## 論文内容の要旨

Construction labor productivity (CLP) is an important aspect of the construction industry. The construction sector, in many developing countries like Vietnam, is facing numerous problems. One of the big problems is poor labor productivity. To solve this problem, many studies have identified and classified factors affecting this aspect. However, the roles of autonomous motivation (AM) and work autonomy (WA) in CLP improvement has been ignored. This knowledge gap hampers further efforts to explore new CLP determinants that increase productivity. Accordingly, self-determination theory (SDT) is promising in terms of its ability to bridge this gap and explain how AM and WA can be generated by integrating reasonable leadership styles and basic psychological needs satisfaction (BPNS). Therefore, this project was designed to explore the roles of AM and WA in improving CLP based on SDT perspective. This project includes three studies as follows: The first study developed a novel model for assessing the effects of engaging leadership, three basic psychological satisfaction factors (i.e., autonomy, competence, and relatedness), and work motivation (i.e., autonomous motivation, controlled motivation and amotivation) on CLP. The structural equation modelling (SEM) results showed that, in addition to reinforcing the traditional view, which emphasized the role of controlled motivation (CM) in CLP improvement, this study revealed several interesting and valuable findings. First, the important role of AM in proving CLP was explored. Second, to improve AM and CLP, the satisfaction of competence and relatedness needs to be played a vital role. These findings provide a new perspective on both industry and academics with respect to how CLP can be enhanced, as well as how AM can be generated and maintained. Finally, the "negative legacy" of the construction industry was explored. This feature implied that the older and more experienced, but not necessarily skillful, workers perceived autonomy satisfaction as being achieved through selfish work, resulting in an obstacle to productivity improvement and the promotion or maintenance of work motivation. Selfish work is a novel factor that was first discovered in the construction domain. This study provides substantial practical recommendations for CLP improvement, such as enhancing autonomous motivation, promoting satisfaction with competence and relatedness, and reducing selfish work. Theoretically, this study expands and reinforces SDT knowledge by comprehensively illuminating leadership and psychological and motivational indicators in the construction context. In the second study, the author quantitatively measured the WA level of workers by adopting Relative Autonomy Index (RAI) and Aggregated Motivation Index (AMI) that was developed in this research. The results showed the different effects of two of these scoring protocols in measuring WA. Specifically, the RAI explains differences in WA between genders, while the AMI more precisely accounts for dissimilarities in WA on the basis of work experience. In addition, the author developed a new model by which to discover the function of WA in increasing CLP and determined the ways through which WA can be cultivated and maintained. The SEM was conducted to examine the effects of WA on CLP. The results indicated that WA positively and significantly contributed to CLP. Promoting WA required paying attention to the competence and relatedness satisfaction of the workers. Furthermore, latent and potentially extensive labor management-related problems were identified, namely, unsuccessful career development and the underutilization of experienced workers. Three meaningful policy recommendations were put forward to solve the aforementioned problems and improve CLP: the effective organization of crew members, the improvement of training, and the improvement of site amenities. This study expands theoretical knowledge by (1) developing and justifying the AMI as an auxiliary to conventional indices, (2) proposing five conditions necessary for optimal scoring in WA

measurement and (3) developing a motivation matrix that identifies and distinguishes the attributes of different groups. In practical terms, the findings support the introduction of reasonable policies that advance the career development of workers, promote WA and improve CLP. These achievements, in turn, significantly advance effective and sustainable construction workforce management. The first study explored the ways of promoting work motivation through BPNS, in fact, however, many factors in addition to BPNS may affect work motivation of construction workers. Hence, the third study managed 35 factors constraining their work motivation in construction projects. This study differs from past studies in CLP research by investigating the severity level and occurrence frequency of barriers to work motivation in construction projects, and a more realistic ranking of these factors by adopting a risk mapping approach. The results indicated that the following barriers as the most significant factors constraining work motivation in construction projects: (1) payment delay, (2) lack of financial incentive schemes, (3) lack of professional training and advanced learning opportunities, (4) poor work condition, (5) unskilled workforce, and (6) work dissatisfaction.

Keywords: autonomous motivation, work autonomy, construction labor productivity, self-determination theory, Vietnam.