

Assessment of Project Quality Control Measures and Its Impacts on Project Success in Lagos State, Nigeria

L. A. Babatunde* and N. N. Agu

Department of Quantity Surveying, Nnamdi Azikiwe University, Awka, Nigeria

*Corresponding Author: tundeyla@gmail.com

ARTICLE INFO

Received: August, 2025

Accepted: October, 2025

Published: October, 2025

Keywords:

Building construction

Project delivery

Quality control

Quality assurance.

ABSTRACT

This study is to identify practices of building construction firms in Lagos State in ensuring successful project delivery vis-à-vis project control measures. The study focused on project control measures for quality assurance with a view to developing a guide for improving quality-related project control to avoid poor quality projects so as to meet client's satisfaction. A field survey involving 97 professionals (Consultants and Contractors) that were involved in building construction projects within Lagos State was conducted. Data were collected using structured questionnaires and analyzed using statistical package for social science (SPSS, 23 version) with a simple table of analysis. The top most agreed project control measures revealed by the study include; making sure that all necessary materials needed for the construction works passed through approved tests throughout the construction stages, making sure the project team understands the product quality, and involvement and necessary approval from the government quality control agencies. Project fraud and corruption, lack of enforcement/sanction for earring contractor, and lack of proper training and experience for project managers were the top ranked inhibiting factors observed. While the top ranked guide for improving quality-related project control include: ensuring there is regular project quality and cost control progress meetings involving quality assurance officers, planners, quantity surveyor and the site management team, making sure the site personnel are trained in the project quality control monitoring process, and ensuring there is an open and trusting relationship between the site management team and office team to ensure reporting from site honest and accurate. The research recommended that there must be proper control measures for all aspects of the project and to be followed by adequate guide as related to quality. This will go a long way in changing the negative story of the building construction projects in Lagos State, Nigeria.

1. INTRODUCTION

In many developing economies, including Nigeria, the construction and project delivery industry plays a critical role in infrastructure development, urbanisation, and economic growth. Lagos State, being Nigeria's most populous state and its commercial nerve center, has seen rapid growth in construction projects (roads, housing, commercial buildings, public works) intended to improve the standard of living and support economic activity (Oyalowo, 2022; Chidi and Badejo, 2024; Lan *et al.*, 2025). However, despite significant

Babatunde and Agu: Assessment of Project Quality Control Measures and Its Impacts on Project Success in Lagos State, Nigeria

investment, many projects in Lagos do not fully meet stakeholders' expectations in terms of time, cost, quality and sustainability (Leo-Olagbaye *et al.*, 2023; Oyalowo, 2023).

Quality control in project management refers to the systematic set of measures and procedures applied during all phases of a project (from planning and design, through procurement, construction, and commissioning) to ensure that outputs meet required standards, specifications, and client expectations (Abeyasinghe, 2022; Owolabi *et al.*, 2024; Qamar *et al.*, 2024). When properly implemented, quality control measures help prevent defects, reduce rework, limit waste, ensure safety, prolong lifespan of structures and infrastructure, improve client satisfaction, and ultimately contribute to project success (Tijani and Ajagbe, 2016; Olawale *et al.*, 2019; Faraji *et al.*, 2022; Love *et al.*, 2023; Skorupińska *et al.*, 2024).

In Lagos State, there have been recurring concerns about poor workmanship, use of substandard materials, insufficient inspection, non-adherence to design and regulatory standards, and collapses or failures of structures (Opawole *et al.*, 2022; Nwoyiri *et al.*, 2023; Ajagbe *et al.*, 2023). For example, recent research indicates that while quality management practices are present among construction firms in Lagos, many of them rely primarily on traditional methods rather than more robust or modern quality control frameworks (Oyewole, 2022). Additionally, quality assessment systems have been shown to have positive impacts on project delivery such as reducing material waste, shortening delivery time, improving firm reputation, and increasing customer satisfaction (Okoye *et al.*, 2022).

Moreover, challenges such as inadequate enforcement of building codes, limited resources for inspection and testing, lack of trained personnel, weak regulatory oversight, and cost-cutting behavior among some contractors exacerbate poor quality outcomes (Arowolo *et al.*, 2019; Barnaby *et al.*, 2025). These challenges often lead to non-satisfaction of clients, project delays, cost overruns, legal liabilities, safety hazards, and in worst-case scenarios, structural failures.

Given the gap between what is formally required or expected in quality control, and what is actually practiced in Lagos State, there is a need for a systematic assessment of which quality control measures are being used, how effectively they are enforced, and how they influence the success of projects (success in terms of meeting cost, time, client satisfaction, safety, durability). This understanding is essential for policy makers, agencies, regulatory bodies, construction firms, and other stakeholders who are interested in improving project outcomes, reducing waste and failures, bolstering public trust, and ensuring that investment in infrastructure yields its intended benefits.

Therefore, this study identified the quality-related project control measures in Lagos State's project delivery environment, assessed the critical factors inhibiting quality related project control, and evaluated a guide for improving quality-related project control measures in building construction projects. Insights from this study help in recommending improvements to regulatory frameworks, practices of project stakeholders, resource allocation for quality control, and ultimately contribute to more successful projects in Lagos State.

2. METHODOLOGY

The study area is Lagos State, Southwestern Nigeria (Figure 1). Based on the 2006 census, Lagos is the second most populous state in Nigeria with population of 9,013,534 people and area of 356,861 hectares. The rate of population growth is about 600,000 per annum with a population density of about 4,193 persons per sq.km (NPC, 2006). Purposive simple random sampling techniques were employed for this study. Since most of the big firms in construction industry are based in Lagos State, questionnaire was formulated in such a manner that the professionals with accumulated experience in the construction industry were chosen for the study. In terms of sampling, accessibility and data availability are the main reason for selecting the sampled respondent for the study.

The questionnaire used was divided into different sections, in order to cover all necessary details for the report and analysis of the case study. Each section contain number of questions from which data were

Babatunde and Agu: Assessment of Project Quality Control Measures and Its Impacts on Project Success in Lagos State, Nigeria

collated. Section one was used to obtain demographic information of respondents; section two identified the quality-related project control measures; section three assessed the critical factors inhibiting quality related project control while section four evaluated a guide for improving quality-related project control measures in building construction projects. The target population for this research work is made up of the professionals (Quantity Surveyor (QS), Architect, Engineer) both in contracting and consulting firms of construction industry in the study area. One hundred (100) questionnaires were administered to the professionals that were involved in building construction projects, and ninety-seven (97) were retrieved from the respondents and analysed. Descriptive statistics (percentages, mean and standard deviation) and statistical package for social science (SPSS 23 version) were used to analyse the data collected.



Figure 1: Map Lagos Metropolis

(Source: Dept. of Surveying and Geo-Informatics, Nnamdi Azikiwe University, Nigeria)

3. RESULTS AND DISCUSSION

3.1 Demographic Information of Respondents

Table 1 shows the demographic information of respondents. It could be observed that majority of respondents (58.7%) are from contracting firms, which suggests that most voices are from those directly involved in construction delivery. Consulting firms make up about a quarter (25%), with government agencies and others making up smaller proportions (6.5 and 9.8% respectively). This spread indicates that the dataset has strong input from contractors, somewhat less from oversight/regulatory or advisory roles (consultants, government). This might bias responses toward the challenges and perspectives experienced by contractors rather than oversight or regulatory perspectives.

The respondents' organisations are fairly well established. Only 17.4% have been in the industry for 0-5 years; the largest single group (28.3%) have been involved for 6-10 years. Combined, the middle bands (6-20 years) constitute roughly 60% of the sample, while about 21.7% have over 20 years' involvement. This suggests that many organisations have some maturity and institutional memory, which could affect how robust their quality control practices are. Moreover, more than half of the respondents are Quantity Surveyors (52.7%), followed by Engineers (17.6%), Contractors themselves (14.3%), Architects (7.7%), and Others (7.7%). This strong skew toward Quantity Surveyors means that cost-related issues and measurement, specification checking etc. may be particularly well represented in the data; on the other hand, perspectives from Architects or Government Agencies may be less represented, potentially limiting diversity of viewpoints in design, regulation or policy.

Babatunde and Agu: Assessment of Project Quality Control Measures and Its Impacts on Project Success in Lagos State, Nigeria

Table 1: Demographic Information of Respondents

S/N	Items	Frequency	Percentage
1	Type of Organisation		
	Contracting	57	58.7
	Consulting	24	25
	Government Agency	6	6.5
	others	10	9.8
	Total	97	100
2	Number of Years of involvement by your organization within the construction industry		
	0-5 years	17	17.4
	6-10 years	27	28.3
	11-15 years	19	19.6
	16-20 years	13	13
	above 20 years	21	21.7
	Total	97	100
3	Profession of Respondent		
	Quantity Surveyor	51	52.7
	Architect	8	7.7
	Engineer	17	17.6
	Contractor	14	14.3
	Others	7	7.7
	Total	97	100
4	Years of construction experience		
	0-5 years	13	14
	6-10 years	28	29
	11-15 years	23	23.7
	16-20 years	15	15.1
	over 20 years	18	18.3
	Total	97	100
5	Highest Academic Qualification		
	HND	32	33.3
	B.Sc	26	26.9
	M.Sc	30	31.2
	M.BA	1	1.1
	Ph.D	5	4.3
	Others	3	3.2
	Total	97	100
6	Profession Membership level		
	Graduate	17	17.6
	Probationer	17	17.6
	Corporate	38	38.5
	Associate	17	17.6
	Fellow	4	4.4
	Others	4	4.4
	Total	97	100
7	Number of Construction Projects handled as a Professional		
	1 – 5		
	6 – 10	11	10.8
	11 – 15	32	33.3
	16 – 20	20	20.4
	Above 20	8	8.6
	Total	26	26.9
		97	100

On the individual level, respondents tend to have significant experience: only about 14% have 0-5 years, while almost 29% are in the 6-10 year category, about 23.7% in 11-15, 15.1% 16-20, and 18.3% over 20 years. So a substantial portion have over a decade of hands-on experience. This is positive, in that many respondents are likely to have seen multiple project cycles and thus have knowledge of what does and doesn't work in quality control. Furthermore, qualifications are relatively high: 31.2% have Master's degrees (M.Sc), 4.3% are Ph.Ds, while HNDs and B.Sc.s make up about a third each (33.3% and 26.9% respectively), and a small set with other. Very few have MB.A or equivalent. This mix indicates a reasonable level of academic preparation among respondents. The presence of higher qualifications suggests capacity for understanding technical and theoretical aspects of quality control.

Respondents show varied professional membership status: 38.5% are Corporate members, the largest group; 17.6% Graduate, another 17.6% Probationer, 17.6% Associate. Fellows and Others are small (~4–5%). The dominance of corporate membership suggests many are well-recognized in their profession, likely to have met high standards of competency and experience; whereas a smaller proportion are still progressing or lower tiers. Regarding project experience, about 33.3% have handled 6-10 projects, 26.9% have handled more than 20, and smaller proportions have handled 1-5, 11-15, or 16-20. This implies that many respondents have moderate to high exposure to projects, enough to form informed opinions about quality control, its implementation and impact.

3.2 Quality-Related Project Control Measures by Construction Sites in Lagos State

Table 2 presents the level of implementation of quality-related project control measures by construction sites in Lagos State. The result showed that all of the 16 identified quality-related project control measures had mean values of above 4.00. This implies that the stakeholders agreed to the identified control measures used in building construction sites in Lagos State noting that these measures should be considered on construction sites. The five top most agreed project control measures by the respondents include; making sure that all necessary materials needed for the construction works passed through approved tests throughout the construction stages (MS = 4.40, SD = 0.84849) making sure the project team understands the product quality (MS = 4.40, SD = 1.03742), involvement and necessary approval from the government quality control agencies (MS = 4.39, SD = 0.95203), making sure there is a regular monitoring regime (e.g Weekly/ monthly) at each stage of construction processes (MS = 4.38, SD = 0.86192), and making sure the site personnel are trained in the project quality control monitoring process (MS = 4.36, SD = 0.94694).

The least three agreed control measure by the respondents were; ensuring there is project quality control manual that site monitoring team can refer to, if at a loss about the project control process (MS = 4.10, SD = 1.06096), making sure the people monitoring from the office regularly visit the project site (MS = 4.10, SD = 1.00802), and daily/frequent monitoring of quality to identify potential risk areas as work progresses (MS = 4.01, SD = 1.00909). The identified control measures based on their agreement ranking should be prioritized by stakeholders in the construction industry to enhance project quality and mitigate risks. Misge (2024) stated the key determinants of quality in building construction projects include the quality of materials and equipment used, and adherence to specifications.

3.3 Critical Factors Inhibiting Quality Related Project Control in Building Construction Projects

Table 3 shows the critical factors inhibiting quality related project control measures in building construction projects. Respondents agreed on moderate level that 8 of the 14 identified factors inhibited construction project control measures with the mean values of above 3.50 signifying that the respondents believed well that these factors inhibited quality-related construction control measures as compared to the other 6 identified factors which were ranked agreed with a mean value of less than 3.50. The five top ranked inhibiting factors by respondents include: project fraud and corruption (MS = 3.98, SD = 1.06096), lack of

enforcement/sanction for earring contractor (MS = 3.74, SD = 1.00802), lack of proper training and experience for project managers (MS = 3.65, SD = 1.00909), risk and uncertainty associated with projects (MS = 3.63, SD = 1.33419), weak regulation and control and view of quality program as a quick fix (MS = 3.62, SD = 1.17654).

Table 2: Level of Implementation of Quality-Related Project Control Measures by Construction Sites in Lagos State

S/N	Control Measures	Mean	Standard Deviation	Rank
1	Making sure that all necessary materials needed for the construction works passed through approved tests throughout the construction stages	4.40	0.84849	1
2	Making sure the project team understands the product quality	4.40	1.03742	2
3	Involvement and necessary approval from the government quality control agencies	4.39	0.95203	3
4	Making sure there is a regular monitoring regime (e,g Weekly/ monthly) at each stage of construction processes	4.38	0.86192	4
5	Making sure the site personnel are trained in the project quality control monitoring process	4.36	0.94694	5
6	Making sure that the quality is realistic at all time	4.35	0.92919	6
7	Ensuring there is regular project quality control progress meetings involving Architect, Engineers, QS and the Site management team	4.33	0.87035	7
8	Specifying clearly what the deliverable of the project quality will be in order to aid monitoring	4.31	1.01535	8
9	Accurately recording information	4.25	1.17699	9
10	Ensuring there is an open and trusting relationship between the site management team and office team to ensure reporting from site is honest and accurate	4.24	0.98409	10
11	Ensuring the quality record data are updated as the design evolve until the design is signed-off	4.23	0.92107	11
12	Regular reporting of the project quality status	4.19	0.93748	12
13	Having an independent personnel at next higher management level to assess the report to ascertain if it is optimistic, factual or pessimistic	4.11	1.04413	13
14	Ensuring there is project quality control manual that site monitoring team can refer to, if at a loss about the project control process	4.10	1.06096	14
15	Making sure the people monitoring from the office regularly visit the project site	4.10	1.00802	15
16	Daily/frequent monitoring of quality to identify potential risk areas as work progresses	4.01	1.00909	16

This indicates the presence of factors inhibiting quality related construction control and the significant challenges posed to achieving high-quality construction projects in Lagos State, and that the stakeholders in the construction sites should address these issues to improve overall project performance and outcomes. According to Gadisa and Zhou (2021), the influential factors affecting public construction performance

include weak project site management and supervision, delayed payment, rising material prices, ineffective project schedules, and cost management, rising market prices and devaluation of the currency.

Table 3: Critical Factors Inhibiting Quality Related Project Control Measures in Building Construction Projects

S/N	Critical Factors	Mean	Standard Deviation	Rank
1	Project fraud and corruption	3.98	1.06096	1
2	Lack of enforcement/sanction for earning contractor	3.74	1.00802	2
3	Lack of proper training and experience for Project Managers	3.65	1.00909	3
4	Risk and uncertainty associated with projects	3.63	1.33419	4
5	Weak regulation and control	3.62	1.17654	5
6	View of quality program as a quick fix	3.62	1.31514	6
7	Unpredictable weather conditions	3.60	1.18726	7
8	Lack of formalized strategic plan for change	3.55	1.16654	8
9	Conflicts between project parties	3.45	1.21656	9
10	Lack of time to devote quality initiative	3.40	1.20744	10
11	Lack of industry wide definition of quality	3.40	1.35139	11
12	Contract and specification interpretation disagreement	3.26	1.40874	12
13	Dependency on imported materials	3.16	1.38203	13
14	Complexity of works	3.12	1.21001	14

3.4 Guide for Improving Quality-Related Project Control Measures in Building Construction Projects

Guide for improving quality-related project control in building construction projects in Lagos State is presented in Table 4. All the 11 identified guides were highly relevant in the improvement of quality-related construction project control with mean values of above 3.90. The five (5) top ranked guide in the relevance cadre include: ensuring there is regular project quality and cost control progress meetings involving quality assurance officers, planners, QS and the site management team (MS = 4.53, SD = 0.85416), making sure the site personnel are trained in the project quality control monitoring process (MS = 4.45, SD = 0.73729), ensuring there is an open and trusting relationship between the site management team and office team to ensure reporting from site honest and accurate (MS = 4.28, SD = 0.78416), establish a comprehensive and meticulous quality management supervision system (MS = 4.27, SD = 0.85404), having a system in place that check submitted subcontractors works completed in relation to specifications (MS = 4.26, SD = 0.87809).

These implied that the guides for improving quality-related project control measures in building construction projects should be considered for application based on their high relevance in improving these project control. According to Jacob and Kelvin (2025), to have better quality control in the organizations, investment should be made in employee training, adoption of the latest technologies, frequent audits, enough resource allocation, bottlenecks and delays, updates on quality processes, and leadership commitment.

Table 4: Guide for Improving Quality-Related Project Control

S/N	Guides	Mean	Standard Deviation	Rank
1	Ensuring there is regular project quality and cost control progress meetings involving Quality Assurance officers, Planners, QS and the Site management team	4.53	0.85416	1
2	Making sure the site personnel are trained in the project quality control monitoring process	4.45	0.73729	2
3	Ensuring there is an open and trusting relationship between the site management team and office team to ensure reporting from site is honest and accurate	4.28	0.78416	3
4	Establish a Comprehensive and Meticulous Quality Management Supervision System	4.27	0.85404	4
5	Having a system in place that check submitted subcontractors works are completed in relation to specifications	4.26	0.87809	5
6	Ensuring that people are inclined to releasing information on time especially quality and cost related information to aid analysis and reporting	4.18	0.92433	6
7	Improve organization's culture of quality management	4.18	0.90460	7
8	Focusing on the efficiency of labour when analyzing in project quality	4.18	0.93254	8
9	Utilization of quality-value comparison when analyzing during project quality control	4.04	1.05059	9
10	Incorporating quality explanation into reports in addition to quantitative graphs and curves, so that the reason behind result can be properly understood	3.98	0.94558	10
11	Increase environmental protection from the direct environmental effects	3.98	1.02041	11

4. CONCLUSION

This research provided insight into the assessment of project quality control measures and its impacts on project success in Lagos State, Nigeria. It evidently concluded that higher percentage of the construction firms in Lagos States adopted project control measures on construction sites to enhance project quality and mitigate risks but they are not being consistently implemented. Furthermore, there are some critical factors that inhibited quality-related construction project control measures that needs to be addressed by the stakeholder to improve the overall project performance and outcomes. Finally, there are some relevant guides for improving quality-related project control measures in building construction projects that needs to be considered by stakeholders for application based on their high relevance in improving the construction project control. Therefore, capacity building for site managers and quality officers are recommended and to be supported with independent third-party audits to verify compliance with quality standards that have been specified in the contract documents.

References

- Abeyinghe, S. (2022). Project quality management. In *Managing Information Technology Projects: Building a Body of Knowledge in IT Project Management* (pp. 245-281).
- Ajagbe, W. O., Tijani, M. A., Ezennia, C. M., Babatunde, L. A., & Ganiyu, A. A. (2023). Effect of variation in physical and mechanical properties of reinforcing steel on post-construction parameters of buildings in Nigeria. *Adeleke University Journal of Engineering and Technology*, 6 (1), 240-252.

- Arowolo, T. A., Kolawole, O. A., Adewale, A. K., & Adeyemi, O. M. (2019). Factors affecting quality control in building construction. *International Journal of Advances in Scientific Research and Engineering*, 5(11), 172–177. <https://doi.org/10.31695/IJASRE.2019.33548>
- Barnaby, J., Odoanyanwu, N. M., Mbanefo, I. A., & Udegbe, C. C. (2025). Ensuring safety from blueprint to home: integrating design, construction, finishing and furnishing for secure living spaces. *Nigerian Journal of African Studies*, 7(2).
- Chidi, O. C., & Badejo, A. E. (2024). Emerging issues in the development of Lagos as a mega-city. *UDS International Journal of Development*, 11(1), 1092-1104.
- Faraji, A., Rashidi, M., Meydani Haji Agha, T., Rahnamayiezekavat, P., & Samali, B. (2022). Quality management framework for housing construction in a design-build project delivery system: A BIM-UAV approach. *Buildings*, 12(5), 554.
- Gadisa, B., & Zhou, H. (2021). Exploring influential factors leading to the poor performance of public construction project in Ethiopia using structural equation modelling. *Engineering, Construction and Architectural Management*, 28(6), 1683-1712.
- Jacob, M., & Kelvin, C. (2025). Evaluating the Effectiveness of Quality Control Measures in Project Management: A Study of Construction Companies in Lusaka. *Journal of Arts, Humanities and Social Science*, 2(1), 113-120.
- Lan, R., Adenuga, O., & Awolusi, I. (2025). Professionals' perspectives on the factors causing construction project failures in developing countries: a case study of Lagos metropolis. *International Journal of Construction Management*, 1-25.
- Leo-Olagbaye, F., Odeyinka, H., & Rathnasiri, P. (2023). Stakeholders' roles in the delivery of sustainable housing projects in Lagos State, Nigeria. *Sustainability*, 15(15), 11709.
- Love, P. E., Matthews, J., Ika, L. A., Teo, P., Fang, W., & Morrison, J. (2023). From Quality-I to Quality-II: cultivating an error culture to support lean thinking and rework mitigation in infrastructure projects. *Production Planning & Control*, 34(9), 812-829.
- Misge, D. (2024). Assessing project quality management practices in building construction projects: the case of Federal Housing Corporation, Addis Ababa, Ethiopia (Doctoral dissertation, St. Mary's University).
- Nwoyiri, C. S., Attado, C. M., & Uchechi, A. K. (2023). Building collapse in Nigeria: A comprehensive analysis towards sustainable urban development. *International Journal of Scientific and Research Publications*, 13(10), 58-77.
- Okoye, N. M., Okolie, K. C. & Fadumo, D. O. (2022). An assessment of the impact of quality assessment system on building projects in Lagos State, Nigeria. *International Journal of Innovative Research & Development*, 11(1), 179-182.
- Olawale, S. O. A., Tijani, M. A., Babatunde, L. A., & Ajayi, D. M. (2019). Compliance problems on health and safety in construction industry: A case study of Osun State, Southwestern Nigeria. *Epistemics in Science, Engineering and Technology*, 9(1), 623 – 628.
- Opawole, A., Alao, O. O., Yusuf, A. O., Adu, E. T., & Ofoetan, M. A. (2022). Evaluation of compliance of concreting materials to standards in building projects in Lagos State, Nigeria. *Journal of Construction Business and Management*, 5(2), 1-19.
- Owolabi, T., Harry, E., Adewumi, B., Onamade, A., & Alagbe, O. (2024). Ensuring quality in construction project: the role of specifications as quality assurance tools. *Anchor University Journal of Science and Technology*, 5(2), 181-191.
- Oyalowo, B. (2022). Implications of urban expansion: land, planning and housing in Lagos. *Buildings & Cities*, 3(1).
- Oyalowo, B. (2023). Reconceptualizing stakeholders and decentering collaborations: reflections from the Lagos housing sector. In *Handbook of Transdisciplinarity: Global Perspectives* (pp. 474-491). Edward Elgar Publishing.
- Oyewole, M. D. (2022). Developing a framework towards effective quality control management practice on building construction projects in Nigeria: A case study of Lagos. Dissertation submitted in

fulfillment of the requirements for the degree of Master of Construction Management, Durban University of Technology, Durban, South Africa.

Qamar, S. Z., Al-Hinai, N., & Márquez, F. P. G. (2024). Quality Control and Quality Assurance: Techniques and Applications. BoD–Books on Demand.

Skorupińska, E., Hitka, M., & Sydor, M. (2024). Surveying quality management methodologies in wooden furniture production. *Systems*, 12(2), 51.

Tijani, M. A., & Ajagbe W. O. (2016). Professionals view on the causes and effects of construction projects abandonment in Ibadan Metropolis, Nigeria. *Ethopian Journal of Environmental Studies and Management*, 9(5), 593 – 603.