



การประชุมวิชาการและนำเสนอผลงานวิจัยระดับชาติและนานาชาติ ครั้งที่ 10
"Global Goals, Local Actions: Looking Back and Moving Forward"

Influences of Talent Management, Employee Engagement, and Knowledge Integration toward Sustainable Competitive Advantage of Thai Electronics Manufacturing Industry

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Abstract

The objectives in the study were to explore: (1) the talent management, employee engagement, knowledge integration, and sustainable competitive advantage; (2) the influences of the mediated variable of the employee engagement as a correlated variable between talent management and sustainable competitive advantage; and (3) the influences of the mediated variable of the knowledge integration as a correlated variable between talent management and sustainable competitive advantage of electronics manufacturing industry in Thailand. The samples in this quantitative study were 138 entrepreneurs in electronics manufacturing industries in Thailand. Questionnaires were used as the research instrument, Cronbach's alpha coefficient range of talent management, employee engagement, knowledge integration, and sustainable competitive advantage had 0.857, 0.737, 0.767, and 0.780 respectively and data were analyzed using percentage, means, standard deviation, and structural equation model (SEM) and Software program.

The results of the study revealed that (1) the talent management, employee engagement, knowledge integration, and sustainable competitive advantage were overall averaged at high level, ranging at 3.85, 3.82, 3.90 and 3.85 respectively; (2) the influence as a mediated factor of the employee engagement correlated between the talent management and the sustainable competitive advantage had coefficient scales (Booth LL CI) at 0.261 and Booth ULCI were at 0.588; and (3) the influence as a mediated factor of the knowledge integration correlated between the talent management and the sustainable competitive advantage had coefficient scales (Booth LL CI) at 0.052 and Booth ULCI were at 0.281. Therefore, this study ascertained the significance of the employee engagement and the knowledge integration as a new concept of innovative creation that contributes to the sustainable competitive advantage in the world market and it could further increase the organizational efficacy and sustainability.

Keyword: *Talent Management / Employee Engagement / Knowledge Integration / Sustainable Competitive Advantage*



บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษา (1) การบริหารคนเก่ง ความผูกพันของพนักงาน ความผูกพันของพนักงาน และความได้เปรียบในการแข่งขันอย่างยั่งยืน (2) อิทธิพลคั่นกลางของความผูกพันของพนักงานที่เป็นตัวแปรเชื่อมโยงระหว่างการบริหารคนเก่งสู่ความได้เปรียบในการแข่งขันอย่างยั่งยืน และ (3) อิทธิพลของตัวแปรคั่นกลางการบูรณาการความรู้ที่เป็นตัวแปรเชื่อมโยงระหว่างการบริหารคนเก่งสู่ความได้เปรียบในการแข่งขันอย่างยั่งยืน โดยงานวิจัยนี้เป็นการวิจัยเชิงปริมาณ กลุ่มตัวอย่างที่ใช้ในการวิจัย คือ ผู้ประกอบการอุตสาหกรรมการผลิตชิ้นส่วนอิเล็กทรอนิกส์ จำนวน 138 คน เครื่องมือที่ใช้เป็นแบบสอบถาม ซึ่งผลการวิเคราะห์สัมประสิทธิ์แอลฟาของการบริหารคนเก่ง ความผูกพันของพนักงาน การบูรณาการความรู้ และความได้เปรียบในการแข่งขันอย่างยั่งยืน เท่ากับ 0.857, 0.737, 0.767 และ 0.780 ตามลำดับ สถิติที่ใช้ คือ วิเคราะห์ด้วยค่าร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน และการวิเคราะห์ตัวแบบสมการโครงสร้าง

ผลการวิจัยพบว่า (1) การบริหารคนเก่ง ความผูกพันของพนักงาน การบูรณาการความรู้ และความได้เปรียบในการแข่งขันอย่างยั่งยืน มีค่าเฉลี่ยโดยรวมอยู่ในระดับมาก มีค่าเท่ากับ 3.85, 3.82, 3.90 และ 3.85 ตามลำดับ (2) อิทธิพลคั่นกลางของความผูกพันของพนักงานเป็นตัวแปรเชื่อมโยงระหว่างการบริหารคนเก่งสู่ความได้เปรียบในการแข่งขันอย่างยั่งยืน โดยมีค่าสัมประสิทธิ์ของขอบเขตล่างเท่ากับ 0.261 และขอบเขตบนเท่ากับ 0.588 และ (3) อิทธิพลของตัวแปรคั่นกลางการบูรณาการความรู้เป็นตัวแปรเชื่อมโยงระหว่างการบริหารคนเก่งสู่ความได้เปรียบในการแข่งขันอย่างยั่งยืน โดยมีค่าสัมประสิทธิ์ของขอบเขตล่างเท่ากับ 0.052 และขอบเขตบนเท่ากับ 0.281 ซึ่งงานวิจัยนี้แสดงให้เห็นถึงความสำคัญของปัจจัยความผูกพันของพนักงานและการบูรณาการความรู้ที่เป็นแนวคิดใหม่ในการสร้างนวัตกรรมเพื่อก่อให้เกิดความได้เปรียบในการแข่งขันในตลาดโลกที่สำคัญต่อการเพิ่มประสิทธิภาพและความอยู่รอดขององค์กรได้อย่างยั่งยืน

คำสำคัญ: การบริหารคนเก่ง / ความผูกพันของพนักงาน / การบูรณาการความรู้ / ความได้เปรียบในการแข่งขันอย่างยั่งยืน

Introduction

In the digital economy innovation era, every business transaction faces challenges in terms of changing competitions both locally and internationally. It is complicated and dynamic. Business organizations must renovate their concepts in productivities to increase their sustainable competitive advantages. Furthermore, business organizations must adjust themselves in accordance with the technological advancement to the Industry 4.0 era. In this period, organizations must rely on the innovation of asset and equipment together with human resources and organizational membership development to positively prepare them for Industry 4.0 era (Nemati, 2015).

In the Industry 4.0 period, one influential industry of economic advancement is the electronics manufacturing industry. This industry produces electronic computers, digital equipment, and other electronic parts. These products are significant for Industry 4.0 era. Since there are contribute the highest export value in the country. Based on the analysis of



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economic environments of Kasikorn Research Center, it was found that in 2013 the Electronics Manufacturing Industry had produced electronics parts within the country and exported overseas of 42.40% in total quantities. However, the overall exports decreased by 11.70% because of the demand deceleration of global computers. Compared to December 2015, the total of exporting products in January 2016, was reduced to 3.11. Moreover, compared to January 2016, the total of February 2016 exporting products were reduced at 1.5% (Electrical and Electronics Institute, 2017). Based on the analysis of economic environments, Electronics Manufacturing Industry, which is a company that manufactures electrical parts, computers, and other electronic parts, is an important organization in the developing industry to innovate sustainable competitive advantages. It also focuses on the development of production and human resources that bring knowledge, skills, and experiences to share with other members, colleagues within the organization and in the industry; with the aim of cooperative teamwork development (Almaaitah et al., 2013). To promote sustainable competitive advantages, it has promoted employee engagement within the industry by providing education, sharing and transferring knowledge and skills. Moreover, it had created pride and relationship to promote respect on all levels of employees and teamwork in the organizations (Whelan & Carcary, 2011).

From the aforementioned, this study aimed to explore “Influences of talent management, employee engagement, and knowledge integration toward sustainable competitive advantage of Thai electronics manufacturing industry.” This study would like to explore the variables correlated to the relationship among the talent management and the sustainable competitive advantages of the Electronics Manufacturing Industry and to compare the correlated variables of causal and effect factors to show reasonable correlated path diagram (Piriyakal, 2015) in engaging sustainable competitive advantages both in the long run and for the organizational survivals in high global competitions (Boonyoo, 2018).

Objectives of the study

1. To explore the talent management, employee engagement, knowledge integration, and sustainable competitive advantage of Electronics Manufacturing Industry in Thailand.

2. To explore the influences of the mediated variable of the employee engagement as a correlated variable between talent management and sustainable competitive advantage of Electronics Manufacturing Industry in Thailand.

3. To explore the influences of the mediated variable of the knowledge integration as a correlated variable between talent management and sustainable competitive advantage of Electronics Manufacturing Industry in Thailand.



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Review Literature

1. Talent Management (TM): It is regarded as a significant factor in promoting organizational achievement. The organizations must have principles of talent management as a vital strategy for human resources management in consistent with other strategies and policies, and organizational cultures. It aims to enhance talent human resources efficacy for creating productivities, supporting organizational advancement. According to Almmaitah et al's study (2013) highlighted the importance of talent management and claimed that it could promote the highest advantage of the knowledge and work efficacy of human resources. They mentioned that it could further promote sustainable competitive advantage (Whelan & Carcary, 2011).

2. Employee Engagement (EE): It is significant to drive the organizational achievement. Also, it is a strategy to promote the competitive advantages in business transactions. Employee engagement is comparable to human relationships that does not require signing formal contracts. It is a psychological contract of employees who have emotional conditions and reasons shown in the forms of attitudes and cooperative behaviors in an organization. The employees will take full efforts of their work performance to achieve organizational goals and values of organizational membership (Adi, 2012). They will dedicate their ability, time, intellect, and their workforce to enhance organizational achievement. As shown in the study of Kuok & Taorminal (2017) about the effects of employee engagement and the competitive advantages in business transactions, employee engagement had an effect on the contribution of the competitive advantage in the business world.

3. Knowledge Integration (KI): It is a procedure for transferring various kinds of knowledge from different sources, especially in the intrinsic knowledge and the explicit knowledge of human resources (Aldakhil, 2015). Knowledge integration is a process, followed by a combination of communication and organizational knowledge. Both of these combinations will be an integrated input to enhance the different work efficacies and capacities to engage the competitive advantage of an organization (Rahimli, 2012). In the study of Almaaitah et al. (2013), the talent management and the competitive advantage by using knowledge integration as a controlled variable, they mentioned that talent management had an effect on the competitive advantage of organizations. Additionally, knowledge integration could be a supportive variable to increase competitive advantages.

4. Sustainable Competitive Advantage (SCA): It is a new form of contributing a competitive advantage in the new globalization era. It may depend on the utilities of its strategies to promote work efficacy (Porter, 1985). Assuming the achievement of the competitive advantage may not be from competing by threats and competitive price-cutting, the achievement must be from the capabilities of value-creating to produce a new variation



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of productivities. This may affect the competitors' productivities to be outdated and lose track of the new competitive techniques of organizations (Kim & Mauborgne, 2004). Based on the aforementioned literature review, the researcher has created the conceptual framework of this study as the following:

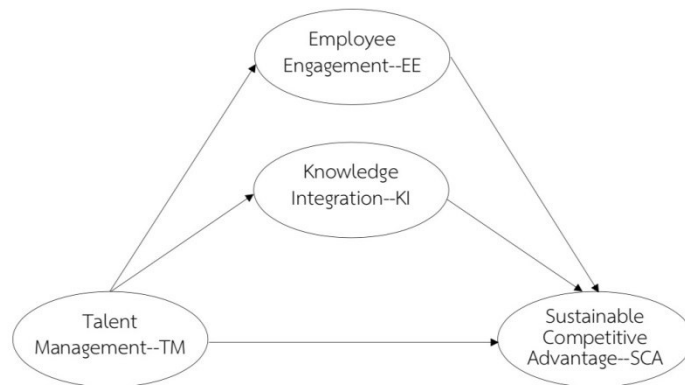


Figure 1 Research Framework

Research Hypotheses

Hypothesis 1 (H1) Talent management has impact directly on the employee engagement.

Hypothesis 2 (H2) Talent management has impact directly on the knowledge integration.

Hypothesis 3 (H3) Talent management has impact directly on the sustainable competitive advantage.

Hypothesis 4 (H4) Employee engagement has impact directly on the sustainable competitive advantage.

Hypothesis 5 (H5) Employee engagement as the mediator variable correlated with the influences of talent management and sustainable competitive advantage.

Hypothesis 6 (H6) Knowledge integration has impact directly on the sustainable competitive advantage.

Hypothesis 7 (H7) Knowledge integration as the mediator variable correlated with the influences of talent management and sustainable competitive advantage.

Research Methodology

This quantitative study is an exploratory research implementing questionnaires. The researcher has followed the delimitation and descriptive details as follows:



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1. Populations in this study: Populations were 2,342 entrepreneurs from Electronic Manufacturing industries, which is registered in the Department of Industrial Works (Electrical and Electronics Institute, 2017). These samples were randomized as 138 samples in the study. The concept for calculating size of minimum and accepted samples was from Westland (2010).

$$n \geq 50r^2 - 450r + 1100$$

'r' value is the ratio between manifest variables (or indicators variables) and latent variables. This study has 22 indicator variables and 4 latent variables. The result of 'r' value analysis was 5.5. From the result of the formula, size of the samples must be not less than 138 samples. Therefore, all samples were randomized into 138 samples using simple random sampling.

2. Research instrument in this study: A questionnaire was used as a research instrument in this study. The questionnaire was divided into five parts. Part one aimed to gather personal data of the samples using checklists. Part two included the measurement of levels of talent management, adapted from Almmaitah et al.'s model (2013). Part three measured levels of employee's engagement, developed from Kuok & Taorminal's Model (2017). Part four measured the knowledge integration, developed from Almaaitah et al. (2013). Finally, part 5 measured the levels of sustainable competitive advantages, developed from Boonyoo's Model (2018). Parts 2 to 5 were evaluated using 5 points of Likert's scales of measurement.

3. Validity of research instrument: The researcher had assured the validity and reliability of the research instrument by measuring the consistency of the overall content of the questionnaire. By using Cronbach's alpha coefficient, if the value is not less than 0.70, indicates that the high precision questionnaire is acceptable and can be used to collect actual research data. The result of Cronbach's alpha coefficient range of talent management, employee engagement, knowledge integration, and sustainable competitive advantage had 0.857, 0.737, 0.767, and 0.780 respectively.

4. Data was collected from 138 entrepreneurs of Electronic Manufacturing Industry in Thailand; were collected and achieved a 100% response. Before collecting data by using the questionnaire, the researcher will inform the entrepreneur in advance by telephone to request cooperation in answering this research questionnaire.

5. Data analysis: Statistics analysis in this study included: (1) descriptive statistics (percentage, means, and standard deviation), (2) Structural Equation Model statistics with



SmartPLS 3 program (Hair et al., 2017); and (3) analysis of the effect of mediated variables by using Process program (Preacher & Hayes, 2008).

Research Findings

1. Regarding the analysis of personal data, it was found that the majority of the samples were males (70.29%), aged 30-40 years (42.03). They had graduated with a bachelor degree (34.78%), have then managed the organizations in limited companies (54.35%). Furthermore, they had run the businesses for around 11-15 years (36.96%).

2. Regarding the descriptive analysis of the talent management, employee engagement, knowledge integration, and sustainable competitive advantages; it was found that the majority of the samples had their opinions about the knowledge integration at the highest level ($\bar{x}=3.90$, $SD=0.425$), followed by the talent management ($\bar{x}=3.85$, $SD=0.534$), sustainable competitive advantage ($\bar{x}=3.85$, $SD=0.527$), and employee engagement ($\bar{x}=3.82$, $SD=0.488$) respectively.

3. The results using structural equation analysis through SmartPLS 3 program (Hair et al., 2017), analyzing direct and indirect regressive coefficient effects toward sustainable competitive advantage. The image 2 has been improved by cutting the weight values of indicators that have unacceptable reached weight, which is positive and greater than 0.707. (Piriyakal, 2015) as shown in the figure 2:

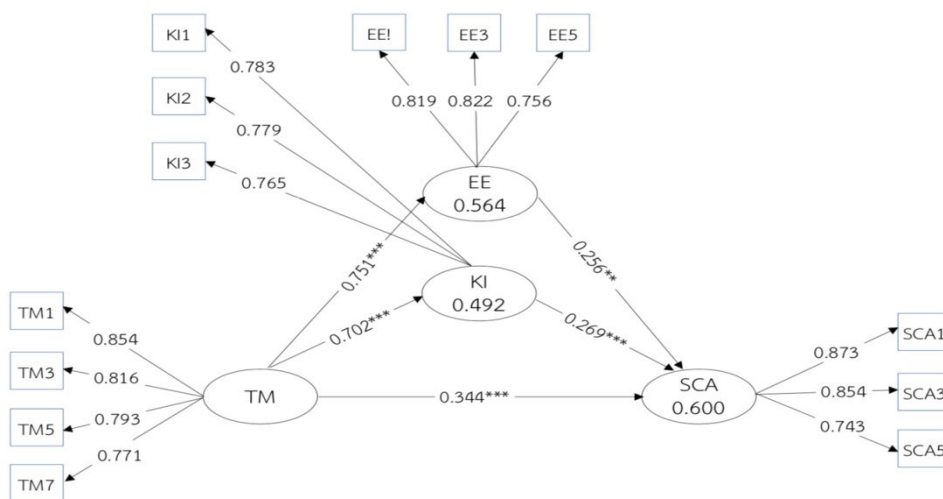


Figure 2 The baseline of structural equation modeling relationships

Figure 2 regarding the path analysis of structural equation model to analyze variables affecting on the sustainable competitive advantage, it was found that the talent management had a direct effect on the employee engagement ($DE=0.751$), followed by the



knowledge integration (DE=0.702), and the sustainable competitive advantage (DE=0.334). The employee engagement and the knowledge integration had an indirect effect on the sustainable competitive advantage (IE = 0.192 and 0.188 respectively); (2) the employee engagement had a direct effect on the sustainable competitive advantage (DE = 0.256); and (3) the knowledge integration had a direct effect on the sustainable competitive advantage (DE=0.269).

4. Results of hypothesis testing of multiple mediator factors correlated with talent management toward sustainable competitive advantage were shown in Table 1.

Table 1 Results of testing hypotheses

	Hypothesis	Coefficient (Coef.)	t-test	Results
H1	TM → EE	0.751***	23.911	supportive
H2	TM → KI	0.702***	14.294	supportive
H3	TM → SCA	0.334***	3.052	supportive
H4	EE → SCA	0.256**	2.540	supportive
H6	KI → SCA	0.269***	2.832	supportive

Notes: (* refers to p-value ≤ 0.10 or t ≥ 1.65) (** refers to p-value ≤ 0.05 or t ≥ 1.96) (***) refers to p-value ≤ 0.01 or t ≥ 2.58)

Table 1 Results of the study revealed that (1) the talent management (TM) had a direct effect on the employee engagement (EE), knowledge integration (KI), and the sustainable competitive advantage (SCA), supported the 1st, 2nd, and 3rd hypothesis, t-test scales were at 23.911, 14.294. and 3.052 respectively; and (2) the employee engagement (EE) and the knowledge integration (KI) had a direct effect on the sustainable competitive advantage, supported the 4th and 6th hypothesis, t-test scores were at 2.540 and 2.832 respectively

5. In terms of the influence of mediator variables as transforming variables of the relationship among independent variables and dependent variables as shown in Table 2

Table 2 Results of indirect structural equation modeling

	Hypothesis	Effect	Boot SE	Boot LLCI	Boot ULCI
H5	TM → EE → SCA	0.411	0.083	0.261	0.588
H7	TM → KI → SCA	0.163	0.058	0.052	0.281



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Table 2 Results of the study showed that the employee engagement (EE) and the knowledge integration (KI) was mediated variables between the talent management (TM) and the sustainable competitive advantage (SCA) because the coefficient scales of Boot LLCI to Boot ULCI did not contain Zero confidence (Preacher & Hayes, 2008). The employee engagement (EE) and knowledge integration (KI) was a mediated variable between talent management (TM) and the sustainable competitive advantage (SCA). The coefficient scales of Boot LLCI were 0.261 and 0.052, respectively and the coefficient scales of Boot ULCL were at 0.588 and 0.281, respectively.

Discussions

1. Regarding the talent management, organizational require skills, knowledge, and experiences to promote creativity and work efficacy to gradually create new productivities in the world market and to contribute to the sustainable competitive advantage in the long run. This study was consistent with Almmaitah et al's study (2013) highlighted the importance of talent management and claimed that it could promote the highest advantage of the knowledge and work efficacy of human resources. They mentioned that it could further promote sustainable competitive advantage (Whelan & Carcary, 2011).

2. Regarding the employee engagement, organizational had to highlight the development of knowledge, skills, and experience of their employees. This can promote the employees' work efficacy in any complicated duties faster. Hence, this result supported Kuok & Taorminal's study (2017) wherein the employees could support sustainable competitive advantages of the business transactions.

3. Regarding the knowledge integration, organizational required the intrinsic knowledge integration of individuals to contribute knowledge for sustainable competitive advantages. This result was consistent with Almaaitah et al. (2013) which argued that knowledge integration would be significant resources that contribute to competitive advantage. Under the vivid knowledge management, it could be a significant process that human resources applied their knowledge to gain successful strategic management and could contribute to the sustainable competitive advantage of the organizations.

Suggestions

1. Suggestions for Organizational Management Utilities

1.1 The organization should have a clear strategy, in order to have proper human resource management for employees to bring embedded abilities of creating a sustainable competitive advantage for the organization



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1.2 The organization should encourage employees to be connected with the organization and be able to apply existing knowledge to adjust the processes that are appropriate to the organizational structure. And can truly create a sustainable competitive advantage for the organization

2. Suggestions for further study

2.1 Further studies should be conducted with other industries which have systematic talent management to contribute organizations' sustainable competitive further.

2.2 Further studies should be explored other variables affecting the sustainable competitive advantages such as organizational structure, capital structure, and so on.

Reference

- Adi, A. N. (2012). Driving performance and retention to employee engagement: A case study in University of Brawijaya. **Journal of Basic and Applied Scientific Research**, 2(1), 338-350.
- Aldakhil, A. M. (2015). The effect of knowledge integration, knowledge innovation on new product performance: An empirical study in Saudi Arabia firms. **International Journal of Business and Management**, 10(11), 177-184.
- Almaaitah, M. A., Al-Shalabi, F. S., & Aljamal, W. H. (2013). Talen management and competitive advantage: The moderating effect of knowledge integration. **International Journal of Computer Applications**, 66(11), 19-27.
- Boonyoo, T. (2018). Mediation effect innovation in transferring effects of organizational culture, market orientation, knowledge management and entrepreneurship to sustainable competitive advantage of footwear and leather goods industry. **Doctor of Philosophy in Social Sciences Association Ramkhamhaeng University**, 8(Special), 44-62.
- Electrical and Electronics Institute. (2017). **Report of the electrical and electronic industry situation**. Retrieved March 25, 2017, from [http:// www.thaieei.com/2013/th/index.php](http://www.thaieei.com/2013/th/index.php).
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). **A primer on partial least squares structural equation modeling (PLS-SEM)**. Thousand Oaks: Sage.
- Kim, W. C., & Mauborgne, R. (2004). **Blue ocean strategy**. Cambridge, MA: Harvard Business School Press.
- Kuok, A, C. H., & Taorminal, R. J. (2017). Work engagement: Evolution of the concept and a new inventory. **Psychological Thought**, 10(2), 262-287.



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- Nemati, M. (2015). Study the organizational socialization, psychological capital, knowledge sharing and trust on employees' tendency to organizational innovation. **Applied Mathematics in Engineering, Management and Technology**, 3(1), 733-742.
- Piriyakal, M. (2015). Mediators and test of indirect effect. **Journal of Management and Development**, 2(1), 11-31.
- Porter, M. E. (1985). **Competitive advantage: Creating and sustaining superior performance**. New York: Free Press.
- Preacher, K. J. & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. **Behavior Research Methods**, 40, 879-891.
- Rahimli, A. (2012). Knowledge management and competitive advantage. **Information and Knowledge Management**, 2(7), 37-43.
- Westland, J. C. (2010). Lower bounds on sample size in structural equation modeling. **Electronic Commerce Research and Applications**, 9(6), 476-487.
- Whelan, E. & Carcary, M. (2011). Integrating talent and knowledge management: where are the benefits?. **Journal of Knowledge Management**, 15(4), 675-687.