

CONFERENCE GENERAL INFORMATION

Title of the conference : International Conference on Sustainable Civil Engineering Structures and Construction Materials (SCESCM) 2018

Date of the conference : September 5-7, 2018

Location of the conference : Royal Ambarrukmo Hotel, Yogyakarta, Indonesia

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Welcoming Remarks

from The 4th SCESCM Chair

Dear participants,

It is my great pleasure to welcome you in The 4th SCESCM here at Royal Ambarukmo Hotel, Yogyakarta, Indonesia.

I would like to express my appreciation to all the co-organizers institutes, universities from Indonesia and universities outside the country. Also to the all the third parties, PT. Pamapersada Nusantara, PT. Adhi Karya, PT. Inti Beton, PT. Cigading Habeam Centre, PT. Geofroce Indonesia, PT. Wika Beton, PT. Hutama Karya, PT PP, PT. Waskita Karya, PT. Tamara Overseas, PT. Fyfe Fibrwrap, PT. Jasamarga Japek Selatan, and PT. Semen Indonesia who provide financial support for us, to Indonesian Society of Civil and Structural Engineers, Asian Concrete Federation, Japan Society of Civil Engineers, International Federation for Structural Concrete, the International Association for Bridge and Structural Engineering as supporting institutions, and to all the reviewers who have worked on their best helping us to sort hundreds of papers from around the world.

To gather and to share all knowledge and research results from students, academicians and professionals, in 2012 the first SCESCM conference was organized focusing on sustainability concept implemented in design, construction and maintenance in any civil engineering structure. Since then, the conference is organized biannually and is increasingly enriched by outstanding keynotes, invited papers and selected participant's papers sharing the latest scientific findings and achievements among civil engineers across the globe.

This time, SCESCM received 129 technical papers from various country and will be published in MATEC WEB Conference which is indexed by Scopus.

We really hope this 4th SCESCM under the theme “Sustainable Structures for Future Generation” will provide us a valuable opportunity to share knowledges and experiences. SCESCM has also been introducing local cultures of Indonesia at the welcome dinner and optional cultural tour on a day after the conference. Once again, welcome to The 4th SCESCM ! We wish you a productive conference, and hope you enjoy your time here in Yogyakarta. Thank you.

Ali Awaludin, Ph.D.

Chair



Keynote Speakers



Michael Haist

Karlsruhe Institute of Technology, Germany



Henricus Priyosulistyo

Universitas Gadjah Mada, Indonesia



Shunji Kanie

Hokkaido University, Japan



Barry Jones

California Polytechnic State University, United States



Tugur Wibisono

PT Cigading Habeam Centre, Indonesia

Conference Fee

Participant		On/before June 30, 2018
Full participant (including PhD students)	Overseas participant	USD. 350
	Indonesian participant	IDR. 3.000.000
Student Participant	Overseas participant	USD. 250
	Indonesian participant	IDR. 2.000.000

Important Dates

- August 1, 2017**
Call for abstracts
- February 15, 2018**
Notification for abstract acceptance
- January 17, 2018**
Deadline for abstract submission
- May 1, 2018**
Deadline for full paper submission for peer review
- June 6, 2018**
Notification of full paper acceptance
- July 11, 2018**
Deadline for camera-ready manuscript

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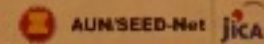
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3. Proceedings editors have taken all reasonable steps to ensure the quality of the materials they publish and their decision to accept or reject a paper for publication has been based only on the merits of the work and the relevance to the journal.

Title, date and place of the conference

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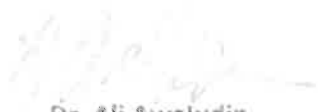
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Informal housing construction workers' perceptions toward the improvement of effective leadership and performance

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Abstract. Practically, as other construction projects, the workforce in housing construction projects is still dominated by informal workers who belong to a group and controlled by a leader. Accordingly, developer companies consider that informal worker leaders play an important role in improving the informal workers' performance in housing construction projects. Therefore, the purpose of this study is to explore the effective leadership style that can improve the performance of informal workers in housing construction projects based on the workers' perceptions. The implications of this research can be used to improve the informal workers' performance both of national and multinational developer companies so they can perform more effectively in completing housing construction projects. The research used qualitative method with phenomenological approach to reveal an assessment based on perceptions and perspectives of informal construction workers. Finally, it was found that the effective leadership style according to the informal workers' perceptions is the transactional leadership which includes being liked by the workers, concerning and appreciating, as well as being consistent with commitments. Thus, effective performance and leadership will be achieved as informal construction workers will work hard under this leadership style.

1 Introduction

Currently, rapid Indonesian population's increase causes housing demand increase as well. As a result, many new housing projects have emerged in various cities in Indonesia [1]. Because of the urgent need, the housing projects must be developed quickly and efficiently. In general, housing projects are relatively similar, for example, in terms of design and residential type in order to simplify the development process. However, the developer company requires a short-time project at a low cost.

In response to the above demands, the role of the workforce in housing construction projects is very important. Being relevant with most construction projects, labour is an essential component of a construction project since labour cost is one of the major cost factors in a construction project [2]. Moreover, many experts found that effective labour management was the key to a project's success [3]. Therefore, the important effort that should be conducted is to encourage workers to work more effectively and efficiently. To achieve this, many factors should be considered such as working environment, wages, working hours and so forth. However, there are other things that are not directly related to the construction project become the determinants of work's effectiveness such as the worker's local culture in which they live [4].

Nevertheless, the effort of labour's performance improvement may vary across countries, and a successful determinant factor in developed countries cannot always be successfully applied in developing countries because

each country has different business characteristics as well as different mindset and ability of the workforce. Factors that already implemented in developed countries to improve workers' performance related to their status as workers, among others, are career path, salary and pensions. In contrast, those things cannot always be the determinant factor in improving a worker's performance in developing countries. Based on a research by Kaming [5] in the field of construction, it indicates that the workers' performance was low because there was no clear concept in working relationships with the group and construction project owners.

Some studies of traditional management in developing countries reveal that informal workers constitute the majority of the labour force who employ traditional management systems such as in housing construction projects [6, 7, 8, 9]. The researchers agree that the traditional management pattern was worthy of attention to its role in line with modern management theory in improving human resource management.

Based on the labour data at the Bureau of Statistics in 2016, more than 60% of workers in Indonesia were informal workers. Informal workers still dominate various sectors, including housing construction. This phenomenon has been studied by Sari [10] and shows that most informal workers refuse to be recruited as formal workers by the companies hiring them. Other studies have found that the attachment of informal workers to the cultures in which they socially live was the reason they did not want to be formal workers, as there might be many cultural rituals they could not follow [11].

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However, there were several studies of informal construction workers showing different results on their performance's determinants. Informal workers in various sectors shows low performance due to the lack of attachment to firms so that their job responsibilities were low as well [5, 6, 8, 9, 12]. The attachment of informal workers was closer to the group leader they worked under, and the leader of this group was related and responsible to the company [13]. A group leader appreciated the performance of informal workers according to the wages given: the better the performance was, the higher the wage would be (and vice versa). However, the leader's subjectivity was urgently needed. Furthermore, a research of the informal workers in East Java shows that their performance was similar to the formal workers, although this study has not assessed the level of performance yet [9].

In general, leaders play an important role in encouraging the improvement of the informal workers' performance as discussed above. A research in the field of leadership proves that being a successful leader requires quality and leadership skills as well as the ability to successfully bring his group to the goal [14]. In addition, a research of housing construction projects found that the performance of informal workers relies heavily on leaders. Even so, the effective leadership characteristics in improving informal workers' performance have not been further investigated [13].

Furthermore, a research that has been done previously gathers the information from the company manager or project owner. Thus, there is still a gap to find out the effectiveness of leaders from the perspective and perceptions of informal workers, which will be investigated in this study. Therefore, the purpose of this study is to fill the gap by knowing the characteristics of effective and capable leaders to improve the performance of informal workers in the housing construction project. Moreover, this study will explore the phenomenon related to the informal workers' cultural background in East Java.

The implications of this research are expected to help developers in determining an informal group of workers based on the characteristics of effective leaders especially in Java, since the cultural background influences the worker's character and the group leader behaviour [11].

2 Informal Worker and Leader in Housing Construction Project

In construction management, labour is an important factor for achieving good quality, minimal cost and optimal time on a project [3]. The existing phenomena in developing countries including Indonesia indicate that informal workers in the construction sector are originally traditional workers in agriculture, plantation or fisheries [11, 13]. Thus, according to some studies in several developing countries including Indonesia [15, 16, 17], India [18], Nepal [6], Brazil [7], Kenya [19] and Tanzania [20], it is proven that construction workers have the same pattern of informal workers working in construction projects over a period of time. Nonetheless, informal workers act as an important factor to support a robust

human resource management system in the current construction industry sector [21].

The characteristics of informal workers in housing construction projects were low-educated and low-skilled, so that there were not many work opportunities to do as freelancers who often shift between jobs [16]. However, in contrast to the phenomenon commonly found in urban areas, informal workers work primarily in the construction sector and are employed in other sectors if there is a vacancy or if there is no construction project [11]. Moreover, another research proves that many informal workers in urban areas were previously formal workers because of certain cases [10].

In addition, informal workers lacking the special skills resulted in having low level of income or low wages and economic shortcomings [13]. In fact, they also could not get the facilities that they actually deserved as workers such as insurance, health and old age benefits; because they were only temporary workers. Project owners sometimes did not pay attention to details such as the workers' temporary shelter at construction sites, which was usually only a semi-permanent site without proper public facilities [18]. Project owners were not directly accountable to workers, but they were associated with the group leader because of the project owners' contracts with the informal workers' group leader; while informal workers only had oral agreement with their leaders.

Now in Indonesia, there are already some housing projects whose investors or developers are multinational corporations accustomed to implementing modern human resource systems [16]. As a result, the dilemma that firms are facing in developing countries is to integrate modern and traditional labour systems, particularly construction projects in the Java area. In the previous paragraph, the role of informal group leaders is needed to overcome that dilemma. They work together to minimize the drawbacks and weaknesses of traditional labour patterns.

There were several characteristics of informal leaders. They, among others, are belonging to and joining a community or group, being informally or informally appointed as a leader, being in a position which is often unchanged within a certain period of time, not getting higher (in position) from informal workers in the group, not receiving a specific penalty in the job yet lacking in confidence, and not receiving wages from the company [22]. Other studies have investigated that informal leaders were not officially appointed and were not more expert or intelligent than their employees; but they had the ability to change their character, psychology and group's behaviour [22, 23, 24].

Based on the history of the construction workers at the lower level (construction labourers), the leaders and their workers work only on oral agreements, especially in developing countries such as Indonesia and Tanzania; the leaders were often called as foremen [15, 16, 17, 19, 20]. The foreman serves to manage everything in accordance with the demands of construction work including finding a job, organizing the division of labour and having a personal closeness with members of his group. The expectation was that each worker had the awareness and sense of belonging that can make them work with shared responsibility [13].

However, there was a change in the leader's relationship with his current group members that the leader or the foreman not only joins and leads a group. This leads to the formation of new patterns in the informal working group. The pattern formed that the foreman was no longer selected by group members or taken from group members but subcontractors of housing projects [11]. Researches on leadership in the construction sector have been widely applied. Nevertheless, a different emphasis on the object has been conducted such as researches in developed countries or in developing countries by discussing leadership on project management or top management level. The quantitative researches had examined leadership based on influencing variables, but no research had examined effective informal leadership based on the perceptions of informal workers in housing construction project.

There were several effective leadership styles based on Northouse [23] which have been applied by the informal group leader. Transformational leadership helps group members to achieve the best outcomes and change people's behaviour for the better [25]. Whereas, serving leadership stresses to serve members of the group or employers so as to create close relationships that can improve performance and loyalty [26]. Next, authentic leadership combines the psychological abilities of workers and organizational systems so that workers can develop their ability positively [27]. Lastly, the transactional leadership style by rewarding if the worker's performance increases while the punishment is otherwise [24]. In practice, a group leader combines these styles and is called multiple leadership styles [23].

3 Construction Workers' Performance

Many factors affect the performance of construction workers such as the objective of a certain period [28,29]. The performance of construction workers has always been linked to economy, technology, resource and welfare.

In the construction project, the dimensions of productivity such as cost, quality, and time are used to measure project performance. The performance of the input, commonly called input factor, is expected [30]. In addition, the workers' performance is also influenced by group leaders or construction companies.

Moreover, the planning and supervision of construction workers at work sites are also the determinant factors of workers' performance. Without the group leaders' planning and supervision, workers are not able to maintain the time, cost and quality of work; often they relax in work by smoking, chatting or just lounging around [30]. In fact, such conditions are often encountered in construction projects. Therefore, in such circumstances, group leaders play a very important role because they have a direct relationship with the workers.

4 Methodology

Several studies have been conducted on leadership in construction using quantitative methods. However, using only quantitative methods to have deep understanding of the problem is not enough, so it is important for a research to use qualitative methods [31]. A qualitative method is used in this research to develop an understanding based on a particular phenomenon and to explore the matter according to the informant's view [32]. Therefore, this study is expected to illustrate the informants' experience with a view to understand the leadership's characteristics of the construction project from the perception of informal workers, why it happened, how it happened and how to achieve success. Acquiring information from the informal worker's perspective is important in order to obtain new discoveries and information that will contribute to science [33].

There are several approaches in a qualitative research. Nevertheless, the phenomenological approach is the most appropriate method to use because the objects being studied are the individuals involved in social interaction with each other. Moreover, the most appropriate approach applied in this study was the Schutz phenomenology approach since it states that a person's actions are a reflection of his past experience and understand that one's actions are not only based on the inner influences of the individual but also influenced by others and socio-cultural around them [31, 32].

4.1 Informant

The informants of this research are the informal worker and foreman who work in a housing developer. The selected housing developers are companies whose projects are dominated by informal workers with a minimum number of 75 people and are located in Surabaya, East Java, Indonesia; from these criteria, four companies are selected. The sampling method used was purposive sampling because the informants were chosen according to the criteria specified by the researcher, such as the minimum working experience is more than 8 years in the housing project, and the age ranges from 30 to 50 years old. Based on the criteria, 4 informants were selected from each company so there were 16 people in total. Demographically, all informants were men whose the highest level of education was senior high school. Moreover, one person from each company's foreman is selected to be the informants so there were four people in total.

To obtain the necessary information, a qualitative research also requires a research instrument that contains general or specific question guidelines to obtain a broad answer from an informant. Instruments in qualitative research are different from instruments in quantitative research, the instruments are used as a reference for researchers to focus on the topics covered. Then, the informants gave their answers verbally and were recorded to be processed. The examples of questions posed to informal workers include how leaders control the current group, how leaders respond with Javanese customs or rituals followed by their workers, how and when leaders direct their workers; while the examples of questions

asked to the foreman are how to supervise workers, how to lead, and how to overcome difficulties experienced by workers in addition to dealing with construction work.

Furthermore, the results of the recorded interviews were transcribed, interpreted, encoded, and analysed for themes. The results of the interviews also went through the process of data validity by comparing the data with the researcher's notes, observation results during the study, available literature; and also by comparing notes, photographs and videos during the interview process [34]. In addition, a data triangulation process was done by conducting open-ended interviews to six different informants to make sure whether there were different outcomes from the previous interviews. The result of the data triangulation shows that there was no significant difference.

5 Discussion and Results

This section will describe the interview results that have been grouped into sub-themes and themes related to the effective leadership and performance improvement based on the perceptions of informal workers. Furthermore, there are three themes described in the following sub-sections.

5.1 Being liked by the workers

The results of interviews with informal workers and field observations prove that a successful leader is strongly influenced by his behaviour. A study also reveals that the leader's key success appears when he is able to integrate modern construction traditions and management [35]. All informants gave the same opinion that they wanted to have leaders who shared the same culture as them; so they can respect the leader, and the leader will not act arbitrarily, rigidly and cruelly but can be cooperative instead. This is because the behaviour of the foreman or the worker was based on the culture passed down from the generation before them.

All informants have the same perspective that by becoming informal workers, they can continue the local cultural tradition. According to them, the traditions or customs are more important to do as a guide in their lives; and they can manage without work rather than abandon cultural rituals. The notion of local culture is a unity that includes knowledge, belief, law, morals, art, customs, technology and religion from their environment [36]. On the informants' understanding, becoming informal workers is the right choice; by doing so, they can still practice the ancestral culture because in their concern, wealth can still be searched. They also argue that working effectively is very important, but it is not used when they are in the neighbourhood.

At the time of the interview, there was an interesting informants' opinion that when asked the question about effective leaders figure, the informants did not distinguish the definition between an effective leader and a respected leader. Based on the data observation, it can be seen that this understanding can occur because of the informants'

low educational background which also resulted in low theoretical knowledge. However, they claim that working with a leader they like and vice versa will make them work with focus and comfort. One of their statements is:

"We can work well and not think of negative thoughts about our leader if we like them. We can also concentrate on work and leave other affairs to our leaders"

The leader of the informal working group also serves to create a comfortable and prosperous atmosphere at the project site. This encourages informal workers to become more focused on work. This is because a feeling of peace and comfort during work can improve the performance of the workers [11, 37]. In addition, workers also understand that in return for such good conditions they will work harder to reach the terms and targets of the housing developers so that their leaders will not suffer loss, as texted below:

"If we work badly, it is our leader who will bear (the consequences) so the company will suffer losses, as a result, we might get fired, especially now that it's hard to get a new job quickly, so we condole with our leader if we just work randomly.. so we have to work well. "

5.2 Concerning and appreciating

A leader will pursue everything that benefits his group members [21]. From the interviews, it was found that more than 70% of informants thought that concerning leaders, leaders who were willing to help when the workers are in distress; and willing to give free time, were the effective leaders for them. They have a common understanding of the leader's attitude of concern which is evident from the way a leader guides or directs in a job, advises or exemplifies; from having close relationships with workers and from being able to provide solutions to workers' difficulties.

In addition, informal workers have a perception that there was no difference between a leader's attitude of helping and paying attention [38]. This was consistent with the informant's statement that the effective leaders were very concerned with what their workers do both in terms of work on construction projects and on personal work of the workers. This condition provides an illustration that the workers were trying to impose their will on the leader so that leaders should always concern them. For example, the usual activities of a leader were to provide financial assistance if the worker was in difficulties, to give a vehicle ride to the workplace, or to help solving a problem.

Most informants stated that an effective leader's attitude was to give spare time to the worker even if it contradicts his or her responsibilities as a leader, because the informants give different interpretations about giving spare time such as not coming to work, working casually or at will, and coming late to work. According to observations and triangulation of data to the foreman, it was confirmed that the attitude of such workers is a form of escape from responsibility. However, if they returned to be informal workers, they remain responsible with the

targets and work results in accordance with the demands of developers.

On the contrary, about 30% of informants provide a better understanding of the effective leaders' category, because they notice that leaders have multiple responsibilities, both to their workers and to housing developers. According to them, an effective leader ought to give attention, to be willing to help, to appreciate the work, and to give spare time not for the personal benefit of the worker. In addition, effective leaders also have the responsibility to direct and to improve workers' performance in order to fulfil the responsibility for completing the work on time in accordance with the specifications requested by the company [39].

In the above explanation, there were different answers from the informants regarding the understanding of free time. The latter opinion, though fewer understand, stated that free time was given as a form of appreciation of the workers' creativity. Leaders give them the freedom to manage their time, not for personal gain but to get the construction work done in their way. Nevertheless, leaders continue to set limits on how work can be completed on time in accordance with the standards set by the company. Thus, the workers feel valued for their opinion or doing work; and ultimately, they regard leaders as friends when not at the working location. The workers believe that if the leaders were concerning and appreciating, they will be able to work together for a long time.

5.3 Being Consistent with Commitments

Between leaders and informal workers, there is no written agreement that binds their relationship and cooperation. This condition has been understood since a long time ago, even though there are no written rules related to this condition in Indonesia as well as in other developing countries. The working relationship between a worker and a leader is only made verbally which is usually limited to the amount of the wage, the number of working-hour and the scope of work performed. These agreements are held prior to starting a new construction work or jobs in different locations, because the agreement will be approved after each party is done with surveying the location of the work and is ensured of the conditions of work to be done. The following statement of an informant is related to the above explanation:

"Before going to a new place, the foreman always asks what we can do, then he will decide the wages, and he gives the working time. If we agree, we only answer yes .. no written contract to sign. - sometimes we are given notes on what is allowed and what is not at the job site. Because this kind of agreement occurs everywhere .. we just follow it."

It can be concluded that the relationship between both parties was only tied to oral promises. All informal workers had the same respond stating that in improving workers' performance, an effective and competent leader was measured in his ability to be consistent with his promises as illustrated in the statement below:

"For us, a foreman must be able to keep his promises because we work by keeping his words. When he promises a thousand for the wage, it means a thousand is to be paid; if it is not, he is a poor foreman. If our foreman can be consistent with the words he said, we will definitely work hard as requested, but if he is not, we will leave him and we will not support him anymore."

Nearly 70% of the informants mentioned that their main concern when working was an agreement on the wage, both the amount and when it was going to be paid. They were not too demanding if there was something different from the agreement like the scope of work; although they initially worked as a mason, they were also available for another job. However, if the foreman cannot be consistent with the provision of the wage, it will be a big problem for the informal workers; for example, the amount of the wage is not exactly as promised because there the payment is reduced, or the wage is not paid on time as promised. In fact, in a construction work, wage reduction can occur because of errors made by the worker and because the worker does not carry out the initial agreement such as being not serious at work, being late at often times or being absent from work.

The fulfilment of a leader's promise is his duty, but on the contrary, sometimes the workers only demand a commitment but do not complete the work as agreed. Based on the statement of several informants and foremen's justification, the informal workers tend to be selfish at this time. Sometimes the workers were more transactional than their leaders by always demanding their rights without fulfilling their responsibilities; this means they were not consistent with their promises.

5.4 Transactional leadership style

The three sub-themes of the data processing such as being liked, concerning and appreciating, and being consistent with commitments are the characters of the transactional leadership style [11, 23]. The character of transactional leadership basically rests on the principle of "giving according to what was received", so that every action was based on profit and loss considerations. The results of this study support the previous research which indicates that construction workers prefer the transactional leadership style over other leadership styles [11]. The influence of technological developments, hedonic and consumptive lifestyles causes construction workers to be more transactional.

The results of this study also support another research in Indonesian workers; they were more likely to favour transactional style leaders [40]. However, this style is not absolutely applicable because informal workers who strongly uphold the local culture will avoid leaders with a purely transactional attitude. This is because the leadership styles applied to each project differ depending on the situation, budget and workers' demands.

6 Conclusion

It could be concluded that the characteristics of an effective leadership were being liked by the workers, concerning and appreciating toward their workers, also being consistent with commitments. Thus, the foreman can improve their leadership style with those characters and are capable to improve the performance of their group. Finally, the foreman and informal workers can work effectively to complete the construction work according to the target set by the housing developer. Nevertheless, the future research is recommended to reveal and investigate the informal worker phenomenon in other sectors or to compare Javanese worker to another culture.

References

1. Data Perumahan BPS Harus Dijadikan Acuan. Departemen Pekerjaan Umum (2017).
2. Y. Yeong & N. Mustaffa, Analysis of Factors Critical to Construction Project Success in Malaysia. *Eng. Const. & Arch. Man* **19**, 5, 543-556 (2012)
3. F. Khoramshahi, R. Dehghan, M. Mortaheb, Factors Influencing Construction Productivity. *The 10th East Asia-Pacific Conference on Structural Engineering and Construction*. (2006)
4. P. Kreiser, L. Marino, K. Weaver, Correlates of Entrepreneurship: The Impact of National Culture on Risk-Taking and Proactiveness in SMEs. *Tuscaloosa: University of Alabama, Department of Management and Marketing* (2005)
5. P.F. Kaming, F. Rahardjo, Y.G. Situmorang, Analisis Kinerja Proyek Konstruksi. *Konteks* **4** (2010)
6. J. Yoon, B. Kang, The Structure Employment in Korean Construction Industry. *International Conference on Structural Change in Building Industry's Labour Market, Working Relation and Challenges in Coming Years, Institut Arbeit und Technik,, Gelsenkirchen, Germany* (2000)
7. K. Jha, Informal Labour in the Construction Industry Nepal. Working Paper, International Labour Organization, Sectoral Activities Programme (2002)
8. M. Leonard, Coping strategies in developed and developing societies the workings of the informal economy. *J. of Int. Dev.* (2000)
9. Y.K. Sutopo, R.R.R. Ardianti, Analisa Pengelolaan Sumber Daya Manusia Sektor Formal dan Informal di Jawa Timur, *Agora* **2**, 1 (2014)
10. M.P. Sari, Transformasi Pekerja Informal ke Arah Formal: Analisis Deskriptif dan Regresi Logistik, *JKET* **9**, 1 (2016)
11. K. Lukiyanto, M. Setiawan, E. A. Troena, Noermijati, Cultural Shifting of Construction Workers and the Effect on Construction Project Management in East Java. *Aust. J. of Basic and App. Scien.* **9**, 11, 191-197 (2015)
12. E. Musmawarni, S. Anton, Pengaruh Motivasi Terhadap Kinerja Tukang pada Beberapa Proyek Konstruksi di Bandung. *Seminar Nasional Teknik Sipil V* (2015)
13. M. Wijayaningtyas, I. Sipan, K. Lukiyanto, Informal Worker Phenomenon in Housing Construction Project, *AIP Conference Proceeding* **1903**, 1 (2017)
14. A.A. Tabassi, A.H.A. Bakar, Training, motivation, and performance: The case of human resource management in construction projects in Mashhad, Iran. *Int. J. of Pro. Man.* **27**, 471-480 (2009)
15. K. Sjahrir, Worker in the Indonesian Construction Industry. ProQuest Dissertations and Theses (1991)
16. B., Soemardi, I. Soenaryo, E. Wahyudi, The Role and Function of Mandor in Construction Project Organization in Indonesia. *Procedia Engineering* **14**, 859-864 (2011)
17. C. Anwar, *Migration and Urban Market*. Tadolako: Tadolako University Press. (2001)
18. S. Saxena, Problem of labours on Construction: A qualitative release. *Int. Res. J.* **2** (2009)
19. W. Mitullah, I. Wachira, Informal Labour in the Construction Industry in Kenya: A Case Study of Nairobi. *International Labour of Geneva* (2003)
20. A. Jason, Organizing Informal Worker in the Urban Economy, the Case of the Construction Industry in Dar es Salaam, Tanzania. *Hab. Int.* **3**, 192-202 (2008)
21. A. Gordon, From Markowitz to Modern Risk Management, *The European Journal of Finance* **15**, 451-461 (2009)
22. Koentjaraningrat. (1984). *Kebudayaan Jawa*. Jakarta: Balai Pustaka.
23. P. Northouse, *Leadership: Theory and Practice*. Thousand Oak, California: Sage Publication (2013)
24. S. Endraswara, *Falsafah Kepemimpinan Jawa*. Yogyakarta: Penerbit Narasi. (2013)
25. B. Bass, The Future Leadership in Learning Organization. *The J. of Lead. Stu.* **7**, 3 (2000)
26. D. Parris, J. Peachey, A Systematic Literature Review of Servant Leadership Theory in Organizational Context. *J. of Bus. Eth.* **113**, 3, 377-393 (2012)
27. B. Avolio, F. Luthans. *The High Impact Leader: Moment Matter in Accelerating Authentic Leadership*. New York: McGraw-Hill (2006)
28. Moehariono, *Pengukuran Kinerja Berbasis Kompetensi*. Jakarta: Raja Grafindo Persada (2012)
29. T. Pabundu, *Budaya Organisasi dan peningkatan Kinerja Perusahaan*. Jakarta: Bumi Aksara. (2006)
30. H. M. Alinaitwe, *Improvement of labor performance and productivity in Uganda's building Industry*. PhD Thesis, Lund University, Sweden (2008)
31. W.I. Ervianto, Pengukuran Produktifitas Kelompok Pekerja Bangunan Konstruksi (Studi Kasus Proyek Gedung Bertingkat di Surabaya). *J. Tek. Sipil UAJ* **9**, 1 (2009)
32. J. Creswell, V. Clark, *Designing and Conducting Mixed Methods Research* (2007)
33. Corbin, Strauss, *Dasar-Dasar Penelitian Kualitatif*. Yogyakarta : Pustaka Pelajar (2003)
34. A. Karami, J. Rowley, F. Analoui, Research and knowledge building in management studies: an analysis of methodological preferences', *Int. J.* **23**, 1, 43-52 (2006)
35. M. L. Neuman, *Social Research Methods (Qualitative and Quantitative Approaches)* fifth edition. USA. (2003).

36. Koentjaraningrat, *Pengantar ilmu Antropologi*. Jakarta: PT. Rineka Cipta (2002)
37. S. P. Robbins, *Perilaku Organisasi: Konsep, Kontroversi, Aplikasi*. Edisi Kedelapan. Jakarta: Pihallindo. (2003)
38. K. Lukiyanto, *Mandor Model Kepemimpinan Tradisional Jawa Pada Proyek Konstruksi Era Modern*. Penerbit: Gramedia Pustaka Utama. (2015).
39. A. Wijaya, N. Purnomolastu, N., A. Tjahjoanggoro, *Kepemimpinan Berkarakter: Telaah Tentang Pemimpin Efektif*, Penerbit: Brilian Internasional. (2009)
40. J.O. Bempah, R. Addison, F.S. Ade, Effective Leadership in the Eyes of Followers: An empirical study in Indonesia. *J. of Trans. Ent* **1**, 1 (2013)