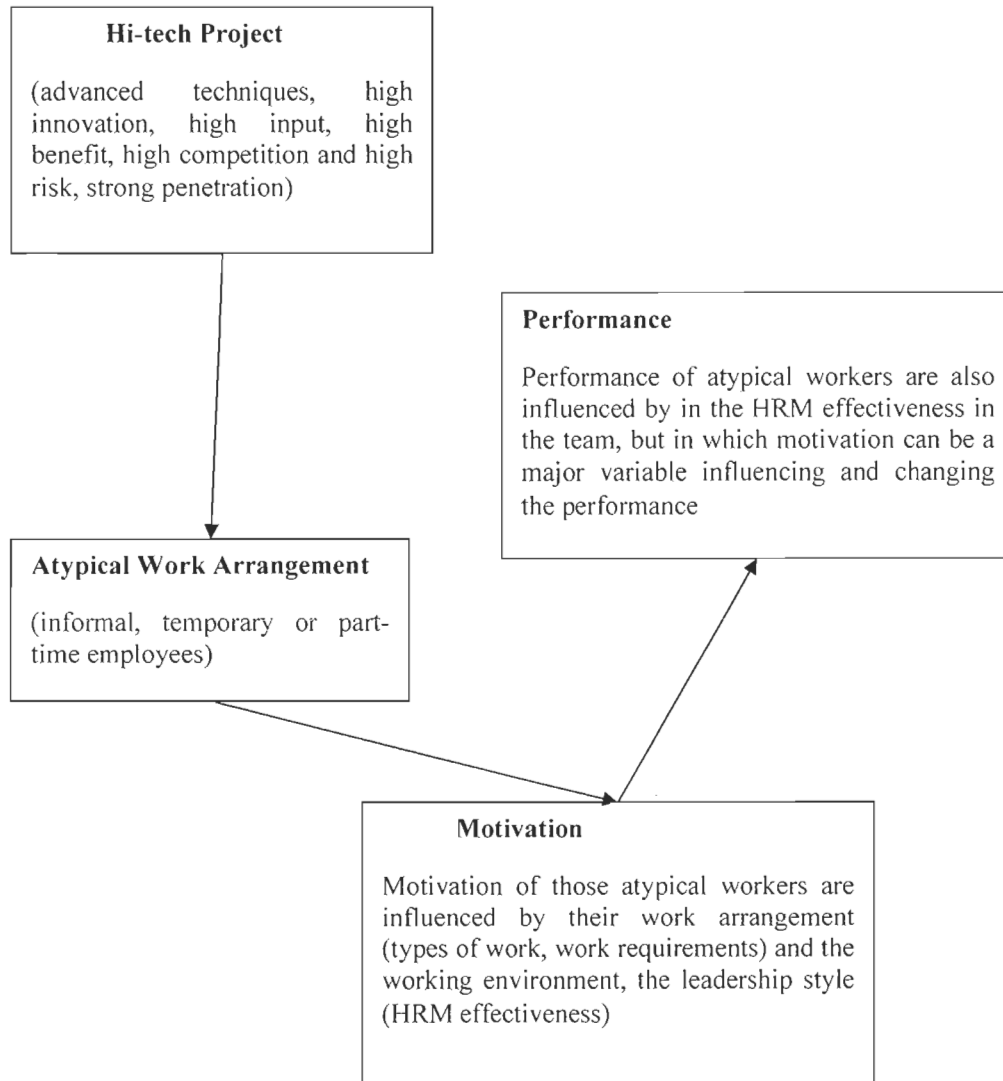
1. To explore the relationship between characteristics of atypical employment and motivation.
2. To explore relationship between motivation and performance of atypical workers in the team project.

With the help of proper method, the objectives will be achieved and finally lead to the answers of the research questions.

3.4 CONCEPTUAL FRAMEWORK

Concerning the indicated research approach above as well as the research questions and objectives, a conceptual framework is drawn as follows:

Figure 1 Conceptual Framework



Firstly, the current condition of atypical work arrangement in the observed high-tech project teams will be shown and as the material for further analysis, performance of these

project teams are to be studied then. What's important, the research focuses on the relationship between the atypical work arrangement and team performance, among which, as the intermediate variable, motivation and the role of work arrangement in motivation system will also be discussed.

Our preliminary interpretative propositions are thus the following ones.

Main preliminary interpretative proposition: the atypical working arrangements will be negatively linked to the performance of the employees.

Secondary preliminary interpretative propositions:

- The atypical working arrangements will be negatively linked to the motivation;
- The motivation will be positively linked to the performance.

3.5 RESEARCH METHODOLOGY

Actually, research methodology is a set of strategies, methods, techniques, and even research ethics, which are stated as follow.

3.51 RESEARCH STRATEGY

Many researches have discussed the differences between the qualitative and quantitative research (Bryant 2007). Bryant (2007) defines quantitative research as the collection of numerical data, indicating a view about the relationship between theory and research. Further, the author defines the qualitative research method that emphasizes words but not numerical data collection or analysis.

In this research, the quantitative research method has been chosen. Further, the use of questionnaire will enable the researcher to collect more primary data on the topic through conducting survey among the high-tech project teams using atypical workers/employees. This questionnaire survey is also to provide a source for this quantitative research.

Types of data: Qualitative and quantitative data

Based on the research methods of qualitative and quantitative approaches, there also two types of data that are often used in researches, which are the quantitative and qualitative data. The former type is concerned on the collection and analysis of data in numeric form, while the latter one is concerned on collecting and analyzing information in as many forms, which are mainly non-numeric (Saunders, Thornhill and Lewis, 2007). Accordingly, the differences between these two types of data are presented in the following Table 1. Further, due to the differences existed between the qualitative data and the quantitative data, there are four different approaches defined and commonly used.

Table 1: Differences between the Qualitative and Quantitative Data

Qualitative data	Quantitative data
Based on meanings contained in and expressed by the words;	Based on meanings derived from number or quantity of samples;
The collection results are in non-standardized data, which need to be categorized and coded;	The collection results are in numerical and standardized data;
The analysis is conducted through the use of conceptualization.	The analysis is conducted through the use of diagrams and statistics.

(Source: Saunders et al., 2007)

Inductive and deductive methods are principals adopted in research. Inductive approach is adopted to collect data and develop as a result of data analysis (Saunders et al., 2007). The result of using induction approach may be to build theory by collection, analysis and conclusion of data. While Saunders et al. (2007) states that deductive approach means that developing a theory and hypothesis, and/or designing a research strategy to test the hypothesis. Robson (1993) presents a 5-step deductive research progress: deducing a

hypothesis from the selected theory; expressing the hypothesis by using two specific variables in operational terms; testing the hypothesis by testing the two divided variables; examining the sequential outcome of the hypothesis; and modifying the theory according to the outcome and findings.

Specifically, our research adopts an exploratory approach, which focuses on questionnaire study. This type of research suits when we know few things on a subject. The analysis remains summary and does not allow the generalization of the results. It allows however to get acquainted with a phenomenon and to formulate a more precise problem of research. We design the questionnaire according to the theme, carry out the questionnaire investigation through random sampling, and analyze the data collected to try to find evidence on the link between atypical work arrangement and performance.

Data collection methods

Data collection is a way to gather information using in researches and studies. Due to different requirements of research information needed, different data collection methods should be adopted, or combined to achieve the final goals (Swan, 2008). Each method will have its own uses and advantages according to specific research situation. Basically, there are quantitative data research, qualitative data research, obtrusive method (e.g. observation, interviews, surveys, and focus groups), and unobtrusive method (e.g. available data like historical data, archival data and document).

Furthermore, since it is to analyze the motivation and performance of atypical workers in specific type of high-tech project teams, information on this kind of project team will then be collected. From this perspective, questionnaire survey will be used and the questions will be designed for atypical workers as well as formal employees in the team.

More specifically, the questionnaire will be first sent out to investigate relevant issues on motivation and performance of sample high-tech project teams in China with atypical

work arrangement, which prepares the material for further statistical analysis and analytical discussion.

In addition to personal detail, there are two parts of the questionnaires in total. The purpose of this questionnaire survey is to study the phenomenon of atypical work arrangement and the performance in high-tech project teams according to the research of intermediate variable, dependent and independent variables. Personal detail includes the choices of respondents' individual properties, which may affect their decision on the choice at psychological level. Part one is a questionnaire about motivation in the sample teams. The problems of how team managers deal with atypical work arrangement and motivation and how team members feel on the issue of motivation system will be observed. The questionnaire is made based on the study of Baker, Gibbons and Murphy (2002) who are expert in relational contracts research. Part two is for gathering the information on team performance. These questions are related to the influence of employees' work arrangement and the effect of motivation system and measures. The questionnaire is based on the questionnaire made in "Motivation to work, work commitment and man's will to meaning" (De Klerk, 2001). Both of the two parts of questionnaires are set with five levels of opinions, strongly disagree, disagree, neither agree or disagree, agree, strongly agree respectively. It tells a changing degree from most negative impression to most positive impression of one statement. In doing so, the researcher can collect data and information to analyze the relationship between atypical work arrangement and team performance under the influence of motivation moves.

When it comes to the content of the questionnaire, there are mainly three parts of the whole questionnaire paper. At the beginning, it is a personal information part, which requires the participants to tick on their gender, age, education, and type of work arrangement and so on. The motivation part of questionnaire is constituted of 13 statements around the current condition of motivation and its effect in the participants' teams. The motivation part is followed by the statements about performance, which focuses on the evaluation of the sample teams' performance. It should be noticed that the questionnaire

measures mainly the values and faiths relative to the motivation rather than the satisfaction of needs. The performance part of questionnaire is constituted of 12 statements. In each questionnaire, the order of these questions is unchanged. The participants need to tick to choose the level of their impressions on all the statements. Through their choice, the researcher is able to get information which is very valuable to the research's moving on and can do further analysis to find answers to the research questions and achieve the research objectives. The designed questionnaire is shown in appendix 1 (After reliability test version). It is easily understood that the effect of motivation depends on individual values and faith to a large extent so that employees' direct and subjective perceptions are very important in our research. And that is considered in the questionnaire.

What's more, in order to check whether all the statements under the two parts in the questionnaire are internally consistent, item correlation procedure should be conducted. There are altogether 3 variables in questionnaire. Each variable has multiple indicators. Intermediate variable stands for motivation, independent and dependent variables refer to HRM – work arrangement and performance.

According to Heng (2006), a scale with Cronbach Alpha more than 0.6 will be accepted for statistical analysis, which indicates the internal consistency within the multiple items is acceptable. Based on that, the researcher did a reliability test on the designed questionnaire with the help of the software SPSS16.5 which provides the function of reliability analysis to check the items' internal consistency. Because the items are originally designed and sorted into two parts (motivation and performance), and the number of items is limited, there is no need to do a factor analysis. Taking the two parts of questionnaire as two scales, table 2 shows the results of scale reliability test together with the number of items that entered the final statistical analysis.

Table 2 Results of reliability analysis

Questionnaire	Cronbachalpha
<p>Motivation</p> <p>People who work deserve success</p> <p>If you work hard, you will succeed</p> <p>Work should be considered central to life</p> <p>I often look for opportunities to develop new skills and knowledge</p> <p>In my view, an individual's personal life goals should be work-oriented</p> <p>I have very strong ties with my present job which would be very difficult to break</p> <p>Life is worth living only when people get absorbed in work</p> <p>The most important things that happen in life involve work</p> <p>I have created a plan for my development in this line of work field</p> <p>I feel a sense of personal satisfaction when I do this job well</p> <p>My opinion of myself goes down when I do this job badly</p> <p>I am very much involved personally in my job</p> <p>Most of my interests are centre around my job</p>	0.601
<p>Performance</p> <p>I can help the client to find what they really need</p> <p>I can satisfied my client</p> <p>I care all the detail things in my work</p> <p>My project manager is satisfied with my job</p> <p>I am always working with my colleges happily and obtain their recognition</p> <p>I am always keeping good relationship with the clients and obtain their recognition</p> <p>I am always getting the goals which is expected</p> <p>I am always doing the task which is more than expected</p> <p>My workload is more than others'</p> <p>My working quantity is more than others'</p> <p>My working attitude is greater than others'</p> <p>Overall, My working performance is better than others'</p>	0.611

From the above results table, it can be concluded that the items of the designed questionnaire has enough reliability to continue a questionnaire survey based on the set principle of Heng (2006). The alpha of Cronbach indeed remains weak, but satisfactory. As we define the study in the high-tech project team in certain region, which is China mainland, so the targeted participants have shared features. On one hand, the same questionnaire can be applied to all the referees; on the other hand, it is the same questionnaire that becomes a standardized model to carry out the explorative research and achieve workable data.

In this research, a broad range of high-tech project teams will be sampled from organizations in Hi-tech industry. These teams who will be in the questionnaire survey are form both small and large teams. This researcher will be sent to the companies in Shanghai, Beijing, Shenzhen and Guangzhou of China to launch the survey and collect data and information. We used snowball sampling. In fact, we met employees in each company. Those employees send the questionnaire to their team members. The employees of the companies of our sample passed the questionnaire on paper format to the members of the teams. There are 52 companies in the sample. The big sample set is adopted to enhance the accuracy of the tests. And the process of collecting questionnaire paper is kind of point-to-point post, thus the factor of confidentiality would not be a big influence to the research. Besides, it is emphasized to the referees that the questionnaire is just for research, and we hope to get the real reflection. In fact, it is difficult to control that they answer the real condition, which may be the point to be improved in later study. The participants can doubt the confidentiality of the questionnaire. Thus, they can give a positive image of themselves.

The method of analyzing data is depending on the method of data collection used in the research. In some cases, the analysis will simply be statistics, while some others will be much more complicated due to the information gathered and methods used (Swan, 2008). There are also various methods of data analysis such as: Analytic Induction, Event Analysis/Microanalysis, Domain Analysis, Logical Analysis/Matrix Analysis, Narrative Analysis, Discourse Analysis, Content Analysis, Constant Comparison/Grounded Theory

(Ratcliff, 2002). Saunders et al. (2007) state that although data collection and analysis would not typically be concurrent in secondary analysis research, and that there are other methods for research, which means that the researcher can apply analytic methods that are suitable. As in this research, it mainly adopts the descriptive analysis and correlation. Analysis which is theory driven.

3.6 RESEARCH ETHICS

In this research, principles and procedures will be paid attention carefully so as to make sure it will be an ethical work. This research will by no means negatively change the normal life and development of any participants and relevant parties. This research will be conducted based on mutual respect and trust. Before this research involves, the potential participants will be asked whether or not they agree with the potential surveys; this research will not include any participants without their permission/agreement. In potential surveys for this research, all participants involved will be told of the aims and objectives, the nature and content of the research, as well as potential consequences and other information involved.

CHAPTER 4

DATA AND ANALYSIS

Based on the research methodologies introduced in previous chapter, the work of data collection is launched and the questionnaire survey is carried out in a period of two months. Data collection on the questionnaire, survey results and related analysis will be introduced and explained in this chapter.

4.1 DATA COLLECTION AND SURVEY RESULTS

In the research, as mentioned above, a board range of different high-tech project teams in the four cities of China were sampled. The teams involved in the survey include organizations of different scale. The researchers were sent to Shanghai, Beijing, Shenzhen and Guangzhou, the major big city in China, to do questionnaire survey in a snowball sampling. The researchers keep connections with the companies and organizations through their network of friends as well as the past classmates and the other acquaintance. However, there is one problem should be noticed. Some organizations may have no atypical work arrangement, which can be known after the team members return their completed questionnaires. The sorting work will exclude the questionnaires with the answer of no atypical work arrangement in the organization and those questionnaires are counted into ineffective ones.

We sent out 600 questionnaires in all at the March of 2011 and got back the replies 40 days later. Through sorting and calculating, there are finally a total of 52 teams with 469 respondents sending back the completed questionnaires, which are counted into effective ones. The following description of data collection and the related analysis are both based on the 469 questionnaires. The number of participants is raised and the rate of answer is very

good which is above 78%. Several persons wished to answer the questionnaire, and the tackled issue interested many persons. It demonstrates a democratic validity. Next, the results on the questionnaire survey will be displayed. Specifically, basic information of participants, participants' choices in each question, the distribution of the answers on different degrees, as well as a simple evaluation on the data in general are to be shown.

4.1.2 SURVEY RESULTS OF PARTICIPANTS' PERSONAL INFORMATION

Table 3 shows the data collected on questionnaire participants' personal information which includes their gender, age, education, duration in present position, number of team numbers, and type of work arrangement and so on. Out of 469 respondents in total, there are 271 males accounting for 57.78%, which is in accordance with the characteristics of high-tech project team. When it comes to the respondents' age, it can be imagined that in high-tech project teams, there must be more young people than elder employees. And the number of employees aged between 20 and 39 is 357, accounting for 76.12%, larger than a half. None of the participants are in the age group of older than 60. And elder employees are mostly at the level of management in their teams. Also, in line with the properties of high-tech industry as well as the project teams, the employees in high-tech project teams must be educated enough. As thought, high school group is empty. Only a very small proportion chooses college and a large part of participants are educated above the group of bachelor. Considering the duration at present position, 20.68% of participants work in the team less than one year; 68.66% of them stay between one year and five year; the rest people belongs to the groups of longer duration. Then, it is found that most sample high-tech project teams have the scale between "5-10", "10-20", and "20-30". Finally, the employee status tells the information of work arrangement in sample high-tech project teams. As the statistics indicates, more than half of participants are full time employees. The information of this feature relates to the research topic. In other word, as independent variable, work arrangement has influence on other variables such as motivation and team performance. Therefore, the researcher values this piece of information much. What should

be noticed is that a big proportion of the referees are not considered as atypical workers, which is one of the limits.

Table 3 Answer distribution of participants' basic information

Items	Distribution of the answers						
Gender	Male 271 (57.78%)			Female 198 (42.22%)			
Age	20-29	30-39	40-49	50-59	60-69	>70	
	133(28.36%)	224(47.76%)	106(22.60%)	6(1.28%)	0(0%)	0(0%)	
Education	High school	College	Bachelor	Master	Doctor		
	0(0%)	20(4.26%)	205(43.71%)	138(29.42%)	106(22.60%)		
How long in present position (years)	<1		1-5	6-10	>10		
	97(20.68%)		322 (68.66%)	38(8.10%)	12(2.56%)		
How many (persons)	1-5	5-10	10-20	20-30	30-40	40-50	>50
	13(2.77%)	112(23.88%)	78(16.63%)	131(27.93%)	88(18.76%)	23(4.90%)	24(5.12%)
Employee status ¹	Full-time	Permanent	Part-time	Temporary	Informal		
	264(56.29%)	32(6.82%)	54(11.51%)	64(13.65%)	55(11.73%)		

¹ Full-time: under full-time work arrangement, employees obey the principle of organizations' normal working hour.

Permanent: under permanent work arrangement, employees stay at the organizations until they retire once they are hired.

Part-time: compared with the full-time work arrangement, under the part-time work arrangement, employees don't work following the normal working hour, and instead, they usually do the part-time job out of the normal working hours.

Temporary: employees under temporary work arrangement don't stay at the organizations more than one year and sometimes are based on seasons. Once the temporary work is done, they quit. But, there is the possibility that they transfer to being the permanent ones.

Informal: as the word itself indicates, employees under this type of work arrangement are informal workers whose work standard and welfare are different from the formal employees.

The following sections will introduce the results and the data distribution of questionnaire on motivation and performance. Participants' answers may vary with their gender, ages, education, and other work related information especially their work arrangement type. In order to do the further statistical analysis and explain the results more scientifically, the data results will be overviewed in tables and related explanation and description will be discussed and analyzed. Meanwhile, issues combining the knowledge in the fields like Chinese culture, psychological knowledge, industry characteristics and so on will be considered to make reasonable explanation.

4.1.3 SURVEY RESULTS OF PARTICIPANTS' PERSONAL INFORMATION

As mentioned in the above description, the choices in the questionnaire on motivation and performance are both designed to five levels of impression, and level 1 to 5 respectively refer to "strongly disagree", "disagree", "neither disagree or agree", "agree", and "strongly agree". Survey participants just tick on the most acceptable choice according to their own feelings and opinions. Accumulating all the questionnaires and responds, the answer distributions are worked out and it is feasible to evaluate the results relevant to the topic.

The questionnaire on motivation wants to find the current situation of the workers' motivation in high-tech project teams. The scale for motivation includes 13 pieces of statements as shown in table 4.2. Actually, these 13 statements were determined finally through reliability analysis on SPSS as the results displayed in table 3.2. The detailed calculation process is as follows. Firstly, a weighted average score of each statement is calculated by multiplying the score of each level by the percentage value of its own. Take the first statement "People who work deserve success" in table 4.2 as an example, the average score of this statement is 3.6205 for $1*7.46\% + 2*9.38\% + 3*8.32\% + 4*63.33\% + 5*11.51\% = 3.6205$. In the same way, each statement of the two forms will all have an average value, which can stand for the average and general evaluation of survey participants on the statement. Then, input the values calculated in the previous step into the

software of SPSS, and call out the software's relevant function to run the reliability analysis and it will output the Cronbach alpha automatically and quickly. What should be noticed is that there is a principle telling when Cronbach Alpha is above the value of 0.6, the scale can be accepted for statistical analysis. However, once a scale's Cronbach Alpha is less than 0.6, the statements with large coefficient must be removed from the questionnaire and the new Cronbach Alpha should be calculated again. The process can not stop until the final value satisfies the principle. With the same method, the statements of questionnaire on performance are fixed which is shown in table 5 as the final version. After determined the statements, the data collected of the statements can be used for further statistical analysis. And the data overviews are shown in table 4 and 5.

The answer distribution of the motivation questionnaire is shown in the below table. Looking at the statements, it is easy to find that all the statements in table 4 are positive described, which means if employees tick on the positive impression choices such as 3, 4, or 5, their teams have a relatively well operated motivation system, and the employees are effectively encouraged. In the following part, descriptive analysis is applied to help to better describe the data collected and analyze the survey results.

Table 4 Answer distribution of the motivation questionnaire

Questions about peer pressure	Distribution of the answers				
	1	2	3	4	5
1. People who work deserve success.	35 (7.46%)	44 (9.38%)	39 (8.32%)	297 (63.33%)	54 (11.51%)
2. If you work hard, you will succeed.	59 (12.58%)	75 (15.99%)	58 (12.37%)	224 (47.76%)	53 (11.30%)
3. Work should be considered central to life.	101 (21.54%)	93 (19.83%)	99 (21.11%)	84 (17.91%)	92 (19.62%)
4. I often look for opportunities to develop new skills and knowledge.	19 (4.05%)	13 (2.77%)	61 (13.00%)	299 (63.72%)	77 (16.42%)
5. In my view, an individual's personal life goals should be work-oriented.	78 (16.63%)	66 (14.07%)	127 (27.08%)	131 (27.93%)	67 (14.29%)

6. I have very strong ties with my present job which would be very difficult to break.	35 (7.46%)	173 (36.89%)	74 (15.78%)	116 (24.73%)	71 (15.14%)
7. Life is worth living only when people get absorbed in work.	193 (41.15%)	209 (44.56%)	27 (5.76%)	22 (4.69%)	18 (3.84%)
8. The most important things that happen in life involve work.	42 (8.96%)	51 (10.87%)	92 (19.62%)	261 (55.65%)	23 (4.90%)
9. I have created a plan for my development in this line of work field.	14 (2.99%)	39 (8.32%)	147 (31.34%)	164 (34.97%)	105 (22.39%)
10. I feel a sense of personal satisfaction when I do this job well.	11 (2.34%)	31 (6.61%)	56 (11.94%)	285 (60.77%)	86 (18.34%)
11. My opinion of myself goes down when I do this job badly.	69 (14.71%)	104 (22.17%)	95 (20.26%)	176 (37.53%)	25 (5.33%)
12. I am very much involved personally in my job.	38 (8.10%)	98 (20.90%)	131 (27.93%)	153 (32.62%)	49 (10.45%)
13. Most of my interests are centre around my job.	35 (7.46%)	93 (19.83%)	143 (30.49%)	149 (31.77%)	49 (10.45%)

Changing Trend of Percentage

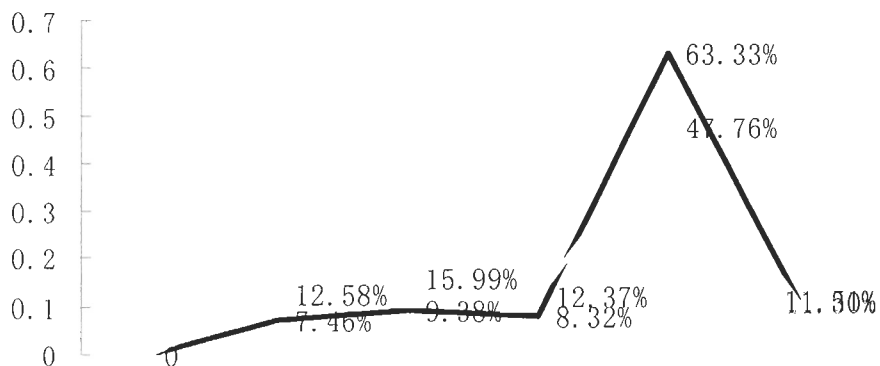


Figure 2 Changing Trend of Percentage of Statement 1 and 2

Statement 1 and 2 both examine the relationship between hard work and success in employees' mind. And the answer distributions of the two statements tell that about a half of the participants agree that hard work leads to success. Besides, although the two statements speak the similar meaning, their data differ from each other. That may be related to the consistency of the respondents' mind or feelings. But figure 2 points out that the two statements share the similar changing trend of their percentage on each level's answer. Statement 3, 5, 7 and 8 also share a central meaning, which is that work is very important in life. Choosing higher level means work is more important in life the participant thinks. The answers in statement 3 and 5 are well distributed while in statement 7, answers focus on level 1 and 2 and level 4 in statement 8. It can be understood if people consider the features of high-tech project. As we know, most high-tech projects are of intense working hours and period. That means an employee is possible to be involved in a project for a period with quite great pressure and heavy workload. Under this circumstance, different people reflect different feelings and reactions. Those with good adaptability and perseverance certainly choose differently from the ones who are weak at the aspects and qualities. Statement 4 and 9 show how much employees are motivated to fight for their work and teams. In statement 4, 63.72% of the participants agree that they look for opportunities to develop their skills and abilities. That means the motivation system does well in encouraging employees to keep the mind to learn and improve. More than half of participants choose positive impression in statement 9, which says they have plans to develop themselves in the field of high-tech. Statement 6 and 12 evaluate the relationship between the employees and their work, tight or loose. The two statements reflect the motivation effect from a different aspect and an indirect way. The tighter the relationship, the better the effect of motivation. In addition, statement 10 and statement 11 point out the sense of satisfaction employees can get from their work. As shown, more people choose the positive impression. In statement 13, 30.49% of the participants choose a neutral answer and 31.77% of them agree the statement.

4.1.4 SURVEY RESULTS OF QUESTIONNAIRE ON PERFORMANCE

As a matter of fact, performance should include individual performance and team performance. However, the questionnaire here cares more the individual's feeling on their own performance. That is because the research objective of the thesis is to find out the relationship between atypical work arrangement and performance, and the work arrangement is basically individual level and depends on different individuals. And according to Williamson (1985), although team performance can change, it still largely depends on individual performance. Therefore, the questionnaire designed is reasonable and feasible and will not affect the results and findings of the thesis.

Especially in high-tech field, such as information technology, projects are often to write a huge series of programs, which determines that the project values good cooperation. Any mistake of any person leads to the failure of the whole project. And individual performance is quite important to the success of the team.

There are 12 statements in the questionnaire on performance. A fast scan on table 5 will tell the problem stated on the above paragraph. Each statement is described from the view of an individual, and the words such as "I" and "my" are used frequently and widely. In statement 14, a great disparity appears in the percentage of each level. 53.73% of the participants agree that they can help their clients to find the needs while less than 5% of the participants choose negative impression. Similar as statement 14, statement 15 sees almost same answer distribution. Large percentage of participants choose positive answers while only a very small part of employees felt they are not able to satisfy their clients. This is related to participants' self confidence as well as the general nature of Chinese people such as modest. Or there may be different understandings of satisfaction. Some participants have higher requirements on themselves. Statement 17 mentions the manager's satisfaction on employees. This can be thought as the effect of demonstration motivation on performance. The answers are not so focused as other statements. It's about 20% respectively from level 2 to level 5. Statement 18 and 19 evaluates the relationship of participants with their

workmates and clients. As an indicator of performance, this statement supposes that good relationship with people helps performing better. It seems that the participants have quite different conditions of their relationship with colleagues and clients based on their answers. Statement 20 and 21 directly point out the performance employees thought about themselves. More people choose positive answers. From statement 22 to statement 25, there is a kind of comparison between individual and others. Employees should do the comparison when they look at these pieces. The data in the table tell the participants' impression on their own performance compared with their counterparts. When it comes to comparison between people, the researcher has to mention special characteristics of Chinese people and Chinese culture. The traditional Chinese culture encourages the spirit of modest and people are used to avoid becoming outstanding in public. Questionnaire is not so public, because they are anonymous, but the problem is people have been used to behave like that. And their behaviors have influence on the results of the research.

Besides, it should be taken into consideration that the answer may be affected by the condition and environment in which participants are completing the questionnaire, such as the time spent, surroundings, and even impulse and emotions, and so on.

Table 5 Answer distribution of the performance questionnaire

Questions about motivation	Distribution of the answers				
	1	2	3	4	5
14. I can help the client to find what they really need.	6 (1.28%)	17 (3.62%)	89 (18.98%)	252 (53.73%)	105 (22.39%)
15. I can satisfy my client.	18 (3.84%)	34 (7.25%)	72 (15.35%)	251 (53.52%)	94 (20.04%)
16. I care all the detail things in my work.	14 (2.99%)	25 (5.33%)	50 (10.66%)	277 (59.06%)	103 (21.96%)
17. My project manager is satisfied with my job.	47 (10.02%)	96 (20.47%)	123 (26.23%)	92 (19.62%)	111 (23.67%)
18. I am always working with my colleges happily and obtain	36 (7.68%)	96 (20.47%)	89 (18.98%)	143 (30.49%)	105 (22.39%)

their recognition.					
19. I am always keeping good relationship with the clients and obtain their recognition.	15 (3.20%)	48 (10.23%)	141 (30.06%)	126 (26.87%)	139 (29.64%)
20. I am always getting the goals which are expected.	51 (10.87%)	90 (19.19%)	95 (20.26%)	174 (37.10%)	59 (12.58%)
21. I am always doing the task which is more than expected.	58 (12.37%)	92 (19.62%)	95 (20.26%)	101 (21.54%)	123 (26.23%)
22. My workload is more than others'.	54 (11.51%)	93 (19.83%)	120 (25.59%)	87 (18.55%)	115 (24.52%)
23. My working quantity is more than others'.	55 (11.73%)	91 (19.40%)	118 (25.16%)	99 (21.10%)	106 (22.60%)
24. My working attitude is greater than others'.	44 (9.38%)	92 (19.62%)	96 (20.47%)	127 (27.08%)	110 (23.45%)
25. Overall, My working performance is better than others'.	45 (9.59%)	94 (20.04%)	129 (27.51%)	158 (33.69%)	43 (9.17%)

4.1.5 DESCRIPTIVE STATISTICAL ANALYSIS

In this section, further analysis based on the above collected data will be presented. There is mainly a descriptive analysis including frequency analysis and other descriptive indicators' analysis. As shown, the data were collected through a questionnaire survey. The major focus is on the selection of five levels of impression. Participants were required to tick on the item, which most fit their feelings and opinions. And the accumulated answer frequency and related percentage are both displayed in table 4 and table 5.

Actually speaking, the results of frequency analysis are shown in the tables from table 3 to table 5 including three parts of questionnaire, respectively participants' personal information, condition on motivation and performance. As stated, 600 copies of questionnaires were sent out and finally got back 469 effective replies. There are two

values for each statement under each level. The first one is the accumulated numbers of participants who selected the choice. And the second one is the percentage of the number out of the total number of participants, which is 469. The frequency results are kinds of first hand data, which point out the direct condition of participants' choice on the designed questions and statements. From the frequency analysis, it can be told that employees from different high-tech project teams and different regions have diversified feelings on their teams' motivation and self-performance. And the related explanation has been shown in section 4.1.

Table 6 gives out descriptive statistical indicators including mean value, standard deviation and percentage of score above 3.0 points based on the data of high-tech project team members' responses in questionnaires on motivation and performance, namely table 4 and table 5.

Table 6 Descriptive statistical indicators for the questionnaires on motivation and performance

Scales	mean	Standard deviation	Percentage of score above 3.0 points
On motivation	3.2217	0.5206	51.3467%
On performance	3.4548	0.2911	50.8447%

Firstly, the mean is the mean value of level scores. The mean on motivation is 3.2217 and 3.4548 for performance. The value is calculated following the two steps:

1) get the weighted average score of each statement by multiplying the percentage value with corresponding level score such as 1, 2, 3, 4 or 5;

2) calculate the general weighted average value of the whole scale, which is to run out the mean of values got from the first step.

Standard deviation is also calculated based on the values from the above first step. It is known that standard deviation evaluates the extent to which the values deviate from their mean. And when the value of standard deviation is small, it means that the data do not fluctuate sharply and are all around the mean value. It tells the quiet running property of the data.

Besides, the third indicator, the percentage of score above 3.0 points, refers to the proportion of participants who choose agree and strongly agree. Because the statements in questionnaires are described in a positive way, the percentage of score above 3 points evaluates the level of the positive condition of teams' motivation system and its effect in improving performance.

About motivation, it can be easily know from table 6 that the relevant mean value is 3.2217; the standard deviation is 0.5206; and the percentage of score above 3.0 points is 51.3476%. As statements are described in a positive way, higher mean value equals to a better condition of motivation in the teams. The value of 3.2217 is above 3, which tells that in the sample high-tech project teams, the motivation condition is relatively good and at least more participants agree that they are effectively motivated to work hard and develop themselves to work better. Meanwhile, the percentage of score above 3.0 points also supports the fact. What's more, from the value of standard deviation, it can be understood that the fluctuation range of the data. If we refer to the data in participants' personal information, we may know more and understand deeper. It should be remember always that the survey is done on high-tech project teams, which have unique features including younger team members, more male workers, and richer education experience as well as the atypical work arrangement.

The mean value for the data collected on performance is 3.4538, larger than that of motivation. What's more, the standard deviation of 0.2911 is very small. That means participants share the view to a larger extent that their performances are relatively good. The value of standard deviation is much smaller than that of motivation, which tells the fact that the answer distribution is more scattered in motivation than in performance. As

indicated, the questionnaire focuses on individual performance. Therefore, when people are evaluating themselves, the results may not be objective enough, either too high or too low. The percentage of score above 3.0 points for performance is 50.8447%. What should be noticed is that there are about 35% of the participants are experiencing atypical work arrangement. That adds to the difficulty of evaluating individual performance. But if it is supposed that all the answers to the questionnaire questions are true and objective, we can have certain understanding on the relationship between atypical work arrangement, motivation and performance.

The above descriptive indicators point out the information, which can not be directly seen by frequency analysis or content analysis. Descriptive statistical analysis is the basic research on the first hand data collected. Through descriptive analysis, the researcher is able to have a quantitative knowledge on the problem studied, and the readers can also have a clear view on the results of the research. For example, it can be concluded that in the sample high-tech project teams, motivation systems work well, but participants have quite different opinions for the standard deviation is relatively high. And most participants hold a positive impression on their individual performance. Meanwhile, the point is agreed with a small deviation, which can be known through the value of standard deviation. What's more, the quality of the data can be also examined, such as the standard deviation telling the variation width of collected data. When it comes to the inner relationship between scales or variables, descriptive analysis can be helpless. Instead of descriptive analysis, it is necessary to use the method of correlation calculation and analysis, which is carried out in the next section.

4.1.6 CORRELATION ANALYSIS

As described in the above content, there are dependent variables, independent variables, and intermediate variables as well. In order to reveal the inner relationship between these variables, the correlation analysis will be applied here. Table 7, table 8 and table 9 display the results of correlation analysis.

Table 7 Pearson Correlation between Motivation and Work Arrangement

	Motivation	Work arrangement
Motivation	1.0000	0.5028
Work arrangement	0.5028	1.0000

The variable “work arrangement” is processed by naming a code from 1 to 5 standing for the five sorts of work arrangements “full-time, permanent, part-time, temporary and informal”. In doing so, the correlation analysis can be carried out based on the data. For example, higher average score means a larger proportion of atypical work arrangement existing in the sample teams. The correlation coefficient between work arrangement and motivation is positive as shown in table 7, but the result is not statistical significant, which suggests that the work arrangement is not linked to the motivation.

More specifically, the correlation analysis between each of the work arrangement and the motivation is carried out as shown in table 4.6. Each of the status is set to have two codes. Code one stands for choice selected while code 2 means not selected on the type of work arrangement. Thus, for every status, the correlation coefficient with the motivation is calculated based on the data of questionnaire survey.

Table 8 Pearson Correlation between Each of the Status and the Motivation

	Full-time	Permanent	Part-time	Temporary	Informal
Motivation	0.0992	-0.3044	0.6680	0.1875	0.3602

Table 8 shows that motivation is negatively related to the “permanent” type of work arrangement. And the results basically suggest that motivation is positively related to the atypical work arrangement. However, the correlations are also not statistically significant.

That may be because the sample set is not big enough or the work arrangement does not influence motivation in fact which needs other evidences to further confirm.

Table 9 Pearson Correlation between Motivation and Performance

	Motivation	performance
Motivation	1.0000	0.9760*
Performance	0.9760*	1.0000

*refers to statistical significant on the level of 10%.

The correlation coefficient between motivation and performance is positive, so the relationship between motivation and performance is also positive or it can be understood as that motivation is positive related to performance. According to Alper, Tjosvold and Law (2000), motivation systems including reward and recognition programs can positively affect performance and add to the profit of an organization. That supports the correlation analysis results and at least the result is reasonable. At the same time, it should be noticed that the value of the correlation coefficient is almost 1, which suggests that motivation has a remarkable influence on performance. And the value is statistical significant on the significance level of 10%.

With the same method, the following is the correlation results between work arrangement and performance.

Table 10 Pearson Correlation between Motivation and Work Arrangement

	Performance	Work arrangement
Performance	1.0000	0.4577
Work arrangement	0.4577	1.0000

Table 11 Pearson Correlation between Each of the Status and the Performance

	Full-time	Permanent	Part-time	Temporary	Informal
Performance	0.0790	0.3134	0.5698	0.0964	-0.2267

The above two tables show that performance is also positively related to the work arrangement, but different from table 8, performance positively relates to “permanent” and negatively related to “informal”. Therefore, we can say that performance positively relates to formal work arrangement. However, the relation direction between performance and atypical work arrangement is uncertain. And, it should be noticed that the results are still not statistically significant.

Table 12 Employee Status

Employee status*	Full-time	Permanent	Part-time	Temporary	Informal
	264 (56.29%)	32 (6.82%)	54 (11.51%)	64 (13.65%)	55 (11.73%)

Table 12 is part of table 3 on participants’ personal information. From table 10, it can be seen that employees under atypical work arrangement (part-time, temporary, and informal) are of a small proportion compared to full-time and permanent. However, if we add the three types of atypical work arrangement together, the proportion becomes more than one third. And it is reported that atypical work arrangement is more and more popular in enterprises. What is the inner motive of enterprises or teams to adopt atypical work arrangement? Is it because this kind of arrangement is better for the improvement of integrated team performance or helpful to increase organization profit? The further discussion on the topic will be done in next chapter. Besides, it should be understood that motivation system is designed to solve kinds of problems in other aspects of management and to finally do good to the company’s profit especially when there are problems as

barriers in front of improvement. For example, atypical work arrangement may need managers to solve extra problems such as consistency of the work, cohesion among team members, and so on. Motivation becomes the tool to let atypical work arrangement generate positive effect in performance. That is also the reason why motivation is taken as an intermediate variable in this research.

CHAPTER 5

DISCUSSION

In this chapter, there will be first a summary on the key finds of this thesis. Then based on the research process and the final results, it is feasible to evaluate the research objectives. As further discussion and research outlook, a discussion on relationship between atypical work arrangement and project team performance will be carried out including analyzing the motive of atypical work arrangement, role of transaction cost in hiring atypical employees and suggestions for China's atypical work arrangement development.

5.1 SUMMARY OF KEY FINDINGS

Based on the literature review including the definitions of important concepts, relevant theories, main findings in the past and other evidences related to the topic, the thesis studied the relationship between atypical work arrangement and workers' performance in high-tech project team with quantitative methodology. The method of questionnaire survey is adopted to carry out the research. And descriptive analysis, as well as the correlation analysis is applied to further analyze the data collected.

The key findings are as follow:

1) The frequency analysis indicates that employees from different high-tech project teams and different regions have diversified feelings on their teams' motivation and self-performance.

2) In the sample high-tech project teams, the motivation condition is relatively good and at least more participants agree that they are effectively motivated to work hard and develop themselves to work better.

3) Participants share the view to a larger extent that their performances are relatively good. And their opinions are of convergence because there is a very small standard deviation.

4) The correlation coefficient between motivation and performance points out that the relationship between motivation and performance is positive and motivation has a possible influence on performance. It confirms our secondary interpretative proposition, according to which the motivation is positively linked to the performance.

5) The coefficients of correlation between the status of employment and the motivation are not significant. We cannot thus confirm our secondary interpretative proposition, according to which the status of employment is negatively linked to the status of employment. Furthermore, although the correlations are not significant, the established relations are positive on the contrary.

6) Performance positively relates to formal work arrangement but the relation direction between performance and atypical work arrangement is uncertain and not significant.

5.2 EVALUATION ON RESEARCH OBJECTIVES

As stated in section 3.3, the research objectives are classified into main objective and secondary objectives. And as talked, the secondary objectives are the bridge and direction guiding the researcher to realize the main objective and finally achieve the goal of the research. After the secondary objectives are clearly determined and realized, it is much easier for the researcher to get close to the realization of the main objective and eventually have it achieved. Therefore, we will first look at the evaluation on secondary objectives. At first, we envisaged the problem the angle of the negative influence of the forms of atypical work on the motivation and performance. The results bring us to question the valuation of the atypical working forms in the context of the high-tech project teams. The results indeed

make us think that this valuation could influence the motivation and performance of the members of the teams.

5.3 EVALUATION ON SECONDARY OBJECTIVES

The secondary objectives are to explore the relationship between characteristics of atypical employment and motivation and to explore relationship between motivation and performance of atypical workers in the project team.

The data collected from questionnaire survey show that the proportion of atypical work arrangement is nearly 35%, more than one third out of the total 469 copies of questionnaires. That is obviously a large proportion for atypical work arrangement compared to normal work arrangement. Nevertheless, the sample of atypical workers remains restricted. It is a limit of the study in the comparison of the typical workers with the atypical workers. The atypical work arrangement here includes three types, which are part-time, temporary and informal. As to the characteristics of the atypical work arrangement, the part-time work arrangement refers to that compared with the full-time work arrangement, under the part-time work arrangement, employees don't work following the normal working hour, and instead, they usually do the part-time job out of the normal working hours. Under this circumstance, employees usually have their own full-time affairs, either worker in another team or just students. Therefore, team leaders have to try to motivate such employees to balance their full time affairs and the part time job. Team leaders should encourage employees to put resources into the improvement of part time job. Especially when the part time job is SOHO (small office, home office) type, team leaders need to figure out a motivation system and supervise employees to work hard to contribute to the achievement of team goals. So, it seems that atypical work arrangement needs great motivation. Temporary work arrangement means that employees don't stay at the organizations more than one year and sometimes are based on seasons. Once the temporary work is done, they quit. Under this circumstance, team leaders should help employees to change the mind of "temporary", because sometimes, some employee will not value the

job much for the temporary property (Hippel et al., 1997). And team leaders should use tools to encourage employees to take the job serious and take the motive to transfer to a permanent employee through motivation system (Hippel et al., 1997). Informal, as the word itself indicates, employees under this type of work arrangement are informal workers whose work standard and welfare are different from the formal employees. Like temporary, employees will have a kind of psychology of “free men” who are likely to behave as they are outside the organization and are easy to break the rules or lack the mind to meet the standard set in the work (Ellinson et al., 1998). And in this situation, motivation is also necessary. In general, the atypical work arrangement calls for motivation to a great extent (Wheeler and Buckley, 2001).

When it comes to the relationship between motivation and performance of atypical workers, the general relation of motivation and performance should be evaluated first, and then the situation of atypical workers will focused.

Motivation can be understood into several forms which all contribute to the improvement of performance. Firstly, payment and reward systems which are basic and essential systems in corporations are to use money, rewards or welfare to motivate employees. The perspective takes support on the theory of the needs of Maslow. And money is the primary need for employees. So, payment system and reward system play important roles in improving performance. “Money, in itself, has no incentive value. Since our economic structure has made it a medium of exchange, however, it can be used to obtain the real incentives” (Norman, 1965: 314). Once, some researches trained chimpanzees to work for poker chips. Chimpanzees could use poker chips to exchange for food. Due to this experience, chimpanzees formed a habit of saving and seeking after the poker chips. For human beings, pokers chips are equal to money and food is same to human’s own sake. Secondly, fringe benefits are another important element in motivation systems to improve individual performance (Norman, 1965). Although it is not as important as payment, fringe benefits also affect employees’ work quality. For example, when employees found other companies offer fringe benefits, which their own company

does not supply, they would feel dissatisfaction. In order to solve this criticism, the green stamp plan was suggested by an anonym. “The company would offer a basic package and a number of credit points (stamps), for which the employee could select, from a number of electives, additional benefits to the extent of his credit points. Thus employees with different needs and responsibilities could select the benefits most suitable to their tastes and personal situations” (Norman, 1965:198). Thirdly, rewards are intended to influence satisfaction with working for a particular company rather than to increase the satisfaction of the work itself. Retirement plans, life and health insurance, rest pauses, and vacations with pay are considered as rewards. Fourthly, praise is a motivator, which can make people work hard and improve performance. It is a form of ego satisfaction. And it has four functions: learning, influence on attitudes, effect on praise and evaluation of a person. Many researchers thought the praise and reprimand could affect the quality and quantity of work of employees. Well-operated motivation systems improve individual performance definitely.

As to the situation of atypical workers in high-tech project teams, it is the same. Atypical workers also follow the above points for employees. And high-tech project teams also run the business and work with the same framework of motivation system in other organizations. But with atypical work arrangement, team leaders will adjust the motivation tools according to the different types of work arrangement as mentioned in previous analysis. In a word, motivation still improves performance in the teams with atypical work arrangement, but extra consideration is needed.

5.4 EVALUATION ON MAIN OBJECTIVES

The main objective of the research is to explore the relationship between characteristics of atypical employment and performance of the atypical workers in the project team.

The evaluation on the main objectives can be worked out if we combine the analysis in the above two secondary objectives. As stated, the characteristics of atypical work arrangement make it call for motivation to a great extent and motivation does improve performance in the teams with atypical work arrangement. Therefore, it can be concluded that atypical employment does not have direct influence on performance. It means that the existence of atypical employment will not lower the level of performance and will not improve performance itself either. But, if the intermediate variable of motivation is made good use, the performance of teams with atypical work arrangement can be improved.

A further discussion on relationship between atypical work arrangement and performance is given out in the next section.

5.5 DISCUSSION ON RELATIONSHIP BETWEEN ATYPICAL WORK ARRANGEMENT AND PERFORMANCE

In this section, the motive in atypical work arrangement, role of transaction cost in hiring atypical employees and suggestions for China's atypical work arrangement development will be discussed to promote a better understanding on the topic of this thesis.

5.5.1 MOTIVE IN ATYPICAL WORK ARRANGEMENT

Greet, Youngblood and Gray (1999) hold the view that there are five competitive factors, which have the enterprises to chose a marketization of work arrangement, such as employee leasing and other informal work arrangement. The five factors are downsizing of the organization, rapid growth or decline of the organizations, globalization, increased competition and enterprise restructuring. Actually, the basic factor behind the five factors is that organizations apply atypical work arrangement to reduce cost and improve the quality of human resource's service. And all the motives in atypical work arrangement can be classified into internal motives and external motives.

The internal motives include three aspects. Firstly, atypical work arrangement is the requirement of cultivating organizations' core competence. Under the market environment

of increased competition, it is not possible for organizations to pay attention to every field of affairs and organizations should and will have focuses to seek for own competitive advantages. The atypical work arrangement provides the possibility for managers to just focus on the strategy planning and core employees and leave the human resource management of less importance to be outsourced. In doing so, the organizations save resources to manage this groups of employees. Just through motivation systems, atypical workers are encouraged to work hard. And organizations can focus on business and improve performance to form core competence. Secondly, atypical work arrangement can reduce the cost for human resource and strengthen the management efficiency. As we know, atypical workers such as part-time workers, temporary workers, and informal workers don't share the same treatment as the full-time workers, permanent workers, and normal workers. Therefore, the organizations directly save a large amount of wages or other forms of pay outs. And sometimes, the recruitment of atypical workers is not so complicated as that of typical workers. Instead, it is simple and with lower standard. Thus, the organizations save resource in recruitment, selection, training, retirement affairs and other human resource management, which meanwhile save the cost in management of administrative employees in human resource department, the lasting maintaining investment in equipments, systems, information platforms and so on. And in some countries, there are organizations specialized in providing atypical workers. Their professional operation makes them run business with low cost and they have formed a scaled economy. Therefore, in a general view, the prevailing of atypical work arrangement provides human resource management with lower cost and higher efficiency. Thirdly, the adoption of atypical work arrangement is good at reducing the uncertainty risks for organizations. In the environment of fast changing market and updating technology, through atypical work arrangement, organizations can reduce the time spent in management, improve the management efficiency and reduce risks. What is important, the uncertainty of operating environment is the key factor affecting organizations' performance. Through the adoption of atypical work arrangement, organizations possess the flexibility of quit from the employee hiring and management, which enhances the ability of the organizations to fight against the uncertainty. In China,

social capital is limited; enterprises are averagely weak compared with developed countries; and the human capital is also in short. Therefore, the atypical work arrangement is of great significance. Through atypical work arrangement, organizations are able to utilize the innovation skill, professional ability and investment of atypical workers with lower cost. And it is possible to cooperate with overseas human resource out of the complicated process for hiring normal workers. It is a win-win condition.

The external motives include four aspects. The first one is the increased competition. Especially after 1920s, it is more and more difficult for a company to gain extra monopoly profit by the advantages in capital or technology, so it becomes more important to save cost and improve labor capacity. However, labor cost is the most expensive output to a company. In order to maintain the competence, the company need to and tends to reduce the number of normal employees to realize the flattening of the organization structure and to keep the flexibility of reaction in the market environment. The second point is the promotion of internationally developing trend. During the process of launching internationalization strategy, more and more enterprises start to set up operation entity or branches overseas and hire domestic workers to work abroad. This kind of internationalized hiring crossing the geographical borders calls for large demand on atypical work arrangement. At the same time, the competition with international big groups makes known that the competition of human resource is the key to success. The emergence of atypical work arrangement can help the enterprises in sharing the investment and management pressure in human resource to be better adapt to the requirement of international development. The third aspect is the improvement of atypical work arrangement. One of the main reasons for organizations to choose atypical work arrangement is the improvement in atypical work arrangement. If there is intermediary agent, which is professional in providing atypical workers, the agent can provide more professional service for organizations in bad need of the workers and the organizations can be easier in hiring the atypical workers. And there will be scale effect generated. The rapid growth of management consulting including the development and improvement in atypical worker arrangement service provision brings opportunity for relevant organizations to adopt atypical workers. The last point is the impact from modern

information technology. The modern information technology makes the examination and supervision on atypical workers possible and feasible. Because of the efficiency and competition, more and more modern information technology are applied in the field of human resource management work, such as the application of internet, the implementation of ERP (Enterprise Resource Planning), the development and application of work evaluation technique, as well as the use of employee examination tools. That greatly reduces the agency cost caused by three-party contracts and makes it possible to apply the atypical work arrangement in large scale. In spite of these motivations, there are still certain disadvantages in the atypical work, as seen in chapter 2.

5.5.2 ROLE OF TRANSACTION COST IN HIRING ATYPICAL EMPLOYEES

The analysis in this section is under the assumption that there is intermediary agent in the market to provide professional service for enterprises' hiring atypical workers. In the circumstance, these professional agents form their own market (Benner, 2002). In the market, enterprises become the consumers. Once enterprises need to hire atypical workers, they need to sign a contract with the agent. And all the relations and relevant affairs will be listed in the contract. And the transaction cost generates in the process of contracting between the enterprises needing atypical workers and the agents providing atypical workers.

It is said in economic theory that enterprises are the economic organizations appearing to reduce market transaction cost (Williamson, 1979). It is different between hiring atypical workers by enterprises themselves and "buying" atypical workers from intermediary agents. The difference is in the transaction cost. Here, another concept should be introduced. Specialty asset is to evaluate to what a degree a kind of asset can be used by different users in different applications under the conditions that the production value of the asset will not be sacrificed. For the transaction of specialty asset, a transacting mode has been designed to reduce the transaction cost (Williamson, 1979). The specialty level of human capital depends on the employee's quality, technology, skill and the relationship with their organizations' main business. For example, the program writer of software

company and the certificated public accountant in accounting firm belong to the human capital of specialty while the administrative employee and typist of the accounting firm are the human capital without asset specialty.

The cost of human resource transaction includes information searching cost, training cost, and the cost of performing the contract and so on (Williamson, 1979) Although in the high-tech industry, human resource is a typical specialty asset generally, because the technological barrier between employees of different fields are relatively high, the atypical employees are usually not the core talent in organizations. Most of them are distributed in the administrative work. And with the increase in specialty asset, adopting internal hiring within the enterprise will reduce transaction cost; and with the lower in specialty asset, adopting the form of market transaction can be more effective and reduce transaction cost. That means if the needed workers are of lower specialty, the company or the team should turn to the intermediary agent and hire atypical workers under atypical work arrangement. In doing so, the organization can reduce the cost in information searching, employee training, and the performing and supervising of contract as well as the cost in project management.

5.6 SUGGESTIONS FOR CHINA'S ATYPICAL WORK ARRANGEMENT DEVELOPMENT

As the questionnaire survey is carried out in China, the data reflect the condition in China. Therefore, in this section, the developments of atypical work arrangement in China will be discussed. Before proposing the suggestions, we will first examine the problems existing in current situation of China.

Compared with developed countries, the atypical work arrangement market is backward (Cooke, 2005). Firstly, there are only a few intermediary agents providing service in atypical workers. Although more and more companies enter into the trend of atypical work arrangement and the number of intermediary agent grows fast, the number is still very small compared to western developed countries (Cooke, 2005). There are still a big potential and space to develop. At present, there are more than 70,000 labors

dispatching companies; in Japan, the total number of enterprises working on providing atypical workers is above 4,000 (Wei Yanchun, 2003). However, in the emerging market of China, the number is no more than 2,000 currently (Wei Yanchun, 2003). Besides, the scale of China's intermediary agent is small. In countries with developed market economy, atypical work arrangement has been a very mature form of employment and there are already many big companies as intermediary agent in this field. One of the biggest intermediary agents in America has about 6,000,000 employees; and the biggest in Japan has more than 200,000 employees and the turnover reaches hundreds of billion Yen (Wei Yanchun, 2003). This industry in China has been growing fast since 1990s and still keeps a development with rapid speed. However, the problems are that companies entering into the industry are of small scale, and it takes a very long period to expand themselves. It can be understood that there is a long way for China's agents to develop in scale, service quality and risk taking ability. In addition, the operations in these intermediary agents are not standard enough, which are shown in two aspects (Wei Yanchun, 2003). On the one hand, the business status is not clear. The intermediary agents work on a special labor economy whose business has not been regulated clearly in China's laws, which causes great impact on the business marketing of these intermediary agents. They are not able to register in accordance with their main business, and at present, most of them are registered under other titles. In such circumstance, these enterprises' business contents are not standard, and it is difficult to check their income, as well as the taxation law, which they should obey. On the other hand, the unclear regulation causes a lot of problem in regulation and supervision and even the atypical workers to be introduced and the worker "buyers" are not clear what kind of counterparty they are doing business with. What's more, the employees in such intermediary agents are of less stability. That is resulted by the non-standard contract. The items in the contract are too simple, and the right and responsibility are not written clearly enough. Therefore, there is a high separation rate in employees. All the problems listed out have negative impact on the development of China's atypical work arrangement management. In order to solve the problems and promote the well development, several pieces of suggestions are proposed below.

Firstly, establish an industrial cluster to promote the increase of demand in atypical work market. The matching efficiency between enterprises and intermediary agents has a close relationship with the concentration ratio of enterprises. Therefore, the formation of industry cluster will promote the growth of demand in the market. In order to speed up the industry establishment, the following aspects should be worked out.

Secondly, speed up the improvement in legislation of atypical work arrangement. These years, more and more companies adopt the atypical work arrangement and the market has becoming bigger and bigger. That leads to the generation of legislation on atypical work arrangement. However, the work on related legislation is developing slowly and is far from an improved legislation. The following content is about a comparison between the Taiwan and America to provide some indications for the work in legislation.

1) The subject qualification of atypical work arrangement. America's legislation has clear formulation on the subject's qualification, so does China. It involves three parties, workers, employers, and the intermediary agents. The legislation in both America and Taiwan does not formulate the rules in the qualification of employed workers and the employers (Xue Xiaodong, 2005).

2) The protection of employed workers' income. In Taiwan, the payment of wage of the employed workers are a kind of direct joint paying responsibility, which is written in the contract to protect the right of employed workers (Wei Long, 1998). In America, employers pay the wage if the intermediary agent cannot afford it (Wei Long, 1998).

Thirdly, the government should enhance the management of atypical work arrangement market. Standardize the fee system of atypical worker employment and make clear the foundation, procedures and checking methods of every sort of fees. The fee system includes the employees' basic salary, rewards, subsidy, medical insurance, unemployment insurance, retirement insurance, agent serving fee and human resource development fee, and so on. Set up the qualification certificated systems and standardize the quality of intermediary agents. Formulate strict and fast examination procedure; solve

the validity of operation of intermediary agents; establish improved legislation, management and operation systems. Improve the systems of supervision. The regulating departments or industry committee should have their function played, strengthen the supervision and check on the market and the operation behavior. Punish the illegal behavior and entities to maintain a well-operated market. Educate the employees, establish skill qualification certification and faith examination system. If the market cannot solve the problem of training the employees working for agents, the government can organize kinds of professional specialized training in fixed time through the government's human resource serving center or labor department. And combined with qualification certification, it can improve the employees' quality and promote the perfection of the whole industry of atypical work arrangement serving.

Fourthly, promote the system innovation and break the limits of traditional concept on work arrangement. Intensify the reform of enterprises' personnel systems and encourage the innovation in human resource management. In the new situation of economic development, the state-owned enterprises should establish modern enterprise system in order to survive and develop in the increased market competition and think over how to activate the flexible internal work arrangement on human resource. The traditional concept on work arrangement captures the following features: 1) although the contract management is applied, there are still fixed workers, and the problem that workers can enter but can't quit is not solved, which causes big difficulty to the dealing of labor relationship; 2) the managing cost and the labor cost are very high due to the not professional worker providing market; 3) there is only one type of work arrangement – full time under which arrangement some employees don't make effort at most time and their wage paid does not match their actual working hours. Therefore, the traditional mind must be changed, and the full time work arrangement needs break through. The flexible diversified work arrangement should be encouraged. The atypical work arrangement is the results of innovation on labor arrangement these years. The emergence of atypical work arrangement is not occasional. It solves the several problems mentioned above. Currently, the first thing is to further promote the reform of personnel department in state-owned enterprises, break through the

limit of traditional work arrangement and encourage enterprises to try the diversified work arrangement types from the level of policies. Besides, the society should enhance the social insurance system innovation to expand the coverage of the social insurance. The social insurance system is a kind of policy protection for employees transferring from organization member to society member. The improved social insurance system can be the basis of diversified work arrangement. And at present, the country should first to cover the historical outstanding accounts. As reported, the fund shortage is serious. The country is using the young generation's fund to maintain the system serving for elder generation. So the problem of fund sourcing is quite urgent. Meanwhile, the country should innovate the investment system of social insurance funds to realize the appreciation of the funds. In addition, the coerciveness of social insurance should be strengthened and the payment system needs reform.

The above suggestions proposed cover aspects including policies, legislations, social insurance system, industry construction and so on. There is a long way for China's organizations to better understand and improve the atypical work arrangement as well as to balance the relationship between work arrangement selection, motivation implementation and performance evaluation.

5.7 CONTRIBUTIONS AND LIMITS OF THE STUDY

This exploratory study opens the way to the others' researches, because we see certain influences of the forms of atypical work. As it is about a subject little investigated, so our study opens a door on a series of relevant researches. In future study, the topic can be further moved on and the researcher can make effort in figuring out how to adjust the

motivation according to different type of work arrangement to finally improve the team performance.

Through the study, it can be inferred that in particular in a Chinese context, the atypical work allows a mobility of the workers. This mobility allows in particular the development of the skills, the transfer of the knowledge from a project to the other one, even from an organization to the other one. These elements can certainly favor the innovation. Furthermore, the results differ from those of several studies on the atypical work, who depict consequences rather negative. However, the study concerns experts. So, the consequences of such contractual forms explain in a different way.

The condition in other regions and countries also needs examination to achieve a more general conclusion. The thesis is also the opportunity to think about the public policies and the modes of management of the atypical work in China. We see that these atypical working forms can be very important for the plan of the innovation. This innovation is very important in China. However, it seems that the practices and the policies which surround these forms of atypical work are rather rare. A better regulation and a better management would allow to take advantage of it.

The thesis focuses in a phenomenon mattering in China, which is a interesting angle, but little supervised. And because it is in China, we have a big sample set which helps to improve the accuracy of statistical examination. In addition, there comes the democratic validity. The studied theme seems important for the concerned workers because there are very many to want to answer the questionnaire.

Limitations.

The construction of the framework is not so good. The used tools do not correspond perfectly to the construction of the framework. Besides, as mentioned in the above sections, there are several limitations in the questionnaire survey, such as the confidentiality, the

subjective measures and so on. It is hoped that in later study, the desirability of the questionnaire and the process of sampling can be improved.

CHAPITRE 6

CONCLUSION GÉNÉRALE

Ce mémoire étudie les formes de travail atypiques dans des équipes de projet de haute technologie et la relation entre ce régime de travail atypique et la performance ainsi que la motivation des membres de ces équipes. Une enquête par questionnaire a été réalisée pour recueillir les données auprès des membres d'équipes projet en Chine sur leur motivation et leur performance. Les données collectées ont ensuite été l'objet d'une analyse descriptive ainsi que d'une analyse de corrélations.

Avec la méthodologie quantitative, il est constaté que les employés de différentes équipes de projet de haute technologie et de différentes régions en Chine ont des perceptions diversifiées quant à leur motivation et leur performance. Cependant, la motivation au sein de l'échantillon semble plutôt élevée, la majorité des participants convenant qu'ils sont effectivement motivés à travailler dur et à se développer afin d'améliorer leur performance. En outre, les participants partagent le point de vue que leurs performances sont relativement bonnes. Les résultats des analyses de corrélation démontrent que les formes de travail atypique sont positivement liées à la motivation et que la relation entre la motivation et la performance est positive. Finalement, la performance est positivement liée à chacun des arrangements de travail formel et négativement au travail informel, mais les relations ne sont pas significatives.

Ainsi, on peut constater que le travail atypique n'est pas nécessairement une source de démotivation pour les membres des équipes de projet et, par conséquent, une cause de moins bonne performance. Ce mémoire a l'intérêt de mettre en lumière de tels résultats, rares dans la littérature puisque le lien entre les formes de travail, la motivation et la performance demeure peu exploré. Aussi, si certaines études n'établissent pas de lien clair

entre motivation et performance, nos résultats indiquent une relation significative dans les équipes de projet. Cependant, cette recherche comporte certaines limites. Nous avons en effet demandé aux participants d'évaluer leur propre performance. Leur évaluation n'est peut-être pas objective et les biais de désirabilité sociale peuvent influencer les réponses. De même, l'étude a été menée dans un contexte particulier, celui de la Chine. Certaines caractéristiques culturelles peuvent faire en sorte que les résultats ne soient pas nécessairement généralisables ailleurs, comme en Amérique du Nord par exemple. Néanmoins, nos résultats de recherche ouvrent la voie sur l'influence de formes de travail de plus en plus utilisées, soit les formes de travail atypique.

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APPENDIX I

Research survey questionnaires

Mr. and Mrs.

In this paper, we would like to ask you to participate in a research entitled "Analysis of atypical work arrangement in Hi-tech project team".

This research is face to the team, which is about the project of High-Tech Industry. It focuses on the atypical work arrangement in high-tech project teams, trying to investigate relevant issues like the performance and motivation of this employment model. This is now studied by Mr. Hong Sun, a student of University of Quebec in Rimouski. We would invite you to participate our research and answer the following questions.

This questionnaire is composed by 3 parts:

Chapitre 1: The general information of participants

Chapitre 2: Performance

Chapitre 3: Motivation

When you answer those questions, please give me the answer without hesitation. Generally speaking, the first impression reflects what you think. After you answer the questionnaire, please mail to us with the address below. The participation is voluntary. All completed questionnaires are treated with confidentiality and anonymity.

Thank you for your cooperation.

Hong Sun, researcher

Contact:

2-1401 Chunjiangmingyuan, Shangcheng District, Hangzhou,
Zhejiang, China

Post code: 310005

Tel:(86)-571-88882001

Mail: sungreece@hotmail.com

Catherine Beaudry, professor

Contact :

University of Quebec at Rimouski

300, Allée des Ursulines

Rimouski, Québec (Canada)

G5L 3A1

QUESTIONNAIRE OF ATYPE EMPLOYMENT RESEARCH

Thank you for participating in this questionnaire. This research will focus on the atypical work arrangement in high-tech project teams, trying to investigate relevant issues like the performance and motivation of this employment model. If you have any questions regarding the completion of this questionnaire please contact *Hong Sunby* phone (86)-571-88882001 or email sungreece@Hotmail.com.

Please submit the completed questionnaire by *April, 2011* and send it to the address as following:

2-1401 Chunjiangmingyuan Shangcheng District, Hangzhou, Zhejiang, China

Post code: 310005

Important Directions

* Do not write your name on the questionnaire. Your answers will be kept completely confidential. The number on the front of the questionnaire is to keep track of returns and make sure only official questionnaires are counted.

* Please try to answer all questions. Filling out the questionnaire is entirely voluntary, of course, and no one will know if you choose to skip some questions. But a good response

is necessary for a valid study and we hope that you will answer as many of the questions as you can.

CURRENT INFORMATION ACQUISITION, USE AND GENERATION

Your responses to these questions will provide data relating to the types of information that you use to perform your tasks. It will also provide data that will enable the mapping of information flows within the organization and between the organization and external environment.

(All these details are required for communication purposes only and will not be disclosed)

PERSONAL DETAIL

Gender: Male Female

Age: 20-29 years old 30-39 years old 40-49 years old

50-59 years old 60-69 years old more than 70 years old

Education: High school College Bachelor Master Doctor

Division:

How long in present position: <1 year 1-5 years 6-10 years >10 years

How many members in your team. 1-5 persons 5-10 persons 10-20 persons 20-30 persons 30-40 persons 40-50 persons more than 50 persons

What is your employee status ?

- Full-time work
- Permanent work
- Part-time work
- Temporary work
- Informal work

INSTRUCTIONS FOR COMPLETING THE QUESTIONNAIRE

Please circle your response to the items. Rate aspects of the workshop on a 1 to 5 scales:

1 = "Strongly disagree," or the lowest, most negative impression

3 = "Neither agree nor disagree," or an adequate impression

5 = "strongly agree," or the highest, most positive impression

WORKSHOP CONTENT (Circle your response to each item.)

1=Strongly disagree 2=Disagree 3=Neither agree nor disagree 4=Agree 5=Strongly agree

Part 1: About Motivation

		Disagree ==» Agree
		1 2 3 4 5
1	<i>People who work deserve success.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2	<i>If you work hard, you will succeed.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3	<i>Work should be considered central to life.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
4	<i>I often look for opportunities to develop new skills and knowledge.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5	<i>In my view, an individual's personal life goals should be work-oriented.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6	<i>I have very strong ties with my present job which would be very difficult to break.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7	<i>Life is worth living only when people get absorbed in work.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
8	<i>The most important things that happen in life involve work.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
9	<i>I have created a plan for my development in this line of work field.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
10	<i>I feel a sense of personal satisfaction when I do this job well.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
11	<i>My opinion of myself goes down when I do this job badly.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
12	<i>I am very much involved personally in my job.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
13	<i>Most of my interests are centre around my job.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Part 2: About Performance

		Disagree ==> Agree
		1 2 3 4 5
1	<i>I can help the client to find what they really need.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2	<i>I can satisfied my client.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3	<i>I care all the detail things in my work.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
4	<i>My project manager is satisfied with my job.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5	<i>I am always working with my colleges happily and obtain their recognition</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6	<i>I am always keeping good relationship with the clients and obtain their recognition.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7	<i>I am always getting the goals which is expected.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
8	<i>I am always doing the task which is more than expected.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
9	<i>My workload is more than others'.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
10	<i>My working quantity is more than others'.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
11	<i>My working attitude is greater than others'.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
12	<i>Overall, My working performance is better than others'.</i>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Thank you for taking the time to share your opinions. If you have any final comments, please use the space below or inside the back cover.

