ABSTRACT

This thesis analyzed the importance of scientific research through scientific collaboration, social networking sites and journal impact factors. The rapid growth of science, technology and innovation has inspired scientific publications with international collaborators in high impact journals. Social networking sites are useful as a virtual alternative for expanding research opportunities, though some researchers feel that it is more for social communications. Diachronous impact factor has gained attention among diverse agents as a tool to evaluate significance of Institute for Scientific Information’s indexed journals.

Most productive researchers in Malaysia chose the collaborators who have the highest number of scientific publications. Significant differences in both rates and strengths of scientific collaborations were observed among most productive authors except for most productive institutions through Kruskal-Wallis test. The rates of scientific collaboration between the local and international institutions have been low because of poor networking ability among local researchers. Lower research visibility would reduce the demand for scientific collaboration. Scientific collaboration between researchers in Malaysia and the ASEAN countries have been low because of limited talents in writing joint papers.

Socimetrics and Conversational Analysis have reflected significant research conversations among active participants from Malaysia in Facebook. Researchers from Singapore, Thailand, Vietnam, Indonesia and the other ASEAN member states preferred physical instead of virtual medium for research communications. LinkedIn has pointed out limited research communication between researchers from Singapore and Thailand via Socimetrics and Conversational Analysis. It neglects Brunei, Indonesia, Laos and others from the analysis for revealing limited research participations in LinkedIn. There
were also Intellectual interactions between Malaysia, Pakistan, India, the USA and Australia in Facebook and LinkedIn through Socimetrics and Conversational Analysis.

The most suitable measure for evaluating performing Malaysian journals both in the short-term and long-term is diachronous impact factor based on unique citing sources. It has showed the non-overlapping effects (62 percent) in revealing “true” scientific performance and fairness of the journals through forward approach in Malaysia. In Thailand, the diachronous impact factor, based on unique citing subject categories, took the lead to remove the biasness of classical impact factor. In Philippines, Diachronous impact factors based on citing organizations and unique citing sources have removed the biasness of existing impact factors. Diachronous impact factor based on citation concentration index allows both first-comer and latecomer journals in Economics to improve their scientific visibility in a fairer way. It removes the bias in short-term impact factor. The discussions on scientific collaborations, social networking sites and journal impact factors would allow policymakers to maintain the effective resource allocations.
ABSTRAK

Tesis ini menganalisis kepentingan penyelidikan saintifik melalui kerjasama saintifik, laman rangkaian sosial dan faktor-faktor kesan jurnal. Pertumbuhan pesat sains, teknologi dan inovasi telah memberi inspirasi kepada penerbitan saintifik dengan rakan usaha sama antarabangsa dalam jurnal berimpak tinggi. Laman rangkaian sosial adalah berguna sebagai alternatif maya untuk mengembangkan peluang-peluang penyelidikan, walaupun beberapa pengkaji merasakan bahawa ia adalah lebih untuk komunikasi sosial. Diachronous faktor impak telah mendapat perhatian di kalangan pelbagai agen sebagai alat untuk menilai kepentingan jurnal institut berindeks maklumat scientifk.

Kebanyakan penyelidik yang produktif di Malaysia memilih rakan usaha sama yang mempunyai bilangan penerbitan saintifik yang tertinggi. Perbezaan yang signifikan dalam kedua-dua kadar dan kekuatan kerjasama saintifik dapat diperhatikan di kalangan penulis yang paling produktif kecuali institusi yang paling produktif melalui ujian Kruskal-Wallis. Kadar kerjasama saintifik antara institusi tempatan dan antarabangsa telah rendah kerana keupayaan rangkaian yang lemah di kalangan penyelidik tempatan. Penglihatan penyelidikan yang lebih rendah akan mengurangkan permintaan bagi kerjasama saintifik. Kerjasama saintifik antara penyelidik di Malaysia dan negara-negara ASEAN telah rendah kerana bakat yang terhad dalam menulis kertas kerja bersama.

Socimetric dan Analisis Perbualan telah mencerminkan perbualan penyelidikan yang signifikan antara Ahli Dari Malaysia di Facebook. Penyelidik dari Singapura, Thailand, Vietnam, Indonesia dan lain-lain negara-negara anggota ASEAN pilihan fizikal dan bukannya medium maya untuk komunikasi penyelidikan. LinkedIn telah menunjukkan komunikasi penyelidikan terhad antara penyelidik dari Singapura dan
Thailand melalui Socimetrics dan Analisis Perbualan. Ia abai Brunei, Indonesia, Laos dan lain-lain daripada analisis kerana mendedahkan penyertaan penyelidikan yang terhad di LinkedIn. Terdapat juga interaksi Intelek antara Malaysia, Pakistan, India, Amerika Syarikat dan Australia di Facebook dan LinkedIn melalui Socimetrics dan Analisis Perbualan.

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As for any errors or inadequacies that may remain in this work, the responsibility is entirely my own.

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