

# Perceived Information Technology in The Operational Region of PT Kereta Api Indonesia

JAM  
14, 4

Diterima, September 2016  
Direvisi, Oktober 2016  
Disetujui, Oktober 2016

Aneu Yulianeu

Informatics Management of STMIK DCI

Wawan Sukmana

H. Asep Budiman

Management Department of Siliwangi University

**Abstract:** To get the benefit of technology of information optimally and produce the result that we hope, furthermore it needs leadership that could stimulate the employers as users of technology reformation to increase the level of acceptance that integrated with educational degree of employers a moderator into the influence of transactional leadership, transformational in using perceived information technology. This research use three standardized questionnaire, Multifactor Leadership Questionnaire, questionnaire of educational degree to the employers and technology acceptance model. This research has been done at PT. Kereta Api Indonesia operational region II Bandung. The number of questionnaire that has been distributed was 65 (sixty five), they were spread at 5 departments at PT. K.A.I operational region II Bandung. The result from analysis of hierarchy regression found out that the educational degree moderate the influence of transactional leadership and transformational towards technology information of perception. The result of this research found that only transformational leadership that has significant influence to the use of technology of perception information.

**Keywords:** leadership, educational degree, technology acceptance model, transactional leadership, transformational leadership

The implementation of a new technology in an organization is a work that gives many challenges for the organization, such as the acceptance and adoption should be done by employees as the users of information technology. Behavior and acceptance of the user of information technology have a critical influence on the successful implementation of information technology (Succi and Walter, 1999). In order for optimal use of information

technology, it requires management leadership and commitment of the whole company's employees (Dhewanto and Falahah, 2007).

One of the models that is often used to explain the acceptance of technology is the Technology Acceptance Model by Davis, et al. TAM is the first model which states that psychological factors, such as the factor of perceived usefulness of the new technology centrally influences employees as the users of the technology. Employees as the users of the technology are commonly found as the cause of failure, delay and even as a factor that can sabotage the implementation of new information technology (Brown, et al., 2002).



Jurnal Aplikasi  
Manajemen (JAM)  
Vol 14 No 4, 2016  
Terindeks dalam  
Google Scholar

---

Alamat Korespondensi:  
Aneu Yulianeu, Informatics  
Management of STMIK DCI,  
DOI: <http://dx.doi.org/10.18202/jam23026332.14.4.05>

Along with the objectives of the change in information technology and the success in the implementation of information technology, the encouragement of leaders is very necessary (Bassellier, et al., 2003). Leadership model as transformational leadership plays an important role for every company to be able to do the implementation of information technology more optimally.

PT Kereta Api Indonesia (PT K.A.I) is a public company that provides the railway service in Indonesia. The implementation of information technology is an integrated solution that can provide the maximum level of service to customers. E-Ticketing is a form of Information Technology that has been implemented since 2005, which has been proven to increase the productivity.

There are so many facts that can make an indication that the implementation of information technology at PT KAI is not maximized yet, one of which is the quality of service that is still not satisfactory, which is expressed by consumers through the International Railway Journal, 13 February 2007 edition, including the integration with other modes of transportations. All this time, it seems that PT KAI moves on its own, without dealing with the government of each region, and or the central government. Therefore, the accessibility to and from the railway station is not "connected" well with other transportation modes.

Another fact is that at the other stations which are under the Regional Operations (Daop) II Bandung such as Station Tasikmalaya, Ciamis and Banjar, in terms of information technology, has only reached the stage of implementation of e-ticketing, and there is no implementation of integrated information technology. This is due to human inequality between the stations, and there is buildup in the operational region. 75% of the operational personnel present in the station are senior high school graduates, 15% of them are graduates under senior high school, and the rest are bachelors.

The aim of this research is to study and analyze how the transactional leadership, transformational leadership, and education level in PT KAI Operational Region II Bandung, the use of the perceived adoption

of Information Technology at PT KAI Operational Region II Bandung and how the influence of transactional leadership, transformational leadership and education level on the usefulness of the adoption of perceived information technology on PT KAI Operational Region II Bandung.

The benefit for PT KAI Operational Region II Bandung is that the results of this study are expected to provide feedback for the implementation of Information Technology at PT KAI Operational Region II Bandung, especially for information technology managers and the other parties in PT KAI Operational Region II Bandung which are directly related to the use of information technology. Helping solve the problems which often occur in the implementation of information technology, which result in suboptimal use of information technology.

## METHOD

The type of research used in this research is descriptive and verificative research. The data were obtained by using questionnaires. The research instrument was in the form of questionnaires which were distributed to the respondents, in this case were the employees of PT K.A.I.

The variables included in this study consist of the independent variables (X), which are transactional leadership, transformational leadership and level of education, while the dependent variable (Y) is the perception of usefulness. What is meant by the transactional leadership is portrayed as something valuable exchange between the leaders and employees, intervention, which is done by leaders in the organizational process which is intended to control and correct the mistakes that involve the interaction between leaders and employees who are pro-active. The leaderships are active management by exception, passive management by exception and contingent reward.

Variable indicators of transactional leadership which are developed in this study consist of:

- Work with the old way
- Do not change if it goes smoothly
- Do intervention if the standards are not achieved
- Do intervention if the problem is bad

- Agreement about the return for what they have done-rewards if it works properly
- Negotiations to get awards

The meaning of Transformational Leadership in this study is that transformational leaders should be able to persuade their employees to perform their duties beyond their own interests for the sake of a larger organization. Bass and Avolio (1990), suggest that transformational leadership has four dimensions which they call "The Four I's", that are ideal influence, motivation - inspiration, intellectual stimulation, individual consideration.

Variable indicators of transformational indicators which are developed in this study consist of:

Ideal influence

- Pride
- Trust
- Loyalty
- Respect

Motivation-Inspiration

- Motivating the employees
- The use of symbol
- Goal achievement
- Skill

Intellectual Simulation

- Bring up new ideas
- Problem solving

Individual Consideration

- Attention
- Appreciation
- Advisory through personal interactions

What is meant by education level in this study is one's mindset and insights, in this case including the mindset and insights on leadership. Besides, the level of education is also a part of the work experience (Rachmat in Harsiwi, 2003). The sub-variables of education level are the length of mindset, insight and experience.

The indicators of education level which are developed are:

- The length of working
- The growth of position
- The length of serving
- Career development
- Last education

The use of perception is an application that has a high degree of usability which is believed by the

users that there is a positive relationship between the use and performance. The accompanying indicator is the belief, with the sub-variables are:

- The users are more likely to accept and use the information technology applications because they are sure that the application can help them work better.
- The users are sure that the application is useful for them, at the same time they believe that the application is too difficult to use, and they feel that the benefits are in proportion to the work they have done. For more details on the operationalization of the variables in this study.

## FINDING

The findings of the research conducted. In accordance with the results of the hierarchical regression, the first stage of the hierarchical regression analysis is including the effect of educational level to transactional leadership (independent variable) and transformational leadership (dependent variable). The results of the hierarchical regression analysis showed that transactional leadership does not affect the use of perception information technology.

The same thing is applied to the type of transformational leadership, the first stage of the hierarchical regression analysis is including the transformational leadership with perceived information technology, the result of analysis shows that transformational leadership statistically has significant influence only on the use of perceived information technology

Consistent with the findings of a study conducted by Ruyter, Schepers and Wetzells (2005), which uses t test with bootstrap procedure from 250 resample at a service company, the researchers found that the transactional leadership that focuses on the effectiveness cost has no significant effect on the perceived information technology ( $t = 0.099$ ,  $p = 0.9212$ ). In their finding, they also found that the type of transformational leadership has a significant influence on the use of the perceived information technology ( $t = 2,049$ ,  $p = 0.0416$ ).

By connecting the sub-dimensions of the type of transformational leadership directly on the usefulness

of perceived information technology, found that the effect of transformational leadership is fully elaborated by the sub-dimensions of intellectual stimulation in the use of perceived information technology ( $F = 0.094$ ;  $t = 1.900$ ). This indicates that encouraging new ways of thinking and facilitating employees to be able to analyze the problems from many different viewpoints will be able to generate better level of acceptance of the technology of individual within an organization (the use of perceived information as a mediator).

This study found that the level of education does not moderate positive effect of transactional leadership and transformational leadership on the use of perceived information technology. The effect of interaction of transactional leadership and level of education which is hypothesized cannot significantly explain the variation in the variable of the use of perceived information technology. The effect of interaction of transformational leadership and education level does not significantly explain the variation in the variable of the use of perceived information technology.

The results showed that the level of education did not statistically moderate the influence of transactional leadership on the use of perceived information technology and transformational leadership on the use of perceived information technology. The explanation that can be given is that the role of level of education moderation has a strong influence to reduce some of the uncertainty and ambiguity in the role and responsibility of the employees from the work that has been predetermined. The result of this study indicates that in the relation to the use of perceived information technology at PT KAI operational region II Bandung, employees of PT KAI operational region II Bandung who use E-Ticketing information technology have understood clearly the use of information technology in their work. The use of E-Ticketing application is one of the roles in the work that its usefulness has previously been defined well and clearly by the manager, so that employees do not experience the uncertainty and ambiguity.

The result also shows that E-Ticketing Information technology is designed to provide integrated data, which can eliminate the twofold source of the data.

The integrated data gives the sense that wrong data entry can simultaneously have major implications on the overall organization, this can make the source of discomfort, resulting in uncertainty and ambiguity to the end user, and being not aware of this anxiety can affect the use of individual perceived information technology which finally can lead to problems in the implementation.

By providing a strong influence on the behavioral rating to be taken and the behavioral rating which have been carried out, the level of education reduces some of the anxiety and uncertainty that comes from incorrect data entry, which can simultaneously have major implications on the overall organization.

## DISCUSSION

This research found that the level of education does not moderate positive effect of transactional leadership and transformational leadership on the use of perceived information technology. The effect of the interaction of transactional leadership and level of education which is hypothesized cannot significantly explain the variation in the variables of the use of perceived information technology. The interaction effect of transformational leadership and education level cannot significantly explain the variation in the variable of the use of perceived information technology.

The result of this research showed that the level of education statistically did not moderate the influence of transactional leadership on the use of perceived information technology, and transformational leadership on the use of perceived information technology. The explanation that can be given is that the role of level of education moderation has a strong influence by reducing some of the uncertainty and ambiguity in the role and responsibility of the employees from the work that has been predetermined. The result of this study indicates that in relation to the use of perceived information technology at PT KAI Operational Region II Bandung, the employees of PT KAI Operational Region II Bandung who use E-Ticketing information technology have clearly understood the use of

information technology in their work. The use of E-Ticketing application is one of the roles in the work that its usefulness has previously been defined well and clearly by the manager so that the employees do not experience the uncertainty and ambiguity.

The result of research also showed that E-Ticketing information technology is designed to provide integrated data, which can eliminate the source of the data that is twofold. The integrated data gives the sense that the wrong data entry can simultaneously have major implications on the overall organization. This can make it the source of discomfort, resulting in the uncertainty and ambiguity to the end user. Being not aware of this anxiety can affect the use of individual perceived information technology which ultimately can lead to problems in the implementation.

## CONCLUSION

Based on the result of research and the discussion on the effect of transactional leadership, transformational leadership and the education level on the use of perceived information technology at PT K.A.I Operational Region II Bandung, it can be concluded as follows:

1. The leadership which is run by transactional leaders of PT. K.A.I Operational Region II Bandung is good, and the full support given by the employees is a form of the efforts of organization members to achieve the vision and mission also the goals of the organization on an ongoing basis. Transformational leadership that is run by the leaders of PT. K.A.I Operational Region II Bandung is good, and the employees support the leaders in achieving the goals of the organization in accordance with all the advantages and disadvantages of the leaders. The level of education at PT. K.A.I Operational Region II Bandung, is high. It shows that the employees at PT. K.A.I Operational Region II Bandung have good appreciation in terms of education because the high level of education obtained tends to have good insight and knowledge of science.
2. The use of perception at PT. K.A.I Operational Region Bandung is good, this shows that the

employees of PT. K.A.I Operational Region Bandung tend to receive and use information technology applications on an ongoing basis because they believe that these applications can help them to be able to work better in the future.

Transactional leadership and transformational leadership have a significant influence on the level of education at PT K.A.I Operational Region II Bandung. This is in line with the previous studies which found that the transactional leadership and transformational leadership has a significant influence on the use of perception, by encouraging the employees to think in barn, leaving the old patterns, and encouraging to analyze problems with different perspectives that finally will generate better level of acceptance of the technology by employees in an organization.

## REFERENCES

- Adam Ibrahim. 2001, " *Dasar - dasar Administrasi Publik* ", Lembaga Administrasi Negara.
- Arfrida. 2003. *Ekonomi Sumber Daya Manusia*. Penerbit: Ghalia Indonesia.
- Arikunto, S. 1996. *Prosedur* ", ISSN 1979-2697, Vol.1 No.3, September 140 2008:137-142.
- Arikunto, S. 1996, *Prosedur Penelitian: Suatu Pendekatan Praktek*. Jakarta: Rineka Cipta.
- Avolio, B., Bass, B.M., Jung, D.I. 1999. "Re-memeriksa komponen kepemimpinan Transformasional dan transaksional multifactor menggunakan kuesioner kepemimpinan", *Journal of Occupational dan Organizational Psychology*, Vol. 72 No.4, pp. 441-62.72 No.4, pp. 441-62.
- Bass, Bernard, M., & Avolio, J. Bruce. 1990. *Transformational Leadership Development: Manual for the Multifactor Leadership Questionnaire Palo Alto*. California: Consulting Psychologist Press, Inc
- Bass, B.M. 1999. "Dua Dasawarsa Riset and Development in Transformational dan Pembangunan di Transformational Leadership", *European Journal of Kepemimpinan* ", *European Journal of Work and Organizational Psychology*, *Kerjadan Organisasi Psikologi*, Vol. Vol. 8, No. 1, pp932. 8, No 1, pp9-32.
- Basseller, G., I. Benbasast, and B.H. Reich. 2003. The Influence of Business Managers' IT Competence on

- Championing IT, *Information Systems Receach*, 14: 317-336.
- Brent Allred. 1998. ISSN 1979-2697, Vol. 1 No.3, September 142 2008: 137-142
- Brown, D.L., M.A. Berkley, and K.R. Jones. 2002 "Individual and Technological Factors Affecting Perceived Ease of Use of Web-based Learning Technologies in Developing Country", *The Electronic Journal on Information Systems in Developing Countries*; 9, 5, pp. 1-15.
- Covey, Stephen, R. 1997. *Kepemimpinan yang Berprinsip*. Jakarta: Binarupa Aksara.
- Davis, F.D. 1989. Perceived usefulness, Perceived Ease of Use, and User Acceptance. *MIS Quarterly*, 13: 319-340.
- Dewanto dan Falahah. 2007. "Enterprise Resource Planning", Informatika Bandung.
- Dias Aryo. 2008. "Pengaruh Kepemimpinan Transaksional dan Transformasional pada Kegunaan dan Kemudahan Persepsian Pengadopsian Teknologi Informasi dengan Kepercayaan sebagai variabel pemoderasi di PT Pos Indonesia", UGM Yogyakarta.
- Djati, P.S., dan Khusaini, 2003. *Kajian Terhadap Kepuasan Kompensasi, Komitmen Organisasi dan Prestasi Kerja*. Surabaya: Universitas Kristen PETRA.
- Ellitan, L. 2003. *Peran Sumber Daya Dalam Meningkatkan Pengaruh Tehnologi Dalam Produktivitas*. Surabaya: Universitas Kristen PETRA, ISSN 19792697, Vol. 1 N6.3, September 140 2008: 137-142.
- Gibson, J.L., Ivancevich, J.M., dan Donnelly, J.H. 1991. *Organizations: Behavior, Structure, Processes*. Homewood, III: Richard D. Irwin, Inc.
- Grossmann, M. 1999. *The Human Capital Model of The Demand for Health*. Cambridge: National Bureau of Economic Research. ISSN 1979-2697, Vol. 1 No.3, September 140 2008: 137-142
- Harun Al Rasjid, Lokakarya sehari "Analisis Jalur Sebagai Sarana Statistik Dalam Analisis Kausal "LP3E: Fakultas Ekonomi Padjadjaran.
- Harsiwi, A.M., 2003. Hubungan Kepemimpinan transformasional dan Karakteristik Personal Pemimpin. *Kinerja: Jurnal Bisnis dan Ekonomi Vol 5, No. 1, Juni 2001*. Yogyakarta: Program 8 Pasca Sarjana Universitas Atmajaya.
- <http://www.akhmadsudraiat.wordpress>' Makalah pengembangan inovasi kurikulum pembelajaran berbasis keaktifan siswa diposkan 7 April 2010.
- Igbaria, M. 1994. "An Examination of the factors contributing to Micro Computer techenology acceptance". *Journal of Information system*, Elsevier Science, USA.
- Majalah International Railway Journal, Edisi 13 Februari 2003.
- M. Jumali, Surtikanti, SA. Taurat Aly, Sundari, Editor: Eko Supriyanto, Rubino Rubiyanto, Djoko Santoso. 2004. *Landasan Pendidik an*. Surakarta: UMS Press.
- M. Nazir. 1983. *Metode Penelitian*. Jakarta: Ghalia Indonesia.
- Mansyurwiratmo. 1996. Pengantar Kewiraswastaan: Kerangka Dasar Memasuki Dunia Bisnis. Yogyakarta: BPFE.
- Masi, R.J., & Robert, A.C. 2000. Effects of transformational leadership on subordinates motivation, empowering norms, and organizational productivity. *International Journal of Organizational Analysis*, 8:16-47.
- O'Leary, Elizabeth. 2001. *Kepemimpinan Edisi Personalia*. Yogyakarta: Andi.
- Parry, K. 2000. *Does leadership help the bottomline? New Zealand Management*. Auckland, 47:38-41.
- Saifuddin, Anwar. 1997. *Relibialitas dan Validitas*. Yogyakarta: Pustaka Pelajar.
- Sarros, J.C., Butchatsky, O. 1996. *Leadership*. Sydney: Harper-Collins.
- Schepers, J., and Wetzel, M., K.D. Ruyter. 2005. Leadership Styles in Technology Acceptance: Do Followers Practice What Leaders Preach. *Managing Services Quality*, 15: 469-508.
- Sidiq Nurachmat, M Wahyudin. 2008. "Peran Kepemimpinan Transformasional, Kepemimpinan Transaksional, Komunikasi Internal, dan Pengembangan Karier terhadap Kepuasan Kerja di PT Sumber Begawan Plasindo Karanganyar.
- Succi, Melissa, J., & Walter, Zhipting, D. 1999. "Theory of User Acceptance of Information Technologies: An Examination of Health Care Professional" (On-line) <http://www.computer.org/proceeding/hicss /0014 / 013. pdf>
- Sulistiyani, Ambar, T., dan Rosidah. 2003. *Manajemen Sumber Daya Manusia*. Yogyakarta: Graha Ilmu.
- Sugiyono. 2006. *Statistika untuk Penelitian*. Bandung: CV Alfabeta.
- Swandary, Fifi. 2003, "menjadi Perusahaan yang Survive dengan Transformasional Leadership", *Jurnal Ekonomi Manajemen dan Akuntansi*, Vol 1 no 2 Mei 2003:93-1003.
- Tri Heru, 2001 "Pengaruh kepemimpinan Transaksional dan Transformasional terhadap keefektifan pemimpin, kepuasan bawahan, dan upaya ekstra bawahan", *Jurnal Akuntansi Manajemen (AKMEN) STIE YKPN* edisi April 2003:13-29.
- Undang-Undang RI. No.20 Tahun 2003. Sistem Pendidikan Nasional. Bandung: Fokusmedia.

Veithzal, Rivai. 2004. *Manajemen Sumber Daya Manusia*.  
Jakarta: Cetakan Pertama, PT. Raja Grafindo Persada.

[www.undiknas.ac.id/wp-content/uploads/iurnal/analisis-terbedaan-prestasi-kerjanya.srisubawa-iba.budiarta.pdf](http://www.undiknas.ac.id/wp-content/uploads/iurnal/analisis-terbedaan-prestasi-kerjanya.srisubawa-iba.budiarta.pdf)