

# Regional Development and Human Development System (地域発展と人材育成システム)

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**要約:** 本研究は、地域発展状況および人材育成環境の実態調査を行い、社会経済発展を目的とした、大学機能を組み込む新しいシステムの開発を目的とする。本研究では中国における大学の活動、ネパールおよびカンボジアにおけるインフラ発展・人材育成状況について調査を行なった。また、新しい地域発展・人材育成システムの開発を目的として、大学が企業を経営する方式 (University-Run Enterprises)、大学コラボレーション、COE機能について検討を行なった。

**ABSTRACT:** This study aims at investigating regional development and human development system, and developing a new system incorporating university's functions for the socio-economic development. Universities activities in China, human and infrastructure development environment in Nepal and Cambodia were studied. University run enterprises, universities collaboration and center of excellence approaches were integrated in order to develop new regional and human development system.

## Summery of Research

The economic development situation of eastern, central, western regions in China, and the functions of Chinese universities, which include education, research and contribution to the society were investigated. A new Chinese innovation system has been emerging in terms of university-run enterprise. In recent years, science parks, incubators, and high-tech development zones have been provided with strong incentives. The commitment of Chinese government to further introduce a market economy has been elaborated with a focus on the relations between university and industry. The operation mechanism of Chinese university-run enterprise has special characteristics, which are government support, relying on university, market mechanism, and industry movement. As human society enters the knowledge and information age, education is expected to play an increasingly important role and it gives driving force to regional economic development of China by using of the functions of university.

Infrastructure and development environment in

Nepal and Cambodia are in dismal situation. The construction industry could not deliver project efficiently. Human resources development system was ineffective. University and industry are working independently and there no evident linkage between them exists. Industry practitioners were complaining the quality of graduates for not acquiring enough practical knowledge and skills from university education. In addition, neither government provided universities fund/facilities nor the industry motivated for technology development. Lack of enough appropriate human resources and technology for construction and management were the main reasons for the poor performance of the industry and poor quality of infrastructure as well. Universities collaboration and center of excellence approach were recommended to improve the quality of human resources and to develop appropriate technology domestically in developing countries.

In addition, the construction industry was not able to deliver infrastructure development projects within stipulated resources with anticipated quality under traditional project delivery system. Only several

projects were completed within the stipulated resources with required quality. The traditional project delivery system could not provide the industry opportunities to enhance capacity for efficient infrastructure development. Alternative project delivery incorporating human development system was recommended in order to improve the capacity of industry and to deliver project efficiently.

Moreover, official development assistance (ODA), since its adoption, has become the major resource for socio-economic development in developing countries. Japan's ODA occupies major share in the whole ODA from the developed countries. However, the prevailing implementation system of the Japanese ODA could not provide the construction industry of recipient countries enough opportunities to enhance significantly the technological and managerial capacity. In addition, human resource development is inefficient. The quality of higher education was left unaddressed. A new system incorporating university functions integrated with technology and infrastructure development through ODA was developed. The first part of the system which consists of university's capacity enhancement and technology transfer/development system is already in operation to enhance the capacity of Institute of Technology of Cambodia and to develop technology for high strength concrete bridge girder in Cambodia. Eventually, the system will be implemented in other developing countries. The brief of the study is discussed under the headings "***Regional Development Scheme in China Using the Functions of University***", "***Infrastructure Development and Educational Opportunities in the Least Developed Countries: Issues and Recommendations***", "***Improving Performance of the Construction Industry in the Least Developed Countries through Alternative Project Delivery Systems***", "***Official Development Assistance 'ODA' And Human Resource Development in the Construction Industry of a Developing Country***" and "***Pretension Bridge Girder using Self-Compacting Concrete for Cambodian Rehabilitation***", and are presented in the Annex.