

IMPROVEMENT OF CAMBODIAN CONSTRUCTION INDUSTRY IN THE ASEAN ECONOMIC COMMUNITY

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ABSTRACT

This research is to find out the solution for improvement of the construction industry in Cambodia and in the ASEAN Economic Community (AEC). The problem and the factors causing the problems were identified. Two major problems were (i) Organization's vision and its skill, and (ii) Knowledge and motivation towards AEC. These problems causing by three major groups of factors that is (i) Soft infrastructure, (ii) Construction investment policy, and (iii) Construction organization management. There are 14 factors from that main topic causing factors were taken for the recommendation from concerned government, private stakeholders, and literate review of how to improve for the overall solution for an improvement of construction industry of Cambodian in the AEC.

Keywords: construction industry development, strategy planning, economic development, Cambodia

INTRODUCTION

The problems are influenced by many factors in the construction industry of Cambodia in the ASEAN Economic Community (AEC). A method is needed for improving those factors in order to minimize the problems.

The ASEAN Economic Community (AEC) is an economic community which has planned for the integration by 10 member countries of South East Asia by 31st of December 2015 (ADB, 2015; ASEAN Secretariat, 2012). ASEAN leaders had produced an ASEAN Economic Community Blueprint since 2008 (ASEAN Secretariat, 2007). Cambodia is one of the members in the AEC, so it could take an opportunity to attract a lot of construction

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investments, both from ASEAN countries and from outside ASEAN. However, the Cambodian construction industry still has many issues, and it needs to be improved for a better development. The construction industry of Cambodia is lagging behind most of the other countries in the region both technically, and economically (World Bank, 2013). Even though the economic growth was faster this recent year with a 7.2% increase in 2013 (ADB, 2014), it still largely depends on foreign aid (SATO, SHIGA, KOBAYASHI, & KONDOH, 2011). Many project donors were concentrating on producing a human resource and construction of infrastructure which is the key driving force of Cambodia for better development.

The construction industry is a labor intensive sector with a low qualified labor force (Horta & Camanho, 2014). Increasing investment in the construction industry in Cambodia has to be implemented with a competitive strategy in the AEC. The current public administration activity in Cambodia is not efficiently effective and not economically sound (Matei & Băieşiu, 2014 -a). It takes approximately 710 days to get all the construction permits required to complete a project in Cambodia, as opposed to 200 days in Vietnam and about 150 days in Thailand. It takes 31 days to clear each procedure in Cambodia while in Vietnam and Thailand it is about 15 days, and 7 days in Lao's People's Democratic Republic (UNDP, 2009).

The issues of the construction industry of Cambodia in the AEC are in two main groups: (1) Organization's vision and its skill, which includes the vision of the organization, and knowledge and skill; (2) Knowledge and motivation towards the AEC, which includes the knowledge aspect about the AEC, and the level to promote the organization for the AEC (MIN, Leungbootnak, Srinavin, Aksorn, & Deewong, 2016a).

The influencing factors for the above problems are three main groups: (1) Soft infrastructure, which include Research on the construction sector, public administration, the political system, Human rights, the stock market, social affairs, laws and regulation; (2) Construction investment and policy, which include trade enhancement; Investor's confidence and trade and policy; (3) Construction organization management, which includes skill in monitoring, capacity development of human resource, and strategy planning (MIN, Leungbootnak, Srinavin, Aksorn, & Deewong, 2016b).

Since the influencing factors on the issues of the construction industry of Cambodia have been identified, there is still a big deal concerning the construction industry of Cambodia that is recommendation to improve it.

Therefore, this research is particularly to find out recommended to improve the construction industry of Cambodia to survive in the AEC.

LITERATURE REVIEW

Characteristic of the ASEAN Economic Community (AEC)

The world economic challenge could make any countries and regions to form an economic community in order to gain more benefit. The ASEAN Economic Community was integrated on 31st December 2015 (ADB, 2015; ASEAN Secretariat, 2012).

The ASEAN leaders produced a publication of the ASEAN Economic Community Blueprint since 2008 (ASEAN Secretariat, 2007). According to this blueprint, there are four key characteristics of the AEC: 1) a single market and production base 2) a highly competitive economic region 3) a region of equitable economic development 4) a region fully integrated into the global economy. In the AEC blueprint, there are five core elements of an ASEAN single market and production base (ASEAN secretariat, 2008): 1) free flow of goods, 2) free flow of services, 3) free flow of investment, 4) free flow of capital, and 5) free flow of skilled labor (ASEAN secretariat, 2008). Cambodia needs to deal with these issues to prepare itself in the AEC as one of the developing countries in the ASEAN (UNDP, 2009) and Cambodia has a very low GDP as compared to most of ASEAN members.

Construction Investment in Cambodia

The construction industry accounts for almost 7% of the total GDP of Cambodia for each year (Penghuy, 2011; UNDP, 2009). This means it plays a very important role in Cambodia's economic development.

Until 2013, there were 1,641 construction projects with an approximate total investment budget of \$2,773.13 million. It was increased by 31.45% as compared to 2012. There are 1,327 construction companies that had been registered and legally operated until the end of 2013, which 1,043 are small, 163 are medium, and 121 are large construction companies. Construction companies are comprise of 964 local contractors and 310 foreign contractors, 42 local design/consultants and 11 foreign design/consultants (MLMUPC, 2014). Separately, in 2013, there are 149 newly established local construction companies, and 59 foreign construction companies registered. In addition, there are two local construction consultants, and two foreign construction consultant companies legally registered (Huy, 2014; MLMUPC, 2014). The Cambodian construction sector faces a number of challenges both in the short and long term, which should be addressed to ensure maximum efficiency and safety and to make the sector an enabler for other productive sectors of the Cambodian economy (UNDP, 2009).

Calculating from the year of 2000 to 2013 (MLMUPC, 2014), Korea is the biggest investor in construction projects in Cambodia with a total budget of \$1,858.09 million for 41 projects. The second rank is China with total budget of \$747.27 million for 72 projects. The third place is England with total budget of \$131.44 million for 7 projects. The fourth is Japan with a total budget of \$113.44 million for 15 projects. The fifth is Thailand with a total budget of \$86.67 million for 16 projects. The sixth is Russia with \$46.75 million for 1 project. The seventh is Lao with \$36.36 million for 1 project. The eighth is Malaysia with a total budget of \$35.72 million for 10 projects (MLMUPC, 2014). The rest is from Taiwan, Vietnam, India, USA, Australia, Singapore, Belgium, France, and the last one is Canada. The total of foreign investments in the construction project was \$3,131.51 million for a total of 182 projects. The foreign construction investors are depicted in table I (MLMUPC, 2014).

The majority of construction materials are imported, and the Cambodian construction companies depend to a large degree on regional and world prices for materials (MLMUPC, 2014). The following table II and figure 1 depict the number of projects and investment budget in the construction sector in Cambodia from 2000 to 2013 which is licensed by the Ministry of Land Management, Urban Planning, and Construction (MLMUPC) (MLMUPC, 2014).

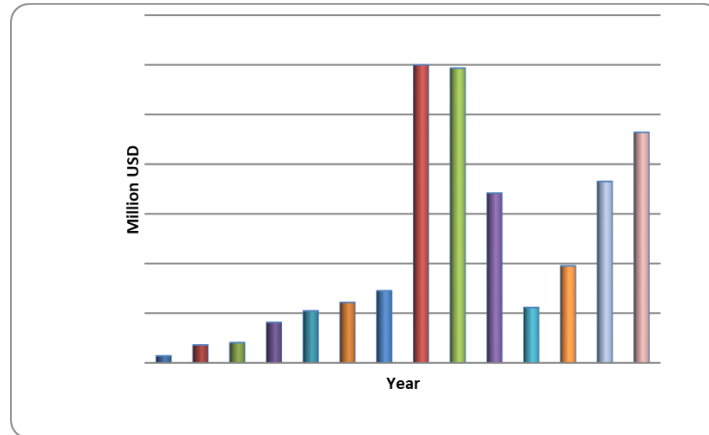


Figure 1. Construction investment budget licensed by MLMUPC.

According to Figure 2 below, it's shown that the construction development in Cambodia is easily influenced by the world economy. As in 2008, when the economic crises in many countries in the world decreased, the development of construction industry of Cambodia dropped down dramatically as it was 3000.8 million USD in 2007 to 557.21 million USD in 2010. In addition, its development is largely dependent on foreign aid.

Cambodia is hard to have the capacity for the completion on the investment in others developing or developed countries in ASEAN, but Cambodia can survive from the investment of other countries in Cambodia as shown in Figure 2.

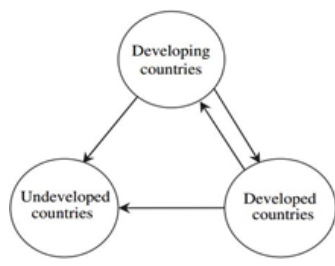


Figure 2. Pattern of international trade in construction services (Bon, 1992).

Issues of Construction Industry of Cambodia in the AEC

Cambodia could take an opportunity to attract a lot of construction investors to invest in it as a member of AEC, both from ASEAN countries and outside ASEAN. However, Cambodian construction industry still has a lot of issues, and it needs to be improved for a better development.

The issues of the construction industry of Cambodia in the AEC are in two main groups: (1) Organization's vision and its skill, which includes vision of the organization, knowledge, and skill; (2) Knowledge and motivation towards the AEC, which includes the knowledge aspect about the AEC, and the level to promote organization for the AEC as depicted in table I (MIN et al., 2016a).

Table 1. Issues of the construction industry of Cambodia in the AEC

Items
Group 1: Organization's vision and its skill
Less investment in the construction sector
Knowledge and skill
Vision of organization
Group 2: Knowledge and motivation towards AEC
Knowledge and motivation to promote organization for the AEC

Source: MIN et al., 2016a

Factors Causing Problems for the Construction Industry of Cambodia in the AEC

The factors causing problems for the construction industry of Cambodia in the AEC are in three main groups: (1) Soft infrastructure, which include research on the construction sector, public administration, political system, human rights, stock market, social affairs, and laws and regulations; (2) Construction investment and policy, which include trade enhancement; investor's confidence; and trade and policy; (3) Construction organization management, which includes skill in monitoring, capacity development of human resource, and strategy planning as depicted in table II (MIN et al., 2016b).

Table 2. Factors causing problems for the construction industry of Cambodia in the AEC

Items
Group 1: Soft infrastructure
Research on construction sector
Public administration
Political system
Human rights
Stock market
Social affairs
Laws and regulations
Construction tendering methods
Group 2: Construction investment and policy
Trade enhancement
Investor's confident
Trade and policy
Group 3: Construction organization management
Skill in monitoring
Capacity for development of human resources
Strategy planning

Source: MIN et al., 2016b

RESEARCH METHODOLOGY

Conceptual Framework

The focus of this research is on recommendations to improve factors that cause problems for construction industry of Cambodia towards AEC. Figure 3 shows the conceptual framework that can be used for the improvement of construction industry of Cambodia towards AEC. From literature, the components of the problems are long term vision, policy issues, and the practical use of culture. The factors that cause problems for the construction industry of Cambodia for the AEC are government action, production factors, area environment, demand condition, and the industrial organization structure. The improvement of each factor will reduce problems for the construction industry of Cambodia in order to survive in the AEC.

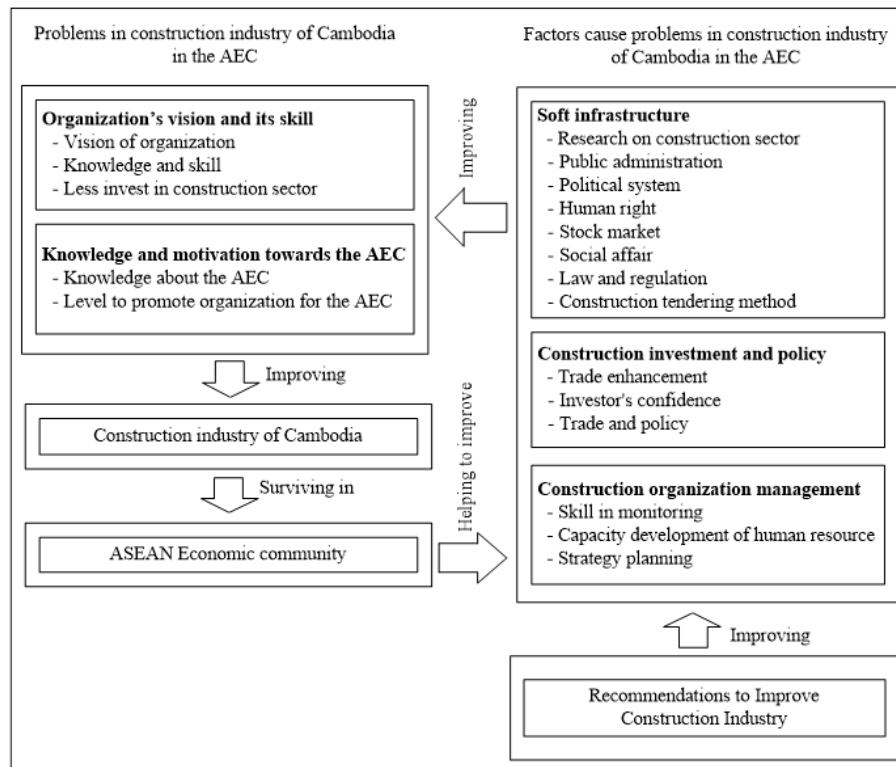


Figure 3. Conceptual framework.

Surveying

A purposive sampling with open-ended questions were made and sent to construction stakeholders both in public and the private sectors. After getting replies from all respondents, only 85 sets of questionnaires were useful for the analysis. The descriptive analysis was used

for the analyzing of this data. In addition, the recommendations were also selected from the literature review.

- 1) *The Public Sector*: The samples were collected from the most five concerned ministries that work in the relationship to the construction sector. The selection of departments and offices, to conduct a survey were appointed by each ministry to the most concerned departments under their supervision and works related to the construction sector. Those ministries are: the Ministry of Land Management, Urban Planning and Construction (MLMUPC), the Ministry of Public Works and Transport (MPWT), the Ministry of Planning (MOP), the Ministry of Economy and Finance (MEF), and the Ministry of Commerce (MOC).
- 2) *Private Sector*: The data were also collected from 33 construction companies that came mainly from construction key personnel ranging from the project manager to the site engineer. The types of construction companies are: a developer, a design and consultant, a contractor, a sub-contractor, and a supplier.

DESCRIPTIVE ANALYSIS

To improve the construction industry of Cambodia in the ASEAN Economic Community (AEC) is to reduce the problems by minimizing the causing factors. The recommendations are made to assist the policy maker, of the top management body, and practitioners from both the public and private sectors to improve the construction industry of Cambodia for the AEC. These changes are to be made in order to make the construction industry of Cambodia to be able to survive in AEC.

There are three groups of factors that cause problems. 1) Soft infrastructure; 2) Construction investment and policy, 3) Construction organization and management (MIN et al., 2016b). The improvement of each factors are described as follows:

Recommendation for an Improvement of soft infrastructure

There should be an improvement on the quality of civil engineering education as it is very basic to have a broad view of construction research (Topp, Barker, & Degenhardt, 2004). The government needs to prepare a reasonable budget to support research organization but the research will not show the results of the benefits for short term, but will show improvement in the long term. It is also in the interest of researchers, not only because they want their work to make a difference, but also because they know that demonstrating good research impacts the policymakers who determine the research budgets (Topp et al., 2004). To Increase the number of PhD instructors can be made by sending them to study and train in any country which have a strong standing in construction research and to raise the wage for the instructor in order to encourage them to give their best for teaching and research. The Construction research organization has to set out the regulation to control plagiarism and to protect the original finding. By making an independent external review of work over the past period, this will aid the development of strategic goals and will be organized into a “National Construction

Agenda” to guide a decade of future work (Gillen, 2010). The government needs to pay more attention on construction research, and consider the research outcome for the planning and implementation. Research is a long term investment for the improvement of the construction industry. The government needs to set out a research organization with a high quality. To do so, there is a need of encouragement and a good infrastructure to encourage construction students, instructors, and educational providers to conduct positive research. The government needs to cooperate with international participants and well recognized organizations in order to improve by learning from them as much as possible. On the other hand, the government should encourage a private construction firm in doing research by offering them some benefit such as reducing tax and paying an additional premium.

Public Administration

Increase the wages for government officers. The wage needs to be balanced with the expenses for their daily lives in order to get public administration service up to par. Construction permit approvals should be made more transparent with a standard framework applied to all projects (UNDP, 2009). Public administration activity should take place by establishing a set of ethical rules of behavior, and standards to be taken into account by the public administration activity. The public administration activity should be developed efficiently, effectively, and economically (Matei & Băieșiu, 2014 -b). Stricter rules and regulations should be applied and enforced in the construction sector throughout the establishment of an efficient, but comprehensive construction code (UNDP, 2009). One must apply the rule of law and regulation which is already available to any government officer that tries to destruct the process and service of the public administration. Moreover, a government auditing system has to play a more efficient and effective role in maintaining financial and economic order and it must improve government accountability and transparency (Liu & Lin, 2012).

Political System

There is a need of enhancing the capacity and capability of the construction industries (Ofori & Han, 2003) within the realm of politicians because politicians are the decision makers to drive the country of all industry sectors. The consent of the governed is a central component in the mandate model of representative democracy (Dahlberg, 2013). The consent should be free, and fair in the election by respecting the voice of people according to the constitution of the nation. A lack of agreement about policies would obstruct the emergence and formation of public opinions (Dahlberg, 2013).

Human Rights

Project impacts on human rights are more closely linked to political, economic, and other factors beyond the immediate effects of a company's policy and action throughout the project life cycle (Salcito et al., 2014). Human rights are the core of comfort and happiness. Taking up human rights issues and making improvements would provide a better living for the people. So, delineating these processes and improvements requires an adequate framework, with strategies for collecting longitudinal data and protocols that would provide core information for the impacted assessment, and guidance. Adaptive mitigation strategies as project-related effects change over time (Salcito et al., 2014).

Land grabbing should be avoided. In the case for the government development, the payment to land owners should be at a reasonable price which is in accordance to market price for who is going to be relocated to another place. There should be no violation at all to the land owners which are mostly from a poor economic background. There should be proper research on the environmental impact before evicting people from their land. So, the construction sector shall need to be improving on human rights.

Stock Market

This functioning of the stock market is particularly important from the view of maintaining and strengthening the domestic banking sectors and the financial system (Inoguchi, 2013). The forming of financial and banking systems using various means (Inoguchi, 2013) should be implemented more effectively with standardization. Then, the promoting of new and high value-added industries will become increasingly important (You & Oum, 2014). Studies of the effects of price limits on the stock market (Wei & hong, (2011)) should be conducted for the implementation on the development of the stock market, SME development (You & Oum, 2014). To do so, a set of rules of law is needed to manage the stock market with efficiency.

Social Affair

Government should have an encouragement policy for all people to be involved in a social affair. There needs to be a global standard education system capable by improving at the primary, secondary, and tertiary levels (You & Oum, 2014). Work needs to be done to develop for all, and to decrease the gap between the poor and rich. Government health policy for all participants should be implemented. Government should consider the need to improve for sufficient beneficial benefits for the retired government people and the private personnel.

Law and Regulation

There is a need to improve and enforce existing laws and regulations as well as develop new laws such as a competition law, an anti-corruption law, a telecommunications law, and a tourism law (UNDP, 2009), Improvements for the simplification of the investment law, the introduction of a competitive corporate tax, a liberal investment policy, and a wider openness to the rest of the world made by the country and its large labor pool and more attractive to foreign enterprises (Ludo Cuyvers, Soeng, Plasmans, & Bulcke, 2011). Government needs to assure all people and construction stakeholders have to be under existing laws and regulations. The strict implementing rules of laws and regulations shall be applied and enforced in the construction of all the related sectors through an efficient but comprehensive construction code that is tailored to the Cambodian environment and ensuring the safety of construction projects (UNDP, 2009). Construction permit approvals could be made more transparent with a standard framework applied to all projects (UNDP, 2009). There shall be detail laws and regulations on the construction industry as the existing laws and regulations are not specific for construction industry (CNA, 1994). Moreover, there shall be research to make the construction master's plan for all urban areas.

Construction Tendering Method

The tendering must be assured by the government to be publicly announced for fair bidding for the construction public project (UNDP, 2009). Implementing the update tendering

method by using online apps would save time for all bidders (Ajam, Alshawi, & Mezher, 2010), and this could educate all stake holders to be familiar with modern tendering process as well. All bidders must be qualified in terms of reference or contracts (Runeson & Skitmore, 1999) or requirements. The government should encourage all private construction stakeholders to be involved in bidding as it would provide an advantage for all the parties and be free of all corruption.

Recommendation for an Improvement of Construction Investment and Policy

Trade Enhancement

There should be a way to shed some light on the role that the FDI played in the further economic development of Cambodia particularly by taking into account the scope of FDI from its more advanced ASEAN partner countries (Ludo Cuyvers et al., 2011). Encourage Foreign Direct Investor to invest in the construction industry (Ludo Cuyvers et al., 2011) as well as to encourage local investors to invest in the construction industry. The FDI needs to facilitate foreign and local investors who were doing investment in the construction industry to enlarge their investment (Ludo Cuyvers et al., 2011) with financial support for SMEs construction investor in order to strengthen (L. Cuyvers, Soeng, & VanDenBulcke, 2006) and improve this sector. Cambodia's resources should be fully explored to gauge the potential for the domestic production of construction materials (UNDP, 2009).

Investor's Confidence

Improvement the efficiency of the public administration by the public administration must comply according to what has been stated in the rule of law with the minimizing of the duration of getting a permit or any license or work permission from the concerns of ministries or departments (UNDP, 2009). One stop service should be efficiently implemented from all concern departments and ministries and be free of corruption. The government should have a budget supporting construction of the SMEs who have less money and the lack of financial funds to start their own business. There needs to be security in protection for all investors.

Trade and Policy

The trade policy should be strong with an easy to implement process and never allow the corruption to take place (Liu & Lin, 2012). There should be a policy of trade enlargement to enlarge the market of construction sector. The Government should increase the cooperation with other develop countries to set an effective trade enhancement. There should be a proper study before establishing a trade policy.

Recommendation for an Improvement of Construction Organization Management

Skill in Monitoring

Every construction organization will need to strengthen their skill in monitoring in order to lead the team effectively (Zou & Sunindijo, 2013) by conducting more research as it will

become a benefit for a long term profit. To apply the regulation of an organization/company effectively, one must assign at least a bachelor's degree level person with at least 5 years of related experience to be a project manager or team leader. Also, set up a systematically management network and an ICT strategy to implement the needs in the Construction organization.

Capacity development of human resource: Promote a stronger commitment from staff to the organization and its work (Chong & Elies, 2011). Government should encourage the private sector to provide a more sufficient number and quality of vocational training centers and courses to train workers to be more skillful. Apprenticeship and internship schemes could also be fostered (UNDP, 2009). There needs to be an increasing access to secondary and tertiary education across the country by increasing the quality of education at all levels and closing the gap between the skills needed to drive the economy and those that the education system provides for the construction industry (You & Oum, 2014). All construction firms will need to set the training course to strengthen the quality of human resources and motivate all team members to get more production out of work with good communication and team work.

Strategy Planning

One must have a strong plan of construction policy and work (Chong & Elies, 2011), and implementing the plan to effectively. This can be done by getting all parties involved in planning throughout the process of open dialogues in formal or informal discussions, and provide project knowledge and experience that can be extracted and shared for the benefit of everyone on the team (Khuzaimah & Hassa, 2012).

CONCLUSION

The conclusion is that the improvement of the construction industry of Cambodian in the ASEAN Economic Community (AEC) needs to be done by improving all factors in the main three groups that are causing the problems: (i) Soft infrastructure, (ii) Construction investment and policy, (iii) Construction organization management. The data for analyzing these problems were taken from representatives of the most five concerned ministries in the public sector and various concerned project managers/engineer in the private sector and from the literature review, So this recommendation could represent and be the solution to minimize the problems in the construction industry of Cambodia in the AEC.

These recommendations provide decision-making support by understanding the way to minimize problems in the construction industry of Cambodia. The concerned departments of the government and the private construction stakeholders may consider this recommendation for the development of the construction industry of Cambodia to survive in the AEC.

CONTRIBUTION

The research outcome can be in part to help policy makers, the top management body, and practitioners from both public and private sectors to improve the Construction industry of Cambodia in the AEC. Moreover, this outcome would be a data sourcing for future research on any related topic for improving construction industry in the AEC.

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