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CONTENTS

Editors' Note

A Vision for Malaysian and Other ASEAN Researchers to Contribute to the International Agency Theory-based Literature
Philip Sinnadurai 1

Adherence to the Pecking Order in Deficit and Surplus Conditions: A Comparative Study of Firms in India and China
Vandana Bhama, P.K. Jain and Surendra S. Yadav 55

Corporate Governance and Dividend Smoothing: Evidence from Pakistani Listed Banks
Zahid Ali, Yang Hanming and Assad Ullah 85

Capital Investment Appraisal Practices in the Emerging Market Economy of Sri Lanka
Lingsiya Kengatharan and Mohamed Nurullah 121

Perceived Self-Efficacy and its Role in Fostering Pro-Environmental Attitude and Behaviours
Yoong Siew Wai, Jamil Bojei, Syuhaily Osman and Nor Hashima Hashim 151

(continued on back cover...)

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CONTENTS (continued)

Sustaining Employees through Co-worker and Supervisor Support: Evidence from Thailand
Kua Wongboonsin, Pitichai Dejprasertsri, Tanasak Krabuanrat, Siriyupa Roongrerngsuke, Sabin Sriwannaboon and Piyachart Phiromswad 187

Experimental Examination of the Relationship between Relative Performance Information, Goal Setting and Performance
Theodorus Radja Ludji 215

A Glimpse into the Virtual Community of Practice (CoP): Knowledge Sharing in the Wikipedia Community
Berto Usman and Yennita 249

Grey Markets in Customer-to-Customer Transaction and Social Networking – The Case of Vietnam
Binh Nghiê-m-Phú 277

Islamic Religiosity and Its Influence on Muslim Students' Travel Preferences
Sedigheh Moghavvemi and Ghazali Musa 315

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Editors' Note

The *Asian Journal of Business Accounting* (AJBA) is proud to present the second issue of Volume 11 which includes a diverse selection of articles written by scholars from Australia, Japan, Sri Lanka, India, Thailand, Pakistan, Indonesia and Malaysia. This issue carries a variety of topics ranging from business, management and accounting related issues to sustainability transition, all of which have reached an unprecedented scale involving many stakeholders. This issue is also timely, in view of the United Nations General Assembly movement towards its sustainable development 2030 agenda which aims to balance the economic, environmental and social needs of the world, thereby empowering future generations with prosperity.

In an era where financial sustainability is a fundamental necessity, the capital structure of a company plays a crucial role. Focussing on the agency theory, the first article written by Sinnadurai presents a vision for researchers from the ASEAN region. It seeks to improve the understanding of the effectiveness of the agency mechanism and how its effectiveness differs depending on contextual settings. The writer calls for future capital market researchers to relate the agency theory to three streams of literature namely: research investigating the association between politically connected status and corporate attributes, literature investigating the association between family company status and corporate attributes and literature on corporate financial recovery. In the second article, Bhama, Jain and Yadav examine firms' adherence to the pecking order in deficit and surplus situations. Based on data collected from the Bombay Stock Exchange (BSE) 500 index and the Shanghai Stock Exchange (SSE) 380 index firms, this article offers insights into the similarities and differences of financing practices of firms in the two emerging economies of India and China.

In a contemporary and competitive environment, the financial sustainability of a company is also dependent on the returns earned by shareholders through their investments. This may cause a temptation for firms to employ dividend smoothing so as to demonstrate a stable trend in income growth. In the third article, Ali, Hanming and Ullah examine the effects of ownership and board structure on dividend smoothing in Pakistani listed banks. It appears that as an emerging economy with a weak corporate governance environment, Pakistan

has some discrepancies. The paper notes that the dividend-paying behaviour of Pakistani banks is unlike that of developed countries. Likewise, to maintain a strong economy growth, it is necessary for firms to utilise a systematic, analytical and thorough capital budgeting practice that is also sound in judgment. Taking this into account, the fourth article by Kengatharan and Nurullah looks at the application of budgeting practices and influence of firm characteristics on the choice of these practices in Sri Lanka. While there is a widespread use of sophisticated capital budgeting practices within emerging economies due to higher uncertain environment, firms in Sri Lanka were still using less traditional and less complex methods.

Today's world recognises the close link that exists between a country's economy and its social environment. Indeed, international communities have a growing interest in sustainable development which not only emphasises on economic or financial sustainability but also respect for the social environment. To support economic sustainability, firms may supplement standard financial accounting and reporting with some elements of social accounting such as human capital development, productivity, research and development and philanthropy. In line with this trend, the next article by Yoong, Bojei, Osman and Hashim examines perceived self-efficacy and its role in fostering pro-environmental attitude and behaviours. Based on the data of 500 individuals in Malaysia, the analysis suggests that marketers and policy makers should include attitude change campaigns and intervention programmes. This can help to increase self-efficacy among individuals who engage in more challenging environmental behaviours.

Whilst many people associate sustainability with "going green", the concept of sustainability thinking involves both the environment and the impact of companies' operations on employees. In the sixth article, Wongboonsin, Dejprasetsri, Krabuanrat, Roongrerngsuke, Srivannaboon and Phiromswad explore the influence of social support in the workplace on employees' intention to quit working. Focussing on Thailand's food service industry, this paper is timely, in view of the Global Reporting Initiative (GRI) which has highlighted employees' turnover rate to be one of the emerging issues in sustainability. High rate of turnover is undesirable for companies due to the high cost of recruitment and training as well as the loss of productivity. Without doubt, organisations with low employee turnover rate would be more productive and profitable. This not only increases employment

opportunities but also promotes a positive social change. Looking at the contemporary workplace setting, it appears that companies not only have to provide social support to sustain employees, they also need to use different forms of control system. On this note, the seventh article by Ludji experimentally examines the relationship between relative performance information (RPI), goal setting and work performance. His study finds that there is an interaction between RPI and goal commitment where the positive effect of RPI on performance is more pronounced in a condition when the individual's goal commitment is high.

In addition, the rapid development of ICT has also been supporting sustainability by way of virtual communities. This social media platform have helped to accelerate the growth of human beings which act as bridges, filling up the digital gaps and providing equality by enabling knowledge transfer. Given the important role virtual communities play in today's knowledge sharing practices, Usman and Yennita examine how two different groups of Wikipedia users from Italy and Indonesia engage in the Wikipedia as a virtual platform. The paper observes that the tremendous growth of the ICT has made social media a popular platform for interactions as well as business activities. In the following article, Nghiê-m-Phú investigates why and how Vietnamese customers purchase grey (unofficial parallel imported) products on Facebook, currently an expanding market for Vietnam. It helps to fulfil the diverse needs of the Vietnamese consumers whose income has improved but whose needs are not satisfied. While buyers and brand owners have actually benefited from the grey market, foreign retailers and brand owners who are and will be potentially entering the Vietnamese retail market may be affected by it. Further to this, under sustainable development, culture has been categorised as one of the social dimensions listed under the three pillars of sustainability. Culture is regarded as a fundamental issue which acts as a precondition towards the achievement of the Sustainable Development Goals 2030 Agenda. In line with this, the final paper by Moghavvemi and Musa examine how differences in Islamic religiosity practices and beliefs of the two cultures of Iran and Malaysia, influence their preferences towards tourism products and services.

To bring this note to a conclusion, we hereby would like to thank the Malaysian Accountancy Research and Education Foundation as well as the Malaysian Ministry of Higher Education for the financial

support extended to us. We also wish to express our appreciations to the members of the editorial and advisory boards as well as the reviewers for their time and effort put into AJBA.

Happy reading and have a great 2019!

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CONTENTS

A Vision for Malaysian and Other ASEAN Researchers to Contribute to the International Agency Theory-based Literature <i>Philip Sinnadurai</i>	1
Adherence to the Pecking Order in Deficit and Surplus Conditions: A Comparative Study of Firms in India and China <i>Vandana Bhama, P.K. Jain and Surendra S. Yadav</i>	55
Corporate Governance and Dividend Smoothing: Evidence from Pakistani Listed Banks <i>Zahid Ali, Yang Hanming and Assad Ullah</i>	85
Capital Investment Appraisal Practices in the Emerging Market Economy of Sri Lanka <i>Lingesiya Kengatharan and Mohamed Nurullah</i>	121
Perceived Self-Efficacy and its Role in Fostering Pro-Environmental Attitude and Behaviours <i>Yoong Siew Wai, Jamil Bojei, Syuhaily Osman and Nor Hashima Hashim</i>	151
Sustaining Employees through Co-worker and Supervisor Support: Evidence from Thailand <i>Kua Wongboonsin, Pitichai Dejprasertsri, Tanasak Krabuanrat, Siritiyupa Roongrerngsuke, Sabin Srivannaboon and Piyachart Phiromswad</i>	187
Experimental Examination of the Relationship between Relative Performance Information, Goal Setting and Performance <i>Theodorus Radja Ludji</i>	215
A Glimpse into the Virtual Community of Practice (CoP): Knowledge Sharing in the Wikipedia Community <i>Berto Usman and Yennita</i>	249

Grey Markets in Customer-to-Customer Transaction and Social Networking - The Case of Vietnam <i>Bình Nghiêm-Phú</i>	277
Islamic Religiosity and Its Influence on Muslim Students' Travel Preferences <i>Sedigheh Moghavvemi and Ghazali Musa</i>	315

A Vision for Malaysian and Other ASEAN Researchers to Contribute to the International Agency Theory-based Literature

Philip Sinnadurai

ABSTRACT

Manuscript type: Review paper

Research aims: This paper offers Southeast Asian researchers, particularly those from ASEAN, a vision to contribute to international agency theory literature.

Design/Methodology/Approach: Most of the studies reviewed were identified during the author's preparation for this paper which involves Malaysia.

Research findings: Three research streams to which Malaysian researchers can contribute are: political connections, family companies and corporate recovery. The socio-political contexts that have resulted in Malaysia being a suitable environment are also discussed. This paper identifies gaps in the literature; it accumulates arguments defining why the Malaysian setting is apposite and it also offers research design suggestions for Malaysians and researchers from Indonesia, the Philippines and Thailand, with some defining differences, to follow.

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I am grateful to Professor Susela Devi for inviting me to write this paper. I am also thankful to workshop participants at UNITAR International University, Malaysia and Universiti Teknologi MARA, Malaysia for their feedback at presentations of the material used to develop this paper. I would also like to express my appreciation to Graeme Harrison and Dedi Muhammad Siddiq for their comments and members of the editorial board and two anonymous reviewers for their constructive comments and guidance.

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Theoretical contributions/Originality: The outcome drawn from this paper assists Malaysian researchers in utilising the agency based theory to approach various topic selections and executions. The comparisons and contrasts made between Malaysia and the other three ASEAN countries may further motivate researchers of the ASEAN region to engage agency theory as a base for their research.

Research limitation: A limitation to this paper is that the boundaries between the proposed categories of shareholder political connections are blurred.

Keywords: Agency Theory, ASEAN, Malaysia, Review Paper

JEL Classification: G31, G33, G38, M41

1. Introduction

Agency theory regards a company as a “nexus of contracts” between principals and agents. A “contract” is any arrangement whether expressed or implied, in which parties have reciprocal obligations to each other. In such contracts, principals delegate decision-making authorities to their agents to act on their behalf. However, even in contracts, all parties are assumed to act in their self-interests, possibly to the detriment of other stakeholders (Jensen & Meckling, 1976).

In business settings characterised by the separation of management and ownership, the main contract is between managers (agents) and shareholders (principals). The interests of these parties are not always aligned thereby generating managerial incentives to pursue policies which are inconsistent with shareholders’ wealth maximisation. Some examples of dysfunctional behaviour include excessive perquisite consumption and overinvestment (Richardson, 2006; Yermack, 2006). These practices can result in a decrease in value and the “residual loss” is borne by both the principals and the agents. Principals tend to anticipate such dysfunctional behaviour and so for price protection purposes, the agents’ remuneration is adjusted. In this regard, both the principals and the agents have the incentive to institute agency mechanisms (also referred to as “corporate governance mechanisms”) so as to re-align the parties’ interests and to reduce residual loss (Jensen & Meckling, 1976).

There are many types of agency mechanisms. Some are external to the company and they serve as a natural feature of the product market. For example, highly competitive industries have many incumbents in providing relatively homogeneous products. In such industries, disclosures made by one player may inform others about demand-side

factors throughout the entire product market (Ali, Klasa & Yeung, 2014). Another type of agency mechanism is those imposed by regulators. An example of this type of agency mechanism is the requirement for financial statements to be subjected to an independent audit. Management is aware that its accrual policy choices must satisfy the auditor. Hence, management is discouraged from making accrual policy choices opportunistically (Becker, De Fond, Jiambalvo, & Subramaniam, 1998). A third category of agency mechanism is those implemented by management. For example, independent directors are included on boards of directors because independent directors are more objective monitors of management (Coles, Daniel, & Naveen, 2008).

No combination of agency mechanisms could fully eliminate the residual loss. This is true of all three categories of agency mechanisms and illustrated with respect to the three aforementioned examples. Firstly, since no two products are identical, there would be a limit to the extent to which, in a competitive product market, disclosure by one player will reveal demand-side factors across the entire industry (Ali et al., 2014). Secondly, independent auditors lack the management's intimate familiarity with a company's business, hence they are unable to check every transaction and accounting policy (Becker et al., 1998). Thirdly, independent directors may also be acting as directors for several companies, therefore the quality of monitoring they imposed on each company may be questionable (Coles et al., 2008).

Agency theory-based research seeks to improve the understanding of the effectiveness of agency mechanisms and how its effectiveness differs, depending on settings. This review paper explores several gaps in the literature to which Malaysian research could contribute. Research (Sinnadurai, 2016; Heng & Sieh, 2004; Gomez & de Micheaux, 2017) has investigated whether corporate political connections constitute an agency cost or an agency mechanism. Research (Sinnadurai, 2016) has also noted that Malaysian firms have many political connections and different types of political connections. In this context, there are also family companies which may carry a different type of agency problem that differs from non-family companies. Hence, the magnitude of agency costs and the efficacy of agency mechanisms may differ vastly. Malaysia is well-positioned to produce evidence that supports this observation. This is because Malaysia has a high percentage of family companies as well as different types of family companies. In fact, these family companies in Malaysia can be distinguished according to whether they are Nanyang or non-Nanyang family companies and also the extent

to which they employ professional management (Heng & Sieh, 2004; Gomez & de Micheaux, 2017).

In Malaysia, the magnitude of the agency costs and the efficacy of agency mechanisms may also differ between distressed and non-distressed companies (Rosner, 2003). Distressed companies face different costs and benefits of accrual-based management versus real earnings management (Zang, 2012). One feature of the Malaysian institution setting is the Practice Note 17 which is a stock exchange listing rule that imposes extra disclosure requirements on distressed companies. These disclosures may be used to predict corporate recovery and more accurately, for modelling the relative costs and benefits as well as for accruals management versus real earnings management for distressed companies.

Shifting to the other countries situated in the Association of Southeast Asian Nations (ASEAN), it can be noted that there are many institutional similarities between Malaysia and her neighbours elsewhere. In this regard, the broad suggestions made in this review paper may be applicable to other countries in the region. However, researchers from neighbouring countries should be cognisant of the fundamental institutional differences (between their countries and Malaysia) while conducting agency theory-based research.

The remainder of this review paper is structured as follows. Section 2 presents suggestions for Malaysian researchers to contribute to the literature on political connections and family companies. Section 3 articulates suggestions for Malaysians to utilise Practice Note 17, a unique institutional feature, so as to contribute to literature on financially distressed companies. Section 4 extends the coverage by making preliminary suggestions for agency theory-based researchers from Indonesia, the Philippines and Thailand and Section 5 concludes. The studies discussed in the sections about Malaysia were identified via three principal modes: The first mode is preparation that I have conducted for workshops delivered at Malaysian universities, for staff and doctoral students, about key papers in my research areas of interest. The second mode is feedback from referees and seminar participants, obtained when Sinnadurai (2016) and Shayan Nia, Sinnadurai, Mohd-Sanusi and Hermawan (2017) were working papers. The third mode is feedback from interactions with Dynaquest Sendirian Berhad and the Malaysian Institute of Corporate Governance. The studies discussed in the sections about Indonesia, the Philippines and Thailand were

identified via Internet searches, using “Chinese companies” “political connections” and “state-owned enterprises” as keywords.

2. Suggestions for Malaysian Research into Political Connections and Family Companies

This section begins by presenting a new approach for operationalising the theoretical definitions of “corporate governance” and “corporate governance quality” in Malaysia. The section proceeds by discussing two different streams of agency theory-based literature, to which Malaysian researchers could contribute by using the new approach.

2.1 Suggestion for a New Approach to Operationalising Corporate Governance Quality in Malaysia

Theoretical definitions of corporate governance quality are generally based on Jensen and Meckling’s (1976) costly contracting view of the firm but corporate governance has been defined by Shleifer and Vishny (1997) as the actions taken by providers of finance to ensure that they achieve an adequate return on investment. According to this definition, corporate governance quality would be the extent to which investors’ actions successfully reduce agency costs and achieve an adequate return on investment. Since Bhagat, Bolton and Romano (2008) viewed corporate governance as a set of mechanism which prompts managers to act in shareholders’ interests, the consequential definition of corporate governance quality would thus be the extent to which these mechanisms are successful. Bhagat et al. (2008) also argued that the boards of directors are an integral component of corporate governance.

Typical Anglo-American approaches to operationalising corporate governance quality tend to refer to the characteristics of the board of directors.¹ Board characteristics that have been examined include board size (Boone, Field, Karpoff, & Raheja, 2007; Coles et al., 2008), separation of Chief Executive Officer (CEO) and board chair (Daily & Dalton, 1997), board independence (Boone et al., 2007; Coles et al., 2008), board experience (Mangena & Pike, 2005; Vafeas, 2005), board education (Yang

¹ Anglo-American studies have also examined other corporate governance mechanisms. Notably, an index of corporate governance quality frequency used, compiled by Gompers, Ishii and Metrick (2003), is based on the extent to which a company’s constitution protects shareholders’ rights.

& Krishnan, 2005), frequency of committee meetings (Baxter & Cotter, 2009) and the extent to which the board is subjected to CEO capture (Coles, Daniel & Naveen, 2014).

Most Malaysian researches (Haron, Jantan, & Pheng, 2005; Abdul Wahab, How, & Verhoeven, 2007; Che Haat, Abdul Rahman, & Mahenthiran, 2008; Ponnu, 2008; Goh, Rasli, & Khan, 2014) use Anglo-American approaches to operationalise corporate governance quality. For instance, Haron et al. (2005) investigated compliance with the listing requirements related to audit committees. Their results indicate a high level of compliance. In Abdul Wahab et al. (2007), Che Haat et al. (2008), Ponnu (2008) and Goh et al. (2014), the association between corporate governance quality was measured via indicators specified in the Malaysian Code of Corporate Governance, particularly board independence and the separation of CEO and board chair and firm performance. The results drawn from Abdul Wahab et al. (2007) and Che Haat et al. (2008) suggest that there is a positive association. However, the results of Ponnu (2008) and Goh et al. (2014) suggest no association at all. Likewise, Hashim and Devi (2008) documented no evidence that board independence and separation of CEO and board chair constrained opportunistic accruals management. Bliss and Gul (2012) also documented evidence of a negative association between interest rates and corporate governance quality for politically connected companies. They classified "high corporate governance quality" companies which separate the roles of CEO and board chairs and companies, had a larger percentage of independent directors on the audit committee. Measuring the outcome via an index based on the Malaysian Code of Corporate Governance, Ramly (2012) also produced evidence showing a negative association between the cost of equity capital and corporate governance quality.

Based on the above, it is concluded that the Anglo-American influence on the Malaysian regulatory régime may have prompted Malaysian researchers to measure corporate governance quality via board characteristics. The Malaysian Code of Corporate Governance makes extensive reference to board characteristics as hallmarks of sound monitoring. Further to this, financial accounting within Malaysia has also been observed to be largely British influenced (Saudagaran & Diga, 2000; Vithiatharan & Gomez, 2014). This implies that the Anglo-American influence did not emerge out of the blue but had instead, arose due to Malaysia's past as a former British colony. It had prompted Malaysia to adopt the *laissez-faire* economics elements for approaching its economic development (Gomez, 2009).

The mixed findings derived from the studies above may be attributed to the fact that Anglo-American approaches may have diminished relevance in Malaysia. It is possible that the boards of directors in Malaysian companies could be a less important corporate governance mechanism. In the family companies existing in Malaysia, the controlling family is likely to “capture” the board even though some non-family members would be serving on the board (Yeung, 2006; Coles et al., 2014). It appears that a more suitable approach for Malaysia would be to emphasise on the management team. This is because a “strong” management would act to maximise shareholders’ wealth even when the management and shareholders’ interests diverge (Hu & Kumar, 2004). One Malaysian study done by Fung, Gul and Radhakrishnan (2015) examined board and management professionalism as indicators of corporate governance quality. Their results suggest that for politically connected companies, the higher scores noted for board and management professionalism (measured via the degree of formal education and experience) ameliorates share price impacts of negative macroeconomic news. In this regard, subsequent Malaysian research could follow Fung et al. (2015) by using different management characteristics to indicate corporate governance quality. In addition, Malaysian researchers could also use local sources of data to construct country-specific proxies for theoretical constructs such as management strengths. This step would respond to the call for corporate governance researchers from developing countries to adapt their research designs so as to accommodate unique institutional features (Claessens & Fan, 2002; Claessens & Yurtoglu, 2013).²

Further measures of corporate governance quality in Malaysia should also acknowledge auditor quality. In family-dominated Malaysian companies, minority shareholders are aware that the management is insulated from the disciplinary forces of the markets for managerial labour and corporate control (Demsetz & Lehn, 1985; Wang, 2006; Ismail & Sinnadurai, 2012). Minority shareholders of family-dominated companies, may be concerned that family members who make up the dominant block of the shareholders, have the incentive to suppress proprietary information from the board of directors because disclosures could damage the companies’ competitiveness and the family’s wealth (Goh et al., 2014). In this regard, minority shareholders may place more

² For example, some Malaysian researches have used data from Dynaquest Sendirian Berhad, a local firm of investment consultants (Ismail and Sinnadurai, 2012; Sinnadurai, 2016).

reliance on the financial statements which can be used as an alternative monitoring mechanism. This would increase the demand for financial statements to be subjected to high quality audits (Claessens & Fan, 2002; Goh et al., 2014).

2.2 *Political Connections*

2.2.1 *Background to Political Connections in Malaysia*

Successive Malaysian governments, over the years, have fused two different ideologies into their approach towards economic and social development. The first ideology, the “developmental state”, is characterised by high-level government interventions in the corporate sector which aim to facilitate gross domestic product growth and distribution. Dimensions of the developmental state such as public-private partnerships and the distribution of national wealth to sections of society deemed in need are embraced by the Malaysian government. The second ideology is the *laissez-faire* economics upon which the dimensions utilised to spur this ideology encompass privatisations and the stock markets (Gomez, 2009; Gomez, Faisal, Padmanabhan, & Tajuddin, 2018).

The fusion of these two ideologies is directed towards achieving two different objectives. The first objective is for social restructuring. In the social dimension of Malaysia, a recurring theme prominent in Malaysian history is the disparity in wealth and political power, between the bumiputera (Malays and indigenous Malaysians) and the Chinese, Indians and other ethnic minorities. Historically, the Chinese have been urban dwellers generating most of the nation’s wealth and economic output via business enterprises. Conversely, the bumiputera have principally been poor rural dwellers with control over the nation’s politics (Sinnadurai, 2016). Tensions between the two ethnic groups erupted in race riots in 1969. Hence, in 1970, the Malaysian government embarked on its “New Economic Policy” (NEP) which was aimed at redressing such imbalances. The objectives were to eradicate poverty and to restructure society so as to eliminate the association between ethnicity and economic function. The National Development Plan, formulated in 1990 was espoused to maintain the objectives of the NEP during the era of 1991-2000 (Siddiquee, 2002). The other objective of the National Development Plan was to mix these ideologies for nation-building and to increase the overall size of national wealth (Gomez,

2009; Gomez et al., 2018). As a result of the government fusing these two ideologies, Malaysia has blurred the boundaries between the public and the private sectors, through an abundance of political connections as well as different types of political connections. This institutional setting is apposite for contributing to agency theory-based literature on political connections.

During the NEP era (1970-1989), developmental state policies also escalated. Government-linked investment companies (GLICs) were formed as trusts to manage share portfolios of listed Malaysian companies for the purpose of the distribution of national wealth to the bumiputera and other segments of society targeted for assistance.³ The GLICs constitute the principal institutional investors of Malaysia. They also held shares in government-linked companies (GLCs) some of which are listed on the Malaysian Stock Exchange and managed with dual goals of maximising shareholders' wealth and implementing government policies (Gomez, 2009; Gomez et al., 2018).

Privatisations which were designed to achieve social restructuring became a legacy of the era of the first Mahathir government, 1981-2003. During this era, state enterprises were privatised to Malay capitalists with the government retaining influence as a trustee. The privatisations occurred primarily via private placements with prescribed portions of shares to be reserved for bumiputera investors and other Malaysian institutions. During this era, the Malaysian government retained substantial ownership and influence over the policies of the privatised corporations such as the Malaysian Airline System and Sports Toto, a gaming company (Salleh, 1999).

Under Mahathir, the Malaysian government also cultivated protégés from the arms of the dominant United Malays National Organisation (UMNO), principally Anwar Ibrahim and Daim Zainuddin. These protégés were appointed as advisers to corporations as an effort to guide the business models to be friendly to the government's plans for economic and social development. The relationships between corporations and Anwar Ibrahim and/or Daim Zainuddin enabled these companies to secure nation-building projects (Fraser, Zhang, & Derashid, 2006). Following Anwar and Daim's fallout with Mahathir in 1998 and 2001, the patronised companies also suffered declines in their financial performances (Gomez, 2009). They also performed poorly

³ Other targeted beneficiaries include members of the armed services and their families and Muslims, receiving financial support for their pilgrimage to Mecca (Gomez, 2009).

during the period of the global financial crisis (GFC) of 2008-2009 (Vithiatharan & Gomez, 2014).

In 1983, the Mahathir government implemented the “Malaysia Incorporated” programme. It involved the close cooperation between public and private sectors as a means to fuel the economic and social development of the country. The programme had been designed to deliver complementary benefits to the respective sectors, where the private sectors would experience increased growth and profitability and the public sector would accrue more fiscal revenue and an increased attainment of its missions (Siddiquee, 2002). This inter-sectoral cooperation also had other dimensions such as government entities depending on the private sector for political donations and the private sector entrepreneurs depending on the government for bumiputera employment and subscriptions to equity raisings (which are legal requirements) as well as licensing and trade permits. Malaysia was characterised by a high rate of politician involvement in private business and business people in politics (Salleh, 1999).

The “Malaysia Incorporated” programme also involved “mega projects” for public infrastructure construction, one of which was the creation and distribution of national Malaysian cars. This was managed by state-owned Heavy Industries Commission of Malaysia (HICOM) which promoted links between Malaysian companies and foreign venturers to produce and distribute national cars. In 1985, HICOM entered into a joint venture with Mitsubishi to create the Proton Saga, a Malaysian car. Following this, the listed company Edaran Otomobil Nasional Berhad (EON) was created to distribute the Proton Saga. HICOM also orchestrated a joint venture between Citroen and the listed Malaysian company, Diversified Resources Berhad (DRB) to create and distribute new national cars. It then merged with HICOM in 1996 to become the new, listed company of DRB-Hicom Berhad (Siddiquee, 2006; Gomez, 2009). Other privatised infrastructure projects were also pursued via inter-sectoral cooperations including the construction of the North-South highway, ports, power generation plants and a light rail network (Salleh, 1999). After the Asian financial crisis of 1997-1998, one remedial response of the Mahathir government was to renationalise mega projects, including the Bakun Dam, Malaysian Airline System, Celcom (a telecommunications provider) and UEM (the operator of tolls for the North-South highway) (Gomez, 2009).

The governance of the GLCs reflect a marriage between the ideologies of the developmental state and the *laissez-faire* economics. In

response to allegations of inefficiencies occurring within these corporations, voiced after the Asian Financial Crisis, the Malaysian government then implemented the GLC Transformation Programme in 2005. The recommendation was towards corporatisation and this include: enhancing the effectiveness of the boards of directors, improving the monitoring of institutional shareholders and intensifying performance management (Putrajaya Committee on GLC High Performance, 2005).

2.2.2 Summary of the International and Malaysian Empirical Evidence Regarding Political Connections

There is considerable empirical evidence about political connections of companies in various non-Malaysian studies. For instance, using data from a range of countries, Faccio (2006) investigated the characteristics of countries where political connections were prevalent. It was observed that political connections were more pervasive in countries that do not ameliorate politicians' conflicts of interests. The results also suggest that political connections were value-adding for shareholders. In another study, using data from Indonesia, Leuz and Oberholzer-Gee (2006) found that during President Suharto's term, companies that were close to the President were less likely to utilise foreign sources of public finance. This is because the government provided domestic support. The results also indicate that companies that had been close to President Suharto also suffered in performance during President Abdurrahman Wahid's term. This is because the financial support for companies associated with the former presidents were reduced. Charumilind, Kali and Wiwattanakantang (2006) investigated the association between Thai companies' access to bank credits and business connections, prior to the Asian financial crisis. Their findings suggest that during the pre-crisis era, companies with business connections had preferential debt access. In the study conducted by Boubakri, Guedhami, Mishra and Saffar (2012) which used data from a range of countries to examine whether the cost of equity capital differs between politically connected and non-politically connected companies, it was revealed that politically connected companies have lower costs of equity capital. Using data from the United States, Houston, Jiang, Lin and Ma (2014) documented evidence which showed that politically connected companies enjoyed lower costs of private debts than non-politically connected companies. The findings further indicate that the lower interest rates were attributed to politically connected companies having lower operating risks.

There are considerable extant agency theory-based empirical literature (Johnson & Mitton, 2003; Fraser et al., 2006; Gul, 2006; Bliss & Gul, 2012; Mitchell & Joseph, 2010; Fung et al., 2015; Tee, Gul, Foo, & Chee, 2017) on political connections. In the Malaysian context, Johnson and Mitton (2003) documented evidence which showed that politically connected Malaysian companies underperformed their counterparts during the era of external economic shock. They however, outperformed their counterparts during the era of government-imposed restrictions of capital flows. These findings did not extend to companies that were connected to an ousted politician. Fraser et al. (2006) also documented evidence which showed that in Malaysia, politically connected companies have higher financial leverage than non-politically connected companies. Linked to this, Gul (2006) also indicated that politically connected Malaysian companies were subjected to higher (lower) audit quality during periods of financial crisis (stability). Bliss and Gul (2012) also investigated the association between interest rates and politically connected status. It was discovered that in Malaysia, the private debt market regards politically connected companies as having higher operating risks. The findings also suggest that the market regards independent audit committees and independent boards of directors as factors that mitigate this risk. Mitchell and Joseph (2010) documented evidence which showed that one type of politically connected companies such as the investees of Khazanah Nasional Berhad (the investment arm of the Malaysian Ministry of Finance) had underperformed during periods when capital controls were removed. This finding revealed by Mitchell and Joseph (2010) is consistent with the differences noted in the temporal variations of corporate performance between the investees of Khazanah Nasional Berhad and the GLCs (two different types of politically connected companies). Based on the 2008 Federal election disappointment of Barisan Nasional, the ruling coalition, Fung et al. (2015) investigated the association between politically connected status and long-term financial health. Their results suggest that political connections added more shareholder value when they are longstanding and when the politically connected company employed professional managers and directors. In comparison, the findings of Sinnadurai (2016) imply that Malaysian companies with a shareholder connection related to economic policy (but not Malaysian companies with other types of political connections) enjoyed higher abnormal earnings growth rates (Ohlson, 2005). Tee et al. (2017) examined the association between shareholdings by institutional investors and audit quality (measured by

the amount of audit fees) and it was found that the positive association between institutional ownership and audit fees was stronger for politically connected companies. This finding similarly supports the view that politically connected companies have higher agency costs of equity, thereby creating a need for higher quality audits as an agency mechanism.

2.2.3 Suggestions as to How Malaysian Researchers could Build on the Extant Literature on Political Connections

Adoption of a Formal Definition of “Political Connection” and a Different Classification Regime

Future Malaysian research looking at political connections could build on the extant evidence by adopting a formal definition of “political connection” and régime for classifying the types of political connections. One suggestion is that a company is politically connected if it receives support from a government because the company’s output is amenable to achieving public policy objectives (Demsetz & Lehn, 1985; Sinnadurai, 2016). Malaysian researchers could distinguish three overlapping categories: companies with a shareholder political connection related to economic policy, companies with a shareholder political connection related to social policy and companies with an informal political connection. The first two categories would have the Malaysian government (state or federal) acting as a shareholder (Fraser et al., 2006).

The first category comprises companies producing outputs that are compatible with the government’s economic policy (policy directed at increasing the size of national output) (Fraser et al., 2006; Mitchell & Joseph, 2010). Examples of investors within this category include the Federal Ministry of Finance, Khazanah Nasional Berhad (the investment arm of the Malaysian Ministry of Finance), Petroliam Nasional Berhad, and the State Economic Development Corporations. During the era of the NEP, the State Economic Development Corporations were formed to serve as the Malaysian state government’s investment instruments. They owned shares in selected Malaysian companies which facilitated economic development (Gomez, 2009; Gomez et al., 2018). The second type of politically connected company has outputs amenable to achieving social policy objectives which are related to the redistribution of national wealth (Fraser et al., 2006). Investors in the second category include non-Khazanah GLICs, bumiputera investors that are not GLICs and other investors associated with political parties (Sinnadurai,

2016). The third category consists of companies in which substantial shareholders, members of the executive or directors have a link (via personal association) to a current or former politician or political party (Faccio, 2006; Gul, 2006; Fraser et al., 2006). These political connections guide the companies to develop business models that are consistent with public policy objectives (Heng & Sieh, 2004).⁴

A limitation to the proposed classification régime is the blurred boundary existing between economic and social policy. All the GLICs were created as bumiputera trusts during the era of the NEP. Its aim was to increase bumiputera involvement in economic activities and the share of national wealth (Gomez, 2009; Gomez et al., 2018). Consequently, even though some GLICs such as Khazanah Nasional Berhad have a greater focus on economic versus social policies, there were social policy consequences for their activities. At least two strategies could be applied for addressing this limitation. Firstly, as a sensitivity analysis, Malaysian researchers could investigate whether their results are robust in how Khazanah Nasional Berhad is classified. If their results were not sensitive to the classification of Khazanah Nasional Berhad, then the problem of the blurred boundaries between economic and social policy is unlikely to mar their results. Secondly, this limitation may prejudice the research design against producing significant results, enhancing the credibility of any significant results documented (Sinnadurai, 2016).

By using the proposed régime for classifying the types of political connections, future Malaysian research could distinguish between shareholder and non-shareholder political connections. Some evidence of this nature of Malaysian research was documented by Johnson and Mitton (2003) who distinguished companies with shareholder political connections that are related to bumiputera objectives from companies with informal political connections. In another, Faccio (2006) acknowledged that political connections can arise from either large shareholders or corporate executives. Fraser et al. (2006) also documented evidence that companies with both shareholder and non-shareholder political connections have higher leverage than non-politically connected companies. Bliss and Gul (2012) alternatively

⁴ The definition of “political connection” and the classification régime proposed in this paper is similar but not identical to the definitions and classified régimes used by Fraser et al. (2006) and Vithiatharan and Gomez (2014).

used the approaches of Faccio (2006) and Johnson and Mitton (2003) to identify politically connected companies while Boubakri et al. (2012) distinguished whether the political connections originated from a close relation, i.e. a director or a shareholder. The analyses in both Fung et al. (2015) and Tee et al. (2017) included both GLCs and non-shareholder political connections. In this regard, future Malaysian research could build on these studies by investigating more explicitly whether corporate governance characteristics differ between shareholder and non-shareholder political connections. Others could aim to broaden the definition of “shareholder political connections” so as to include shareholders such as the State Economic Development Corporations.⁵

Further, more Malaysian research could be conducted to test the hypotheses by comparing corporate characteristics between companies with different types of shareholder political connections. These hypotheses development could refer to differences in fund management approaches among the different types of shareholder political connections. Most of the political connections related to social policy are active portfolio managers, seeking to maximise portfolio returns for distribution to their beneficiaries (Gomez & de Micheaux, 2017). Conversely, political connections related to economic policies are more likely to adopt a “buy and hold” approach, seeking active input into the governance of the companies so as to achieve their public policy objectives (Sinnadurai, 2016). The portfolio management strategy adopted by the political connections may affect governance attributes of the investee company.

Some past studies (Fraser et al., 2006; Mitchell & Joseph, 2010) have investigated whether corporate governance characteristics differ according to the type of shareholder political connection possessed by a company. The empirical tests in Fraser et al. (2006) distinguished companies with political connections related to economic policy from companies with a shareholder political connection that patronises on the basis of ethnicity. The results suggest that both types of politically connected companies carried more debt than non-politically connected companies. The findings of Mitchell and Joseph (2010) were also found to be consistent with the differences noted in temporal variations in

⁵ There is also Malaysian evidence suggesting that performance differs between types of informal political connections, according whether the support comes from an incumbent or ousted politician (Johnson & Mitton, 2003; Mitchell & Joseph, 2010).

corporate performance between investees of Khazanah Nasional Berhad and GLCs. Thus, future Malaysian research could build on these studies by investigating more explicitly whether corporate governance characteristics differ among the types of shareholder political connections.

Consider the ideological mix underlying relevant Government policies in the micro-setting(s) of choice

Different mixes of the ideologies of *laissez-faire* economics and the developmental state have been applied by Malaysian governments, in different areas of public policy. As an illustration, the renationalisation of mega projects after the Asian financial crisis may be regarded as emphasising the developmental state. Conversely, the corporatisation of the GLCs may be regarded as emphasising *laissez-faire* economics. These micro-settings could be classified according to the relevant mix of the developmental state versus *laissez-faire* economics underlying the applicable government policy. For example, Johnson and Mitton (2003) compared the share market performance of politically connected companies with other companies during the Asian financial crisis and the post-crisis period, characterised by government-imposed restrictions on capital flows into and out of Malaysia. Similarly, Mitchell and Joseph (2010) compared the performance of GLCs and the investees of Khazanah Nasional Berhad (two different types of politically connected companies) during different sub-periods, after the Asian financial crisis. The extent of the Malaysian government's restrictions on capital flows in and out of Malaysia also differed during these sub-periods. Thus, the government can be regarded as placing more emphasis on the ideology of the developmental state during periods of strict capital controls and more emphasis on *laissez-faire* economics during periods of lax control. Fung et al. (2015) documented evidence which showed that Malaysian companies with longstanding political connections experienced less dramatic share price decreases in response to negative macroeconomic news, unlike companies with relatively recent political connections. A possible interpretation of this result is that companies with longstanding political connections have accrued more experiences in adapting their business models to changes located within the ideological mix underlying government policies.

Future Malaysian research could therefore build on these studies by formally acknowledging the relative mix of the government's ideologies. The ideological mix (and variants therein) could be acknowledged

in the hypothesis development, research design and conclusion. For example, the finding which indicates that investees of Khazanah Nasional Berhad underperformed during a period of lax capital controls (Mitchell & Joseph, 2010) support the conclusion that this type of politically connected company performs better in settings that had the government emphasising more on developmental state ideology, rather than the *laissez-faire* economics. Subsequent studies could also investigate whether this conclusion can be generalised to other types of politically connected companies and under different settings where the developmental state dominates the *laissez-faire* economics.

2.3 *Nanyang and Other Family Companies*

2.3.1 *Background to the Nanyang Companies in Malaysia*

The socio-political history of Malaysia has generated an abundance of family companies. One type of family company is the *Nanyang* company. “*Nanyang*” is a Mandarin term meaning “Southern ocean”. The word has evolved to mean ethnic Chinese who have settled in Southeast Asia. *Nanyang* companies originated from Chinese traders who migrated from Southern China to the present-day ASEAN countries to escape poverty in China (Sinnadurai, 2016).

The management style of *Nanyang* companies was derived from Confucian values and its reliance on *guanxi* for doing business. *Guanxi* is a Mandarin term meaning networks, comprising close-knit circles of customers, creditors, labourers, suppliers and other parties. Originally, *guanxi* networks were limited to members of the same Chinese dialect groups. Individual *Nanyang* enterprises were small-scale, focused on selling a single product within a small geographical region (Heng & Sieh, 2004). Decision-making has traditionally been centralised, vested in the hands of the founding patriarch while subordinates tend to have high levels of loyalty towards the patriarch and family. Most of the shareholders of *Nanyang* companies have directors and executives who are from the founding family. At the same time, links with China were also maintained (Heng & Sieh, 2004). *Nanyang* companies have been successful in generating wealth for the Malaysian Chinese community, partly due to the forces of change and partly due to its survival of *guanxi* and Confucian values underpinning their business models (Sinnadurai, 2016).

Nanyang companies have been going through various transformations. One force stimulating this change is the ascendancy of China and Taiwan, after the Cultural Revolution and the Asian financial crisis (Liu, 1998). The opening of China and Taiwan has prompted *Nanyang* companies to access product and capital markets in Greater China while companies from China and Taiwan have also begun operations in ASEAN-region countries, thereby creating an increased product market competition for *Nanyang* companies (Yeung, 2006).

Another force of change can be attributed to the globalisation of product and capital markets, prompted by the demise of Communism in Eastern Europe during the 1990s and the opening of the People's Republic of China as a market economy (Siddiquee, 2006). Modern-day *guanxi* networks have expanded beyond Southeast Asia and the Sino world (Liu, 1998; Heng & Sieh, 2004) through vertical integration and diversification. A typical *Nanyang* company operates outside of Southeast Asia and the Sino world and is a conglomerate with a range of businesses and geographical segments. A typical contemporary *Nanyang* company is partly financed by foreign debts and listed on at least one foreign stock exchange (Liu, 1998).

The next force driving change in *Nanyang* corporations is the policies of the Malaysian government that stress on economic and social development. These policies are particularly directed at improving relations between the Malays and the ethnic Chinese (Liu, 1998). Throughout history, *Nanyang* entrepreneurs have successfully adapted their business models to be friendly to the Malaysian government's policies. During the NEP era, *Nanyang* businesses foresaw that their previous approach of employing Malay capitalists as "sleeping partners" would no longer satisfy the government's desire to breed a new entrepreneurial class of Malay. The *Nanyang* corporations, thus began to actively employ Malays into their businesses, using the Malay partners to foster political connections. Therefore, during the NEP period, *Nanyang* corporations were able to amass shareholder wealth, notwithstanding constraints imposed by policy settings (Heng & Sieh, 2004; Gomez, 2009). Following this, *Nanyang* companies were able to avail themselves of the indigenous capital, in addition to the capital of their traditional networks (Yeung, 2006).

In response to these forces of change, contemporary *Nanyang* companies utilised the expertise of non-family members such as professional managers. During the "Alliance" period of Malaysian history (1957-1969), *Nanyang* companies (and the products and services they retailed)

had grown beyond their introduction and growth phases. Hence, these companies embraced the need to diversify their business models. Heads of *Nanyang* companies realised that in order to expand into new industries and new geographical regions, they needed expertise not available within the family (Gomez, 2009). Even within the industry and geographic region of origin, *Nanyang* entrepreneurs understood that they would be foregoing valuable management candidates, if they only considered recruits from within the founder family. Another requirement was then added where even members of the family were required to have tertiary education (often from Western countries) to be eligible for management level positions (Yeung, 2006). *Nanyang* corporations accepted that a degree of independent monitoring was needed to ensure accountability within diversified companies and to accept the importance of independent directors (Gomez, 2009). In addition, *Nanyang* companies also acknowledged that professional management may facilitate the adaptation of their business models to changes imposed by government policies over the long term (Fung et al., 2015).⁶

Despite these forces for change, it was clear that the most essentially defining characteristic of *Nanyang* companies, *guanxi*, still prevails. Links to, and support from, Greater China, were still strong. National and provincial governments from China and Taiwan were eager to consolidate the Chinese identity within Southeast Asia and so *Nanyang* companies were encouraged to invest in Greater China (Liu, 1998; Yeung, 2006). Nevertheless, the family still constitutes as the nucleus of contemporary *Nanyang* corporations (Heng & Sieh, 2004; Yeung, 2006; Gomez, 2009) where it holds a significant, if not controlling, share ownership (Yeung, 2006).

Another factor that can explain the success of *Nanyang* companies is the survival of the Chinese language and culture within the country. Observations show that Malaysia is the only country outside Greater China (with the exception of Singapore) that has a publicly-funded system of Chinese-language education. Malaysian Chinese have the option of sending their children to complete their primary education in Mandarin in government-funded National Type Schools. Following this, they may proceed to a higher system of privately-funded Independent Chinese Secondary Schools where education is conducted in Chinese and where successful students can choose to further their education in China or Taiwan. The Chinese language especially Mandarin also

⁶ However, Fung et al. (2015) do not isolate *Nanyang* companies.

prevails in Malaysia where Mandarin-language prints, television and radio media is prevalent (Lee & Heng, 2004) making it a very rich setting for the propagation of the *Nanyang* companies.

2.3.2 *Suggestions for Agency Theory-based Research Agenda for Malaysian Researchers Investigating Family Companies.*

Two different types of agency relationships of equity exist in family companies: the agency relationship between controlling shareholder-managers and non-controlling shareholders and the agency relationship between shareholders and managers (Claessens & Yurtoglu, 2013). International evidence (Wang, 2006; Ali, Chen, & Radhakrishnan, 2007; Chen, Chen, & Cheng, 2008) indicates that corporate governance outputs such as earnings quality and disclosure policy, differ between family and non-family companies. Evidence from Malaysia (Amran & Che Ahmad, 2009; Amran, 2011; Abdullah, Evans, Fraser, & Tsalavoutas, 2015) corroborates this conclusion, illustrating that the direction of associations between corporate value and board of director attributes, differs between family and non-family companies. The findings of Abdullah et al. (2015) suggest that family companies produced lower quality annual report disclosures but this difference in quality is not incorporated into intrinsic values. Conversely, Ismail and Sinnadurai (2012) were unable to document evidence showing the strength of the positive association between intrinsic values and earnings quality which differed between family-dominated and widely-held companies.

These studies (Liu, 1998, Heng & Sieh, 2004; Yeung, 2006; Gomez, 2009) do not distinguish the types of family companies. Evidence about family companies *per se* may not be upheld for *Nanyang* companies, due to differences in business models and agency mechanisms. One Malaysian study that isolated *Nanyang* family companies is Sinnadurai (2016). He observed that abnormal earnings growth rates were higher for *Nanyang* than non-*Nanyang* companies. To this end, further research could investigate whether other corporate governance outputs and valuation attributes differ between types of Malaysian companies: *Nanyang* companies, non-*Nanyang* family companies and non-family companies.

International evidence indicates that one variable with explanatory power for how corporate governance outputs differ among types of family companies is the extent to which professional management are employed. Using data from the United States, Chen, Cheng and Dai (2013) found that family companies with a professional CEO had higher

CEO turnover – performance sensitivity, when compared to other types of family companies. Based on data derived from the United States, Pérez-González (2006) detected, in cases of CEO change, that when the incoming CEO is an unqualified family member, the subsequent performance deteriorates. However, deterioration of subsequent performance is reduced when the incoming CEO has higher quality tertiary education. Taking data from Thailand, the study conducted by Bertrand, Johnson, Samphantharak and Schoar (2008) found that when control of family companies passed to the second generation, the involvement of professional staff from outside the family reduces the cost of the agency relationship between controlling and non-controlling shareholders. Based on these outcomes, Malaysian researchers are well-positioned to contribute to international literature since Malaysia has substantial variations in the degree of professional management employed within family companies (Fung et al., 2015). However, the evidence highlighting that professional managers ameliorate agency costs of equity when management passes to the second generation (Bertrand et al., 2008; Pérez-González, 2006) may not be generalised to Malaysia, in particular the *Nanyang* companies, owing to their unique corporate governance characteristics (Liu, 1998; Heng & Sieh, 2004; Yeung, 2006).

Hence, in synthesis, corporate Malaysia can be described as heterogeneous, based on its family companies. These companies could be distinguished based on two different criteria, which adds to the extent of international literature. The first criterion is the family company status comprising: non-family company, non-*Nanyang* family company and *Nanyang* company. The second criterion is the extent to which non-family professionals are employed in family companies, as members of the executive and on the board of directors. Previous literature (Ali et al., 2007) has indicated that the relative magnitude of the two types of agency equity relationships and the efficacy of different agency mechanisms vary according to family company status and the extent to which non-family members are employed (Ali et al., 2007).

3. Research into the Recovery of Financially Distressed Companies

3.1 Outline of Practice Note 17

A company is regarded as having “failed” when it ceases to be a going concern. “Financial distress” is an intermediate state, in which a company is experiencing difficulties but is still a going concern. Typical symptoms of financial distress include the inability to pay financial

obligations as they mature, recurring losses, suspension of dividends and massive layoffs (Beaver, 1966; Platt & Platt, 2002). “Corporate recovery” may be defined as the processes by which a distressed company averts failure and returns to being a regular going concern. Theory (see Hofer, 1980; Poston, Harmon, & Gramlich, 1994; Abdullah, Ismail, & Sinnadurai, 2018) predicts that corporate recovery is more likely to occur if a distressed company is diagnosed in the early stages of distress. The probability of recovery is also likely to differ according to whether the distressed company pursues a turnaround strategy that is operational (short-term) or strategic (long-term) in nature (Hofer, 1980; Poston et al., 1994; Abdullah et al., 2018).

Bursa Malaysia, the Malaysian Stock Exchange has attempted to operationalise the definition of “financial distress” via Practice Note 17, a listing rule that imposes additional disclosure requirements on distressed companies. As the forerunner to Practice Note 17, Practice Note 4 was implemented by the Malaysian Securities Commission as part of the Mahathir government’s reforms, after the Asian financial crisis (Che Haat, Mahenthiran, Abdul Rahman, & Abdul Hamid, 2006).

Practice Note 17 designates a company as financially distressed if at least one of the following criteria is satisfied:

1. The company’s shareholders’ funds attributable to parent shareholders are less than 25 per cent of its total paid-up capital and less than RM40 million.
2. Receivers have been appointed to take control of the company’s assets, or the assets of a subsidiary or associated company comprising at least 50 per cent of total consolidated assets.
3. Winding-up of a subsidiary and/or associated company that comprises at least 50 per cent of total consolidated assets.
4. The auditor has expressed an adverse opinion or a disclaimer in the most recent set of audited financial statements.
5. Auditors have expressed emphasis of matter regarding the going concern assumption in the most recent financial statement and consolidated shareholders’ funds of the issuer are at most, 50 per cent of the consolidated paid-up-capital.
6. Default on debt payments by the issuer, its major subsidiary or its major associated company and the issuer is unable to provide a solvency declaration to Bursa Malaysia.

Poston et al. (1994) identified three stages of financial distress. The first stage, “incubation”, refers to the beginning of the financial difficul-

ties. The second stage is “financial embarrassment” where a company still has positive net assets and sound earnings power but is starting to experience liquidity problems. The third stage is financial insolvency where the liquidity problem has deteriorated to the extent that the company can no longer obtain funds for recovery, whether from internal or external sources. If problems persist at the third stage, the company progresses from financial distress to insolvency. The Practice Note 17 criteria seems to be aimed at identifying companies at the latter stages of financial distress (Casey, McGee, & Stickney, 1986; Poston et al., 1994).

A company caught by Practice Note 17 (the “issuer”) and its principal advisor is required to review the issuer’s risk management and the internal control systems. The company is required to submit to Bursa Malaysia the results of the review and the plan to redress the weaknesses reported therein. Bursa Malaysia then assesses the plan according to whether, in the near future, the plan is likely to satisfy the following objectives: redress the problems that caused the issuer to trigger Practice Note 17, prevent the issuer from retriggering Practice Note 17 and increase the value of securities (Bursa Malaysia, 2015).

Companies coming under Practice Note 17 are also required to furnish additional disclosures. Immediately upon being caught by Practice Note 17, the company must issue its “first announcement”, disclosing the fact that it is caught by Practice Note 17, its obligations under Practice Note 17 and the consequences of non-compliance. Within three months of the first announcement, the Practice Note 17 issuer is required to furnish a statement indicating whether its regularisation plan will entail substantial changes to its business model. The affected issuer is also required to make monthly announcements, communicating expected timeframes until approval of the regularisation plan. The plan for implementation made by the companies caught under Practice Note 17 is obliged to continue making monthly announcements until informed otherwise by Bursa Malaysia. Companies coming under Practice Note 17 are also required to make a “requisite announcement”, containing the aforementioned details of the regularisation plan, after necessary third-party agreements such as compromises by creditors have been concluded (Bursa Malaysia, 2015).

Regularisation requirements differ based on whether the plan entails significant changes to the issuer’s business model. If the plan involves substantial changes, the issuer is required to submit the plan to the Malaysian Securities Commission for approval, within 12 months of attaining the Practice Note 17 status. The issuer is then required

to formalise the plan within a timeframe specified by the Malaysian Securities Commission (Bursa Malaysia, 2015).

If the regularisation plan does not involve substantial changes to the issuer's business model, the issuer is required to meet additional obligations. The plan must clarify which of the Practice Note 17 criteria triggered the application of the practice note. The regularisation plan should contain historical figures of revenue, gross profit, shareholders' funds, borrowings and key financial ratios for whichever is later: five years ago or the listing date. There is a requirement for the discussion and analysis of these historical figures to include, in light of the company's operating environment, key risk factors and industry outlook. If the plan entails the injection of new assets, the issuer is required to disclose names, qualifications and experiences of directors, officers and investors involved in the restructuring. The issuer's board of directors is also required to assess whether the issuer is likely to have sufficient working capital to continue as a going concern for the next twelve months, and whether the issuer is likely to achieve positive earnings during the next two quarters. The plan must contain forecasts of earnings and cash flows, in addition to the explanation of the assumptions underlying the forecasts and the review of the issuer's risk management policies and internal control systems. The issuer not intending to alter the business model is required to implement the plan within 12 months of approval. The issuer is obliged to achieve positive net profits in two consecutive quarters, after implementing the plan (Bursa Malaysia, 2015).

A possible rationale for Practice Note 17 to contain such strict requirements for affected companies not intending to alter their business models is the need to convince Bursa Malaysia and the investors of the plan's viability, notwithstanding the issuer continuing in an industry which is struggling. The Practice Note 17 requirements for companies planning to continue with their existing business models are in agreement with prescriptions in the literature aimed at achieving operating and/or strategic turnarounds by single business units (Hofer, 1980).

3.2 Literature on the Prediction of Recovery from Corporate Financial Distress

Studies (Altman, 1968; Ohlson, 1980; Hillegeist, Keating, Cram, & Lundstedt, 2004) have modelled the probability of corporate recovery from financial distress, using financial statement ratios and metrics.

In particular, the Altman (1968) and Ohlson (1980) indices, referred to as “Z-scores” and “O-scores” respectively, model the probability of recovery as a function of liquidity, financial leverage, company age, operating profitability, size and asset usage efficiency. The probability of corporate failure has also been estimated using option pricing models. This approach estimates the probability of bankruptcy as the probability that the market value of a company’s assets is lower than the book value of its liabilities, within a specified time period (Hillegeist et al., 2004).

Evidence (see Altman, 1968; Ohlson, 1980; Poston et al., 1994; Begley, Ming, & Watts, 1996; Hillegeist et al., 2004; Wu, Gaunt, & Gray, 2010) indicates that the predictive accuracy of the aforementioned approaches could improve. The Altman (1968) and Ohlson (1980) metrics have high classification accuracy, when applied to the data from the periods they were developed. However, these metrics have reduced accuracy when applied to different time periods, even when the coefficients are re-estimated. The set of ratios that best predict corporate failure and their coefficients display temporal variation (Poston et al., 1994; Begley et al., 1996; Hillegeist et al., 2004; Wu et al., 2010).

Estimates of the probability of bankruptcy using option pricing models tend to outperform estimates using financial statement ratios. Within-sample and out-of-sample accuracy improves when additional ratios are included as predictors. These additional variables include earnings power, the extent to which assets are collateralised, lagged return, stock price variability and the number of business segments (Casey et al., 1986; Wu et al., 2010). Malaysian researchers, using Practice Note 17 data, have the potential to contribute to filling this void by using the reason(s) for triggering Practice Note 17, as extra predictors for the probability of recovery. Details of the regularisation plan permit assessment of the quality of the corporate governance mechanisms therein and the type of turnaround strategy (operational versus strategic) (Poston et al., 1994).

Studies using financial statement indices and option pricing models to predict corporate bankruptcy experience theoretical and practical challenges which may partially explain the shortcomings of their performances. The Practice Note 17 data have the potential to reduce these shortcomings, for instance, the theoretical challenge to operationalise “financial distress” and “corporate failure” (Karels & Prakash, 1987). Moreover, the correspondence between the value of a ratio and a company’s stage and severity of financial distress is unobservable to researchers and so may vary, cross-sectionally and

temporally. This means that researchers may misclassify healthy companies as distressed. A company's Practice Note 17 status (as healthy, distressed or failed) reflects the judgment of a professional regulator. This judgment is likely to be more accurate than the result derived solely on financial statement ratios and indices that disregards their inherent limitations.

Another challenge is the incorporation of the impact of corporate governance quality on the probability of corporate failure. Effective monitoring may improve the likelihood of recovery but the relation between the probability of survival and the financial accounting metrics may differ according to corporate governance variables. Evidence (Fich & Slezak, 2008) indicates that variables measuring corporate governance quality enhance the predictive ability of financial ratios for corporate recovery. In this regard, triggering Practice Note 17 would implicitly incorporate the impact of corporate governance quality where companies with higher corporate governance quality would have higher shareholder values, hence less likely to trigger Practice Note 17.

The prediction of corporate failure using financial ratios may be disadvantaged by statistical problems. This is because multiple discriminant analysis assumes that ratios are distributed normally (or lognormally), both univariately and multivariately. Evidence (Karels & Prakash, 1987) indicates that these assumptions are only likely to be satisfied for a small sub-set of ratios and that predictive accuracy is much higher when they are satisfied. Using Practice Note 17 to predict corporate failure would thus help to reduce this problem and the reasons for using Practice Note 17 can be captured via a series of indicators, rather than continuous variables.

Using financial statement ratios to predict corporate failure can suffer from sample selection problems. Models that predict corporate failure by using financial ratios tend to over-represent failed companies in their samples (Zmijewski, 1984). This limitation would cause the probability of failure to be over-estimated. Malaysian researchers are able to predict the probability of failure for distressed companies by using Practice Note 17. Since the population of Practice Note 17 companies is regularly published by Bursa Malaysia, the prediction of corporate failure, conditional on being distressed, may be more accurate than through the prediction of failure from a sample of healthy companies.

Previous Malaysian studies such as Abdullah, Halim, Ahmad and Rus (2008) have investigated the probability of financial recovery. They compared the classification accuracy of the multiple discriminant

analysis model, logistic regressions and the hazard model by using the traditional categories of financial statement ratios (Altman, 1968; Ohlson, 1980). Results indicate that financial leverage is the most consistent predictor of financial distress. In another study, Yap, Yong and Poon (2010) used multiple discriminant analysis to develop a corporate failure prediction model with high out-of-sample classification accuracy. Alifiah, Salamudin and Ahmad (2013) estimated Altman's (1968) style models by using logistic regressions. Their results indicate that the models have high classification accuracy, when applied to both contemporaneous and subsequent period hold-out samples. Similarly, Md Zeni and Ameer (2010) predicted the probability of turnaround likelihood by using a sample of Practice Note 4/Practice Note 17 companies. They compared the prediction accuracy of three different Altman (1968) style models. Their findings suggest that all the three models have high classification accuracy. Pirzada (2017) also estimated an Altman (1968) style model by using multiple discriminant analysis to examine a sample of Malaysian manufacturing companies. The results indicate that variables capturing profitability, liquidity, financial leverage and efficiency are able to predict financial distress. Therefore, Malaysian research could be built on these findings. So far, none of the aforementioned studies had utilised the contents of Practice Note 17 disclosures such as the reason for being caught and the characteristics of the recovery plan as predictors of the probability of corporate recovery. Thus far, Md Zeni and Ameer (2010) represents the only aforementioned study that had distinguished financial distress and corporate failure.

3.3 Literature on Earnings Management by Financially Distressed Companies

Literature (Zang, 2012; Roychowdhury, 2006; Cohen, Dey, & Lys, 2008) has investigated the trade-off between earnings management via accruals manipulation and real earnings management. A company's choice between these modes would reflect its relative costs and benefits. Real earnings management causes a drain on cash flows and competition positions, hence the costs of real earnings management would be negatively related to product market power and financial health (Zang, 2012). Accruals manipulation may result in the violations of accounting standards and extra scrutiny from regulators and auditors (Roychowdhury, 2006). The cost of accruals management would be positively related to the strictness of regulatory régime, negatively

related to a company's degree of accounting flexibility but positively related to auditor quality (Cohen et al., 2008).

The costs of real versus accrual-based earnings management may be lower for distressed companies. Distressed companies may prefer the negative cash flow consequences of real earnings management to corporate failure, especially if it is confident that the company can recover. In the years prior to failure, managers of distressed companies may hesitate to engage in upward accruals management. This will cause subsequent accrual reversal which can result in an even bleaker picture of their financial positions (García-Lara, García Osmá, & Neophytou, 2009).

These considerations motivate separate investigations of the trade-off between accruals-based and real earnings management in distressed companies. Evidence (Rosner, 2003; García-Lara et al., 2009) suggests that distressed companies engage in both modes of upward earnings management prior to failure. These studies did not investigate the extent to which distressed companies rely on real versus accruals-based earnings management. Nonetheless, research from Malaysia using Practice Note 17 data has the potential to contribute to the need for this evidence. Companies caught by Practice Note 17 would display a more accurately identified sample of distressed companies which serves research purposes well. In addition, the limitation of relying solely on financial accounting criteria is that earnings may have been managed to circumvent classification as financially distressed and to secure favourable terms from creditors (Rosner, 2003; Mohd Saleh & Ahmad, 2005). Likewise, this also serves as a good reason for making reference to Practice Note 17 for research aims.

Malaysian studies (Selahudin, Zakaria, & Mohd Sanusi, 2014; Ghazali, Shafie, & Mohd Sanusi, 2015) have investigated earnings management by distressed companies. In their work, Selahudin, et al. (2014) were unable to document reliable evidence of the association between accruals management and financial distress. In contrast, Ghazali et al. (2015) managed to document evidence which showed that financially distressed companies engaged in income-decreasing accruals management. Nevertheless, these studies did not utilise Practice Note 17 disclosures neither did they control the level of real earnings management. In another study, Shayan Nia et al. (2017) observed that real earnings management, prior to being caught by Practice Note 17, was constrained by foreign shareholders which may also carry some implications for research. Therefore, subsequent Malaysian researchers

could build on this evidence by modelling the relative costs and benefits of the two modes of earnings management (Zang, 2012).

4. Suggestions for Agency Theory-based Researchers from Indonesia, the Philippines and Thailand

There are many institutional similarities between Malaysia and other ASEAN countries. Hence, some of the recommendations proposed in this paper may be applicable to the neighbouring countries. This section discusses the potential applicability of the suggestions for research into family companies and political connections for Indonesia, the Philippines and Thailand. Consideration of differences and similarities between each of these three countries and Malaysia may spur researchers from these countries to engage in agency theory-based research.

The remainder of this section is organised as follows: the second sub-section discusses political connections. It begins with a general discussion, followed by specific discussions related to Indonesia and the Philippines respectively. The third sub-section dwells on family companies; it also provides an integrated discussion for all the three countries and the fourth sub-section is specifically devoted to Thailand. It focusses on the unique institutional investor of The Crown Property Bureau of Thailand.

4.1 Political Connections

4.1.1 General Discussion

The global definition of “political connections” as postulated in this review paper applies to Indonesia, the Philippines and Thailand (Demsetz & Lehn, 1985; Sinnadurai, 2016). All these three countries have companies that receive government assistance because the companies’ output is amenable to achieving public policy objectives. In this regard, it is also appropriate for capital market researchers from Indonesia, the Philippines and Thailand to distinguish shareholder political connections from adviser connections. Both categories of political connections abound in all three countries (Carino, 2008; Wurfel, 1999; Pananond, 2001; Carney & Hamilton-Hart, 2015).

In developing the research hypotheses, it would be appropriate for researchers from Indonesia, the Philippines and Thailand to follow a similar approach to Malaysia. Researchers from these three countries

should also identify the ideologies underlying their respective government's policies for economic and social development. The researchers should consider how these ideologies differ in the different micro-settings and where possible, develop research hypotheses linking politically connected status to corporate characteristics and policies. However, there are marked differences between the ideologies adopted by Malaysian authorities and the ideologies underpinning economic and social development policies in Indonesia, the Philippines and Thailand. Hence, researchers from these three countries would need to mount different arguments, different from those of researchers in Malaysia. Furthermore, researchers from these three countries also need to bear such similarities and differences in mind, when constructing their research designs.

4.1.2 *Indonesia*

The ideologies underpinning post-Suharto Governments' policies for the social and economic development of Indonesia share some similarities with Malaysia. In particular, Indonesian federal governments like their Malaysian counterparts, have embraced a mix of the developmental state and *laissez-faire* economics (Gomez, 2009; Warburton, 2016). In Indonesia, as in Malaysia, the relative mix of these ideologies has differed both over time and in different micro-settings. For example, since 2014, the Jokowi administration (October, 2014 to the time of writing) has greatly empowered state-owned enterprises by providing special sources of funding, offering them lucrative infrastructure building projects and facilitating intra-industry mergers to consolidate the product market power. The Jokowi administration has also implemented deregulation packages aimed at encouraging private sector investment and it also lifted restrictions on foreign investments in some industries (Warburton, 2016). The Jokowi Government provided substantially more funding for public infrastructure building projects than the Yudhoyono administration did (October, 2004 to October, 2014). The Jokowi administration was also more concerned with attracting private sector investments to participate in these projects (Warburton, 2016). In this regard, Indonesian capital market researchers could develop testable hypotheses, related to the impact of these government policies on corporate governance. For example, product market competition amongst private sector participants may have been fiercer in the Yudhoyono era. Therefore, the potency of product market competition,

as a determinant of earnings quality and disclosure policy, may have been stronger during the Yudhoyono era (Ali et al., 2014).

There are differences between the ideological underpinnings of the Indonesian and Malaysian governments' policies for social and economic development. In particular, post-Suharto Indonesia may be regarded as a "weakly ethnicised polity", an environment in which resource allocation by the federal government has limited regards for ethnicity. One factor causing this situation is that fiscal and administrative decision-making was decentralised to the provinces. Some of these provinces were heterogeneous, containing many different ethnicities, with different demands. This is a result of the Indonesian government's programmes of resettling Javanese and Madurese to elsewhere in the archipelago. Alternatively, some predominantly mono-ethnic regions have been divided into several provinces, for example, the Javanese heartland is spread over the provinces of Central and East Java. As a result of this, inter-ethnic patronage and communication has become a critical success factor for federal politicians in Indonesia (Aspinall, 2011). Hence, the social policy goal of eliminating the association between ethnicity and economic function is less important in Indonesia than in Malaysia (Siddiquee, 2002; Aspinall, 2011). It seems unlikely that in Indonesia, policies of companies subjected to government shareholding would be influenced by the requirement to provide a steady income stream to indigenous beneficiaries. Instead, the influence of government shareholdings on corporate policy may depend on the nature and degree of reciprocal patronage between politicians and the listed company. A conjecture of this nature could be tested empirically by capital market researchers.

The post-Habibie government of Indonesia had strongly pursued an agenda of reducing the degree of corporate cronyism, secrecy and corruption that prevailed during the Suharto era (October, 1999 to June, 2001) (Leuz & Oberholzer-Gee, 2006; Warburton, 2016). This change in the Indonesian government's ideology may have reduced the strength of political connections as a determinant of corporate performance. This conjecture can be tested by capital market researchers. Some evidence of this nature exists, as seen in the results of Leuz and Oberholzer-Gee (2006). They suggested that during President Suharto's term, companies close to the President were less likely to utilise foreign sources of public finance due to the domestic support provided by the government. It was further documented that companies close to Suharto suffered a decline in performance during the term of President Abdurrahman Wahid.

Indonesian researchers are thus advised to use a different measure of political connections than that of Leuz and Oberholzer-Gee (2006), to acquire reliability. The definition of “political connection” in the current paper is broader and focuses on support from the government to achieve public policy objectives, rather than closeness to a particular politician.

Based on the above, it would be appropriate for Indonesian capital market researchers to have different categories of politically connected companies that is unlike their Malaysian counterparts. In Indonesia, it is more common for listed companies to be ultimately owned by the government of a foreign country (Carney & Hamilton-Hart, 2015). These companies may be treated as a distinct category of shareholder political connections. The shareholders may import governance practices from their countries of origins and this practice affects corporate governance outputs differently from companies dominated by the Indonesian government (Shayan Nia et al., 2017). Indonesian capital market researchers may therefore treat this as a distinct category of political connections where companies are associated with politico-business elites who fund politicians and political parties. Due to the Indonesian politicians’ reliance on these sources of funding (Aspinall, 2011; Warburton, 2016), it is inevitable that these companies would experience different types of wealth transfers between the politicians and other stakeholders in the companies. In addition, the performance of these companies may be more susceptible to the vagaries of the health and power of the politicians with whom they are connected to (Leuz & Oberholzer-Gee, 2006). Indonesian capital market researchers could model political contributions from these companies as negative subsidies from Indonesian politicians when conducting research examining financial support towards politically connected companies and also study its impact on corporate performance (Boycko, Shleifer, & Vishny, 1996).

4.1.3. The Philippines

Shareholder political connections in the Philippines, as in Malaysia, have arisen due to the government’s policies related to economic development. The New Public Management and privatisations have been embraced as mechanisms to enhance public sector efficiency in the Philippines (Sta Ana, 1998; Carino, 2008). Consequentially, the Philippines, like Malaysia, has some listed companies which are subjected to substantial government ownership. Similar to companies

with political shareholder connections in Malaysia, government owned and controlled corporations in the Philippines are required to balance the goals of maximising shareholder wealth and achieving public policy objectives. Similarly, there are many government related shareholders in the Philippines, a phenomenon which is heterogeneous, in respect to their missions (Senate Economic Planning Office of the Philippines, 2006). A difference between Malaysia and the Philippines is that Malaysia has not experienced fiscal mismanagement to the magnitude of the Marcos era (Rivera, 1994). The use of privatisations to redress impacts of politicisation in government owned and controlled corporations and to reduce public sector debt has been more imperative in the Philippines than in Malaysia (Sta Ana, 1998; Wurfel, 1999). Therefore, with data from the Philippines, more powerful tests of conjectures from the perspective of economic theory about shareholder wealth impacts of different régimes of government involvement in the private sectors, can be permitted (Boycko et al., 1996).

One suggestion for Filipino researchers is to classify privatised entities that are subjected to substantial government ownership, according to the categories of privatisation (see Sta Ana, 1998). The author distinguished the following categories of privatisations: privatisations primarily undertaken to increase public sector revenue, privatisations undertaken to increase private sector involvement in infrastructure building projects and privatisations of providers of social services. The difference between the ideologies underpinning privatisations in the Philippines versus Malaysia is that regarding social services privatisations where the government of the Philippines sought to “steer, rather than row” (Sta Ana, 1998). This ideology postulates that privatised entities should ultimately determine their own directions with the government acting as a mere enabler and regulator. By contrast, Khazanah Nasional Berhad of Malaysia retains substantial share ownership in its private sector investee companies and also has active input in their corporate governance (Claessens, Djankov & Lang, 2000). A suggestion for Filipino capital market researchers is to categorise the privatised entities according to the extent to which the government “steered” rather than “rowed”, in different settings. The extent to which regulatory intervention influences corporate governance may be greater in settings where the “rowing” dominated the “steering”. For example, the relative cost of engaging in accruals management, rather than real earnings management, is likely to be larger in settings characterised by a high degree of regulatory scrutiny (Zang, 2012).

The nature of government share ownership in the Philippines differs from Malaysia. While the Federal Government of Malaysia's share ownership is principally exercised via one government-related investor, Khazanah Nasional Berhad that owns shares in companies across several industry sectors,⁷ the State Government's share ownership tends to be exercised by the State Economic Development Corporations, bodies that are responsible for cross-sectoral economic development within the state of jurisdiction. Conversely, government share ownerships in Filipino listed companies tend to be exercised by the Federal Government Department, corresponding to the operations of the corporation such as the Department of Energy (Senate Economic Planning Office of the Philippines, 2006). The extent to which corporate output is amendable to achieving public policy objectives is likely to vary among industries (Demsetz & Lehn, 1985). For example, the activities of the provider of childcare facilities may be more amenable to achieving public health objectives than a manufacturer of tobacco products. Hence, the potential for conflicts between shareholder wealth maximisation and public objectives may be greater in some industries than in others (Senate Economic Planning Office of the Philippines, 2006). The importance of the earnings, as a valuation input and accountability metric, may accordingly, exhibit inter-industry variation (Ismail & Sinnadurai, 2012). Conjectures of this nature could be investigated by Filipino capital market researchers.

4.2 Family Companies

It would be appropriate for capital market researchers from Indonesia, the Philippines and Thailand to distinguish the *Nanyang* family companies from the non-*Nanyang* family companies. Both types of family companies abound in all three countries (Semkow, 1995; Batalla, 2010; Tabalujan, 2002; Ouyyanont, 2008; Carney & Hamilton-Hart, 2015). Further, the *Nanyang* family companies in Indonesia, the Philippines and Thailand also share many characteristics with their Malaysian counterparts.

⁷ An exception to this observation is Petroliam Nasional Berhad (PETRONAS), a Federal Government-related institutional investor in Malaysia. PETRONAS' shareholdings reflect more industry concentration, in companies engaged in activities related to oil and gas extraction (Petroliam Nasional Berhad, 2017).

Nanyang companies in Indonesia, the Philippines and Thailand, similar to their Malaysian counterparts, have been successful in generating shareholder wealth. Carney and Hamilton-Hart (2015) documented that six of the ten largest listed Indonesian companies (by total assets) in 1996 were still in the largest ten circle in 2008. Most of the others were within the top 100 in 2008 with the *Nanyang* companies well-represented (Tabalujan, 2002). In 2005, the 22 most dominant private sector companies in the Philippines represented 11 families, mostly of ethnic Chinese background (Batalla, 2010). During the period of 1950-1980, *Nanyang* banks in Thailand had achieved higher growth rates than the Siam Commercial Bank, notwithstanding the fact that the latter had also enjoyed special privileges as a shareholding of the country's Crown Property Bureau (Ouyyanont, 2008). A critical success factor for the *Nanyang* companies in all the four countries is their reliance on family and other networks (Semkow, 1995). Therefore, listed *Nanyang* companies in Indonesia, Thailand and the Philippines, like Malaysia, are typically large, diversified conglomerates which have used vertical integration, horizontal integration and diversification as their growth strategies. Examples include the Salim group in Indonesia (Sato, 1993; Carney & Hamilton-Hart, 2015), the companies within Lucio Tan's empire in the Philippines (Batalla, 2010) and companies under the Charoen Pokphand Group in Thailand (Pananond, 2001).

A factor that can explain the success of *Nanyang* companies in all the four countries is their ability to adapt their business models to be friendly towards national policies for development despite hostile policies directed towards ethnic Chinese. Without doubt, *Nanyang* companies in Indonesia, the Philippines and Thailand, like those in Malaysia, have been vulnerable to these sentiments (Semkow, 1995). For example, in the era prior to the mid-1980s, the Salim group in Indonesia employed a mixture of ethnic *Nanyang* and *pribumi* (indigenous Indonesian) managers. The former oversaw the business in its entirety while the latter ran daily operations and liaised with the Suharto Government (Sato, 1993). In the Philippines, during the period between independence and the reign of President Marcos (1946-1971), legislation prohibiting ethnic Chinese from engaging in retail trade was enacted (Batalla, 2010). *Nanyang* businesses responded by diversifying into manufacturing industries, including the production of cigarettes, textiles and footwear, coconut and flour products and banking (Rivera, 1994). In Thailand, during the period of 1930-1950, *Nanyang* business

enterprises were regarded as pariahs by the indigenous population (Wurfel, 1999). During this period, *Nanyang* families founded several banks, with the purpose of providing funds for *Nanyang* businesses (Charumilind et al., 2006).

Like their Malaysian counterparts, the success of *Nanyang* companies in Indonesia, the Philippines and Thailand can be attributed to the management's ability to adapt their business models, in response to changes in the macroeconomic climate and their country's policies for economic and social development. For example, in Indonesia, during the period of 1968-1974, the Salim group diversified its operations into manufacturing, to take advantage of the Suharto policy that required final processing of consumer goods to be localised. The Salim group expanded into the cement industry during the period of 1977-1981, foreseeing the heightened demands for building products during a period of economic recovery (Sato, 1993). In the Philippines, during the Marcos era, *Nanyang* entrepreneurs consolidated their wealth by forging political connections with Marcos (Rivera, 1994; Semkow, 1995; Batalla, 2010). The Charoen Pokphand Group is a diversified *Nanyang* conglomerate from Thailand. In 1993, the group took advantage of privatisation in Thailand and entered into a joint venture arrangement with the state-owned Petroleum Authority of Thailand. The joint venture managed a petrol station network (Pananond, 2001). After progressing to the second generation and beyond, *Nanyang* companies in Indonesia, the Philippines and Thailand began employing professional managers (in addition to members of the family) on the executive, to facilitate vertical integration and diversification (Sato, 1993; Rivera, 1994; Bertrand et al., 2008).

Although their similarities are obvious, a principal difference between the *Nanyang* communities in Malaysia and those in Indonesia, the Philippines and Thailand is that the Malaysian *Nanyang* community had clung to its Sino culture to a much greater extent. Malaysia is the only country outside Greater China (other than Singapore) with a publicly-funded system of Chinese-language education (Tan, 2004). Most Malaysian Chinese attend the Chinese-medium primary schools while some also progress to attending Chinese-medium secondary schools. Most Malaysian Chinese speak Mandarin or at least one Chinese dialect as their mother tongue (Tan, 2004), evidence that they have retained their cultural identity as Chinese. Moreover, Malaysia also has a widespread use of Mandarin-language print, television and radio media (Lee & Heng, 2004). This contributes to the propagation of

Nanyang companies. In comparison, however, the *Nanyang* communities in Indonesia, Thailand and the Philippines have not retained their Sino culture to the same extent. In fact, it is rare for them to be able to communicate in Chinese (Liu, 1998).

There are several reasons why the *Nanyang* community in Malaysia has followed a different evolutionary path from its counterparts in the neighbouring three countries. The *Nanyang* community in Malaysia is bigger than those in the other three countries (Lee & Heng, 2004). Furthermore, the political interests of the *Nanyang* community in Malaysia have always been well-represented where historically, the Malaysian Chinese Association (MCA) works with the United Malays National Organisation (UMNO) coalition together with other minor parties. Therefore, the interests of the *Nanyang* corporations are manifested and represented by the leaders of the MCA in terms of policy-making, both at the federal and state levels. In the history of Malaysia, the MCA has influence and the power to soften the prevalence of *ketuanan Melayu* (Malay supremacy) policies, particularly during periods when the dominant UMNO was plagued by intra-party dissent (Gomez, 2009). This helped to fortify the position of the *Nanyang* businesses (Lee & Heng, 2004). Conversely, the Malaysian Chinese community is also represented by the Malaysian political oppositions. Their common objective of advancing the interests of the Malaysian Chinese community is thus stronger (Heng & Sieh, 2004; Gomez, 2009).

A corollary of these differences of the *Nanyang* companies in Indonesia, the Philippines and Thailand suggests that other critical success factors may also be in place. There are non-*Nanyang* family companies in these three countries that have also been as successful as the *Nanyang* companies. Therefore, the agency theory-based researchers from these three countries will need to be cognisant of the institutional differences so that effective hypotheses and relevant research designs can be constructed. As an illustration, for Indonesian family companies (*Nanyang* and otherwise), the patronage of politicians and cooperation with government policies may be more important as a critical success factor, than traditional Sino business practices. Hence, it may be appropriate for Indonesian capital market researchers to categorise family companies that are associated with powerful non-*Nanyang* politico-business elites in the same category as *Nanyang* companies (Warburton, 2016).

The Philippines also have non-*Nanyang* family companies that share governance traits as the *Nanyang* companies. One group of com-

panies in this category are those owned and managed by descendants of Chinese mestizos⁸ who manage their companies much like the *Nanyang* companies. They too faced discriminatory treatment and restrictions of business opportunities imposed by the Spanish colonists (Wickberg, 1964). In response to the changes noted in the regulatory régime and economic climate, Chinese mestizo businesses adapted their business models with great effects. For example, during the era of 1850-1898, the Spanish authorities began to fear that they would lose the Philippines to the United States, hence, they removed many of the travel and business restrictions previously applied on Chinese mestizos. This was a strategy to enable the Philippines to generate more profits for Spain. The Chinese mestizos, likewise, responded by diversifying into agriculture (a supported industry) and employing more native Filipinos in their businesses (Wickberg, 1964). Even though the Chinese mestizos no longer constitute a distinct cultural grouping within the Philippines, their descendants have maintained their successful business practices. Some of the most profitable companies in the Philippines are family companies managed by ethnic Chinese mestizos, such as companies within the Cojuangco group (Batalla, 2010). Another type of non-*Nanyang* family company that has enjoyed similar success in the Philippines are companies owned by descendants of the landed capitalists that had arisen to prominence during the post-independence era (Rivera, 1994). A critical success factor of these companies can be attributed to the fact that they provided the support base for presidents and Congress (Wurfel, 1999).

These institutional differences have implications on the Filipino market, hence capital market researchers should consider using a category that is broader than *Nanyang* companies in their hypothesis development and research design. They could include, within the same grouping as the *Nanyang* companies, the following types of family companies: family companies that have descended from Chinese mestizo businesses, family companies that originated from non-landed capitalists and family companies that originated from landed capitalists.

⁸ The Chinese mestizos are descendants of mixed marriages between ethnic Chinese men and native Filipina women, during the era of Spanish colonisation. The Spanish encouraged these mixed marriages, to facilitate Hispanisation of subsequent generations of Chinese traders. The Chinese mestizos were generally afforded preferential treatment, by the Spanish colonists, over the Chinese. Hence, the mestizos developed more cultural affinity with native Filipinos than the Chinese (Wickberg, 1964; Rivera, 1994).

4.3 *The Thai Crown Property Bureau*

A unique entity in Thailand which shares similarities with both the political connections and the *Nanyang* companies, is the Crown Property Bureau, which is the investment arm of the monarchy. The two principal shareholdings of the Crown Property Bureau are companies listed on the Thai stock exchange: the Siam Commercial Bank and the Siam Cement Group. The Bureau also actively manages a share portfolio via the Crown Property Bureau Equity Company and property investments via The Crown Property Bureau Property Company (Ouyyanont, 2008).

The Crown Property Bureau has many common characteristics with the political connections. For instance, the Bureau is a large institutional investor, whose activities fuel the economic development of the country. Like many of the shareholder political connections related to the economic policy in Malaysia, a significant source of income of the Crown Property Bureau of Thailand is dividends generated by its two principal equity investments. The Crown Property Bureau Equity Company in Thailand, like most of the shareholder political connections of Malaysia, related to social policy actively manages its share portfolio with a view to maximising returns (Ouyyanont, 2008; Gomez, 2009). However, the Crown Property Bureau does not satisfy the definition of a “political connection” as postulated in this review paper. Its function is to generate wealth from investments for the Thai royal family, rather than for the implementation of public policy (Ouyyanont, 2008). A corollary is that Thais doing agency theory-based research should therefore treat the investees of the Crown Property Bureau as a separate category from (any type of) politically connected companies.

The Crown Property Bureau in Thailand shares many common features and critical success factors as the *Nanyang* companies. It has been extremely successful in generating wealth (Ouyyanont, 2008). It also has a conglomeration of investments. It adopts an aggressive approach to its investment management. Like *Nanyang* companies, the Bureau has employed diversification and vertical integration as strategies for enhancing its competitive position (Pananond, 2001). Similar to *Nanyang* companies, the Bureau investees have also been successful in adapting their business models to changes within the economic environment. For example, during the post-Asian financial crisis recovery period, the Siam Cement Group engaged in considerable restructuring, selling non-core businesses. The Bureau reoriented the principal activities of the Siam Cement Group towards the provision

of cement and construction materials, petrochemicals and paper. These products and services were in demand following the post-crisis situation in Thailand which fueled the demands for building products and services in a resurgent economy (Ouyyanont, 2008). Another critical success factor which the Crown Property Bureau has in common with the *Nanyang* companies is its ability to utilise networks of finance providers, political connections and technology providers to procure a competitive advantage (Pananond, 2001).

The Crown Property Bureau's association with the royal family of Thailand makes its investees distinct from *Nanyang* companies. Hence, it would be appropriate for capital market researchers from Thailand to treat Bureau investees (principally the Siam Cement Group and the Siam Commercial Bank) as a separate category from *Nanyang* companies, in their hypothesis development and also, research designs.

There has been some empirical capital market-based research from Thailand which acknowledges the themes of political connections and family companies. Charumilind et al. (2006) compared Thai companies' access to bank credit and business connections, prior to the Asian financial crisis. The results indicate that during the pre-crisis era, companies with business connections had preferential debt access. Another study by Bertrand et al. (2008) investigated the association between shareholder wealth indicators and the degree of involvement by family members (versus professional managers) in family companies. The results indicate that when leadership passes to the second generation, involvement of professional managers reduces agency costs between family and non-family shareholders. Peetathawatchai and Acaranupong (2012) investigated the association between asset impairment charges and economic indicators mentioned in the relevant accounting standard. The results produced some evidence of opportunistic earnings management in accounting for impairment losses. However, the results also indicate that efficiency dominates opportunism. Acaranupong (2017) used Ohlson's (2005) methodology to investigate the value relevance of book values of investment properties of listed Thai companies. The findings were mixed.

Subsequent Thai studies could build on the extant literature by investigating whether the findings are robust to the suggestions in this review paper. For example, Charumilind et al. (2006) used two different approaches to identify politically-related companies. The first measure treated companies as politically connected if one of the largest family conglomerates in Thailand ultimately owned at least 10 per cent

of ordinary equity. The other measure is continuous, the percentage of directors of a company who are also on the board of directors of one of the listed family, or on the board of Crown Property Bureau-controlled banks. Their findings may not be robust, based on the alternative definition of political connections that require the connection to be involved in implementing public policy. In this regard, future research could investigate whether the aforementioned findings of Bertrand et al. (2008) were upheld for both the *Nanyang* and non-*Nanyang* companies. Within Thailand, the incentives for opportunistic earnings management may differ according to family company status (non-family company, *Nanyang* company or non-*Nanyang* family company). Hence, further research could extend the findings of Peetathawatchai and Acaranupong (2012) and Acaranupong (2017) by repeating the analyses for samples stratified according to family company status.

5. Summary and Conclusions

This paper presents a vision for conducting agency theory-based research for researchers who come from the ASEAN region, to contribute to the international literature of this discipline. While the main focus of this review paper was on Malaysia, the discussion is also extended to Indonesia, the Philippines and Thailand. The paper suggests an alternative operationalisation of “corporate governance” quality for Malaysian researchers. The subsequent suggestion for Malaysian capital market researchers relate to three streams of literature: research investigating the association between politically connected status and corporate attributes, literature investigating the association between family company status and corporate attributes, and literature on corporate financial recovery. The final section provides the comparison and contrast between Malaysia and the three aforementioned countries of ASEAN, with respect to political connections and family companies. The section makes suggestions which are designed to stimulate the use of the agency theory-based approach by researchers in these countries.

Theoretical definitions of corporate governance quality from the Anglo-American setting refers to the effectiveness of agency mechanisms in reducing residual loss (Jensen & Meckling, 1976; Bhagat et al., 2008). The Anglo-American approaches to operationalising these definitions tend to utilise the board of directors characteristics (Boone et al., 2007; Bhagat et al., 2008; Coles et al., 2008; Coles et al., 2014) for assessment. Most extant research looking at corporate governance quality in

Malaysia (Abdul Wahab et al., 2007; Che Haat et al., 2008; Bliss & Gul, 2012; Goh et al., 2014) had used Anglo-American approaches possibly because as a former colony, Malaysia had inherited many British institutional features (Vithiatharan & Gomez, 2014).

The theoretical definitions of corporate governance quality adopted from the Anglo-Americans accurately characterises Malaysia. However, using the Anglo-American approaches to operationalise these definitions may be sub-optimal for Malaysia while using the board of directors as an agency mechanism may also be less precise due to the diminished importance of the approach and the board in the Malaysian context. Boards are likely to be “captured” by management, particularly in family companies (Yeung, 2006) thus, a more suitable approach may be to emphasise the characteristics of the management team and also auditor quality. A “strong” management would be selective of shareholder wealth maximising policies, regardless of agency costs (Hu & Kumar, 2004). High quality audits would enhance the usefulness of financial statements, as a monitoring mechanism, to compensate for controlling shareholders who are able to insulate the management from market-related disciplinary threats (Ismail & Sinnadurai, 2012; Goh et al., 2014). Some Malaysian researches (Fung et al., 2015; Tee et al., 2017) have also used similar measures of corporate governance quality of this nature.

To proceed, some definitions are in place. Here, a new definition of “political connections” and a new régime for classifying political connections are postulated. A company is “politically connected” if it receives some form of government support because its output is amenable to achieving public policy objectives (Demsetz & Lehn, 1985; Sinnadurai, 2016). This definition is broader than those in previous studies (Fraser et al., 2006; Vithiatharan & Gomez, 2014). The régime for classification in the current study distinguishes shareholder political connections from informal non-shareholding links. Shareholder political connections are distinguished according to whether the government-related shareholder is focused on economic versus social policy. It would be appropriate for future Malaysian researchers to use a broader definition of “shareholder political connections” than most prior studies (Johnson & Mitton, 2003; Fraser et al., 2006; Gul, 2006; Mitchell & Joseph, 2010; Bliss & Gul, 2012; Fung et al., 2015; Tee et al., 2017) had done so by including investors such as the State Economic Development Corporations.

Future Malaysian research could investigate how the impact of political connections on corporate governance outputs differ according to several criteria. The governance of politically connected companies

may differ according to the emphasis placed by the Malaysian government on the developmental state versus *laissez-faire* ideologies, in facilitating economic and social development (Gomez, 2009; Gomez et al., 2018). In their hypothesis development and research design, future Malaysian researchers could also acknowledge more explicitly, the mix of these two ideologies underpinning government policy in the settings they investigate. Future studies could also consider a broader range of corporate characteristics and outputs (Johnson & Mitton, 2003; Gul, 2006; Mitchell & Joseph, 2010; Fung et al., 2015). In addition, Malaysian researchers could investigate how corporate characteristics differ according to different types of shareholder political connections. Without doubt, future research could augment extant literature of this nature (Fraser et al., 2006; Mitchell & Joseph, 2010) by categorising the different types of government-related shareholders according to their policy missions and portfolio management approaches (Sinnadurai, 2016; Gomez & de Micheaux, 2017).

Malaysian research could contribute to the need for evidence on family companies. These companies experience an agency relationship between family shareholders (who are also managers) and non-family shareholders, in addition to the relationship between managers and shareholders. Hence, the nature of agency costs and the efficacy of agency mechanisms may differ between family and non-family companies (Wang, 2006; Ali et al., 2007; Chen et al., 2008; Claessens & Yurtoglu, 2013). Research from Malaysia has the potential to contribute to this literature because socio-political factors have resulted in a high concentration of family companies in Malaysia (Heng & Sieh, 2004; Gomez & de Micheaux, 2017).

The magnitude of agency costs and the efficacy of agency mechanisms may also differ among family companies. International literature (Pérez-González, 2006; Bertrand et al., 2008; Chen et al., 2013) indicates that after the founding generation, agency costs were reduced via the engagement of qualified professional managers, in addition to family members. Malaysian researchers are also privileged to contribute to this literature since Malaysia varies substantially in the degree of professional management employed within family companies (Fung et al., 2015). International evidence may not be generalised to Malaysia, particularly Malaysian *Nanyang* companies, owing to their unique governance characteristics (Liu, 1998; Heng & Sieh, 2004; Yeung, 2006; Gomez & de Micheaux, 2017). Research could therefore build on existing studies (Amran & Che Ahmad, 2009; Amran, 2011; Ismail & Sinnadurai,

2012; Abdullah et al., 2015; Sinnadurai, 2016) by distinguishing *Nanyang* and non-*Nanyang* family companies (Gomez & de Micheaux, 2017).

Malaysian researchers are also blessed with the unique opportunity to contribute to literature on recovery from corporate financial distress. In this context, researchers may utilise data available due to Practice Note 17, a listing requirement imposing extra disclosure requirements on distressed companies (Che Haat et al., 2006). Most existing studies which predict corporate recovery have used financial statement items as predictors, based on seminal models (Altman, 1968; Ohlson, 1980) which also carry many limitations. The set of ratios that best predict corporate failures and their coefficients, vary temporally (Poston et al., 1994; Begley et al., 1996; Hillegeist et al., 2004; Wu et al., 2010). Measurement error is induced due to the difficulty in categorising companies as healthy or distressed. The financial statement ratios are, therefore unlikely to be normally distributed (Karels & Prakash, 1987) and failed companies are likely to be over-represented in the samples (Zmijewski, 1984).

These problems could be reduced if Malaysian researchers could consider using Practice Note 17 disclosures to identify the distressed companies and also to include these disclosures as predictors for the probability of recovery. These predictors may capture corporate governance factors (hence the effectiveness of agency mechanisms) more accurately than by relying solely on financial statement items (Fich & Slezak, 2008). This can augment current existing Malaysian studies (Abdullah et al., 2008; Md Zeni & Ameer, 2010; Yap et al., 2010; Alifiah et al., 2013; Pirzada, 2017).

International literature has investigated the extent to which distressed companies rely on accrual-based management versus real earnings management. Evidence from healthy companies illustrating the trade-off between these modes of earnings management, however, may not be generalised to distressed companies because the relative costs and benefits may differ (Zang, 2012). Future Malaysian research could, henceforth extend on current existing studies (Selahudin et al., 2014; Ghazali et al., 2015; Shayan Nia et al., 2017) by formally modelling the extent to which distressed companies engage in the two modes of earnings management.

Scholars from Malaysia's neighbouring countries doing agency theory-based research, could benefit by comparing and contrasting the Malaysian institutional setting with their own countries. The environments of Indonesia, the Philippines and Thailand are also apposite for contributing to empirical evidence on how political connections and

family company status affect corporate governance outputs. Researchers in these countries are advised to use the same broad definition of “political connections” postulated in this paper (Demsetz & Lehn, 1985; Sinnadurai, 2016). It would also be appropriate for them to distinguish the shareholder and non-shareholder political connections. It is further recommended that, similar to the Malaysian researchers, they develop hypotheses via consideration of the ideologies (and mix thereof) that underpin their governments’ policies for economic and social development (Gomez, 2009; Gomez et al., 2018). Researchers in these three countries could then distinguish the *Nanyang* versus the non-*Nanyang* family companies in their hypotheses and research designs.

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Adherence to the Pecking Order in Deficit and Surplus Conditions: A Comparative Study of Firms in India and China

Vandana Bhama*, P.K. Jain and Surendra S. Yadav

ABSTRACT

Manuscript type: Research paper

Research aims: This study examines firms' adherence to the pecking order in deficit and surplus situations by comparing firms in India and China. It also examines the extent of debt issues and redemption when the deficits and surpluses are relatively large in amount.

Design/Methodology/Approach: This study analyses the data of the Bombay Stock Exchange (BSE) 500 index and the Shanghai Stock Exchange (SSE) 380 index firms. It uses Ordinary Least Square (OLS) regression to examine the effect of deficit and surplus on debt issuance and redemption.

Research findings: The findings indicate that deficit firms in India as well as China adhere to the pecking order by issuing large amounts of debt. The debt issues (short-term debt) are exceptionally higher among Chinese firms whereas Indian firms issue more long-term debts. In addition, Chinese firms prefer to utilise new funds to redeem the existing debts because most of their debts are short term whereas Indian firms use a major chunk of their proceeds to finance deficits. Chinese surplus firms do not retain sizeable funds, an overwhelming proportion of these funds is used to redeem their existing short-term debts. In contrast, Indian surplus firms are

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reluctant to retire debts at a fast pace because of the existing low debt to equity ratios. Indian firms also have more long-term debts in their capital structure.

Theoretical contribution/Originality: This study extends on previous works on the pecking order theory in developing countries by splitting the analysis into two: deficit firms and surplus firms.

Practitioner/Policy implications: This study provides insights into the financing practices of the two developing economies. It also highlights the differences in corporate financing of these two countries.

Research limitations/Implications: This study is confined to only Indian and Chinese firms. It mainly focusses on dataset that have been accumulated over a period of 12 years only. Future studies may consider adding the financing cost aspect so as to generate a more impressive analysis of firms' adherence to the pecking order theory.

Keywords: Pecking Order Theory, Financing, Deficit, Surplus, Debt, Equity

JEL Classification: Q14, G32

1. Introduction

The pecking order theory was first propounded by Donaldson (1961). It outlines the most desired financing hierarchy - internal funds, debt and equity. Generally, firms prefer internal funds to external funds and debt issues to equity (Myers, 1984; Serrasqueiro & Caetano, 2015). This is because internal funds carry no flotation costs while equity carries a higher cost. This has been a well-accepted proposition in the finance theory. In view of these facts, firms prefer to retain earnings or internal cash flows because their first priority is to fund all projects. Where funds are inadequate, debt is preferred because it is relatively a cheaper source of finance. Equity is issued as a last resort (Myers, 2001; Briozzo, Vigier, & Martinez, 2016). Frequently, firms are in either of two situations, fund deficiency or availability of surpluses. The excessive capital investment needs that are over and above the internal cash flows create fund deficiency within firms (also known as deficit firms). In contrast, firms with sufficient amount of internal cash flows and low capital investment needs create surpluses (called surplus firms). In a fund deficiency situation, the pecking order theory proposes that firms issue debts until the limits are exhausted. When the existing limits are beyond the target limits, equity is raised as a last resort. In a reverse situation of excess

flow of surplus funds¹, preference is given to retire debts (Myers, 2001; Serrasqueiro & Caetano, 2015). Therefore, the whole theory of pecking order revolves around debt issues and redemptions.

In view of the above, the first objective of the present study is to examine firms' adherence to the pecking order by comparing firms in India and China during two conditions: deficit and surplus. This study is closely related to the work of Bhama, Jain and Yadav (2016) who focused on Indian firms in an earlier study. A reference on the pecking order theory recognises that majority of studies had been derived from those conducted in the context of developed economies (Shyam-Sunder & Myers, 1999; Frank & Goyal, 2003; Fama & French, 2005; Leary & Roberts, 2010; Jong, Verbeek, & Verwijmeren, 2010; Lemmon & Zender, 2010; Denis & McKeon, 2012). It appears that literature detailing empirical evidences of the pecking order theory of emerging economies, from various aspects, is still lacking. Several studies examining the debt and equity structure across different countries stress the role of country-specific factors such as institutional frameworks and national culture, which are likely to differ across developed and emerging markets (Acedo-Ramírez & Ruiz-Cabestre, 2014; Belkhir, Maghyereh, & Awartani, 2016). Most of the firms in emerging markets still possess characteristics that distinguish them from the typical developed economy, which may prevent the generalisation of prior works on developed markets. As the two fastest growing economies in the world, both India and China clearly serve as good research grounds for researchers to investigate their respective financial systems. Undoubtedly, the financial system of both countries differ due to their diverse institutional structures. Therefore, it would be interesting to explore the extent to which firms from both economies adhere to the pecking order theory during deficit and surplus conditions. The theory focuses on internal financing, then debt and equity as a last choice. This study primarily focuses on internal financing and debt. Access to equity financing is limited in both countries.

The rationale to test the pecking order of deficit and surplus firms separately is motivated by the works of Shyam-Sunder and Myers (1999) and Jong, Verbeek and Verwijmeren (2010). Shyam-Sunder and Myers (1999), for instance, tested the pecking order theory by using

¹ Ideally, firms could use surpluses to buy back equity instead of debt redemptions. Information asymmetry issues force firms to give preference to retire debt. The use of surplus funds in the form of stock repurchases may erode the base of pecking order theory.

an empirical regression model for all the firms where the deficits/surpluses were regressed on net debt issues. They found a common homogenous pecking order coefficient value. Following their work, Jong, Verbeek and Verwijmeren (2010) used a similar methodology of net debt issues to generate their results for deficit and surplus firms separately. The review of literature confirms several observations: (i) A common coefficient exhibits a distorted picture of the pecking order results, hence it is difficult to find the extent of a firm's debt issuance during deficiency and the extent of a firm's debt redemptions during surplus. (ii) The implications of the pecking order coefficient for deficit and surplus firms are different, hence focus should be given to debt issues during deficiency conditions and to debt redemptions during surplus conditions. In view of this, our study emphasises on gross debt issues during deficit conditions and on gross debt redemptions during surplus conditions.

The second objective of this study is to ascertain and compare the extent to which Indian and Chinese firms retire their existing debts in deficit situations and the extent to which they issue new debts during surplus situations. It has been noted that many Indian firms retire their existing debts during deficit conditions and they raise more debts during surplus conditions. Similarly, it has been observed that Chinese firms either redeem old debts substantially or they raise new debt proceeds which are significantly higher than the amount of their deficits and surpluses. Based on this, our study aims to examine if excessive debt issues are being used to retire existing debt during deficiency. We also aim to examine if the new debt proceeds are used to redeem debts or to retain funds for future investments and other needs during surplus conditions.

The third objective of this study is to compare the debt issues or debt redemptions of firms from the two countries during excess deficits and surplus conditions. This objective was motivated by the work of Chirinko and Singha (2000) who asserted that the pecking order does not fit into firms with excessive deficits. Since the financial requirements of these firms exceeded the existing debt capacity limits, it is proposed that firms rely on equity for financing their deficits. In this regard, the pecking order is expected to be weak for firms having large deficits. Likewise, the theory is also less fitting for firms that have large amounts of surpluses. This is corroborated by the fact that firms with large surpluses already have low debt ratios and so they could redeem less debts and retain more funds for future needs.

Since there is a literature gap in the comparative analysis of the financial system of emerging countries, it is hoped that the outcome generated from this study can contribute to filling this gap. To the best of our knowledge, the current study is the first of its kind which examines and compares the new parameters of the extended model of the pecking order theory for firms in emerging economies during deficit and surplus conditions. The remainder of this paper is organised into five sections. Section 2 reviews the relevant literature. Section 3 describes the data and methodology. Section 4 discusses the empirical findings and Section 5 summarises and concludes the paper.

2. Review of Literature

2.1 Debt and Equity Structure in the Financial Markets of India and China

Since the 1990s, India and China have made significant efforts to expand their financial system. To begin with, the Indian financial system constitutes primarily of debt markets followed by a limited role of equity markets (Saggar, 2005). In previous years, the share of bond markets has been virtually less (Dawar, 2014). It was noted that corporate financing in India is mostly covered by debts in the form of borrowings from banks and financial institutions (Ganguli, 2013) but Rastogi, Jain and Yadav (2006) maintained that India's debt financing profile has changed significantly over the years. Indian firms give more preference to short-term debts than long-term debts (Jain & Yadav, 2005; Jain, Singh, & Yadav, 2013). In contrast, Saggar (2005) asserted that Indian firms rely more on long-term debts to finance fixed investments than on short-term debts to finance short-term needs. It seems that there is homogeneity on the usage of long-term debts among Indian firms (Majumdar, 2010). Lending interest rates in the form of cost of debt financing is also high (8.3 to 13.3 per cent in Figure 1) in India.

Capital markets are not the primary drivers of economy in India (Didier & Schmukler, 2013), making the role of equity markets limited. However, equity markets are more developed than bond markets (Komera & Lukose, 2014). Large firms are the ones that raise funds from these markets. Thus far, share repurchasing is not yet a normal practice among Indian firms, unlike developed economies.

In China, firms face severe financial constraints (Poncet, Steingress, & Vandenbussche, 2010). Bank loans are the major source of financing deficits in China (Allen, Qian, Shan, & Zhu, 2015) mainly because of the

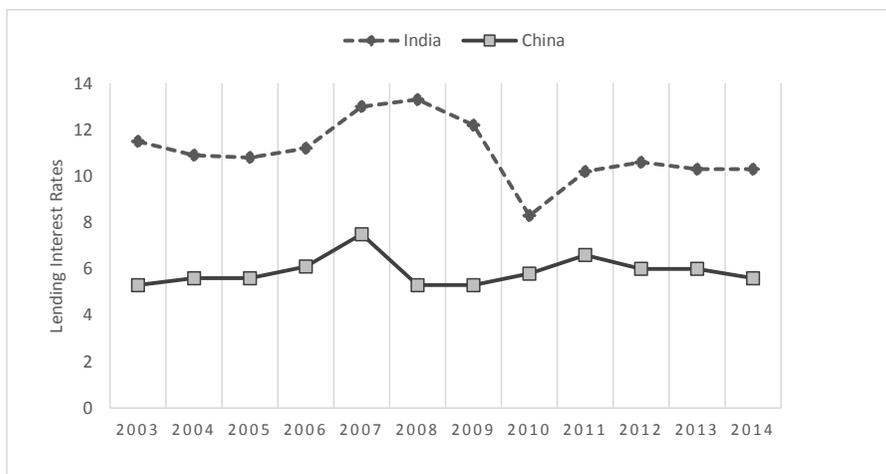


Figure 1: Lending Interest Rates of India and China, 2003-2014

low interest rates ranging from 5.3 to 7.5 per cent (in Figure 1). During the period of study, capital markets were an insignificant source of financing in China (Didier & Schmukler, 2013). This was accentuated by the weak corporate bond market and its over-dominated banking industry (Pessarossi & Weill, 2013). In view of the above scenario, firms in China have only one primary source of debt, i.e., short-term debt. The reason is because Chinese firms employ less amount of long-term debts in their capital structure (Bhabra, Liu & Tirtiroglu, 2008). Due to a major reliance on a single source of debt, Chinese firms maintain low level debt ratios (Faulkender & Petersen, 2006; Fan, Titman, & Twite, 2012). Figure 1 illustrates.

As far as China's unregulated capital markets are concerned, firms do not rely highly on equity financing. This is because these firms have greater reliance on debt funds (Tong, 2005; Fan, Rui, & Zhao, 2008). In China, there is a fixed quota for specific numbers of firms to go public. When firms become public in mainland China, they continue to face other regulatory barriers for raising funds through equity capital (Jiang & Kim, 2013). It is not surprising that firms more often than not issue equity because Chinese markets are highly unregulated. Equity issuance requires prior approval, which is subjected to quotas and other prerequisites. As far as equity repurchasing is concerned, there is little evidence to highlight the role of equity buy-back in China, a practice that has only been allowed recently.

2.2 The Pecking Order Theory and the Need for Extension

For the first time, Shyam-Sunder and Myers (1999) provided the statistical power of the pecking order model to assess financing hierarchy through regression equations. This model states that firm's financing deficit should match dollar for dollar by a change in the firm's debt. Chirinko and Singha (2000) questioned the regression test of the pecking order model developed by Shyam-Sunder and Myers (1999). They maintained that simple tests generate misleading inferences while evaluating the plausible patterns of external financing. They then confirmed that the pecking order coefficient value can be lower than one, even if firms followed the financing hierarchy as prescribed by the pecking order theory. The rationale is that during large deficits, firms might be constrained into issuing more debts. These firms have to finance the remainder of their deficits with equity issues. Such constraints are painfully higher for firms with high leverage ratios. Therefore, alternative tests that can identify various capital structure determinants are needed. This can also be seen in Adedeji's (1998) criticism who places doubt on firms' motivation to raise funds externally when experiencing deficiency in their internal funds.

Bontempi (2002) proposed a 'modified pecking order model' in which both the trade-off and pecking order models are fitted. The modified pecking order follows when firms adhere to the guidelines of both the pecking order and the trade-off theory. It is difficult for firms to strictly adhere to a single theory. Pure pecking order model and pure trade-off model do not work well. Vasiliou, Eriotis, and Daskalakis (2009) suggested that researchers should carefully shape the pecking order theory as the methodology can be misleading. Their findings revealed that the negative relation between leverage and profitability could not be taken to mean that the pecking order financing hierarchy persists. They claimed that analysis should not rest solely on the mean of the oriented regression results when testing the pecking order theory, hereby referred to as distinct hierarchy.

2.3 Mixed Evidence on the Pecking Order Theory

Using regression for testing the pecking order theory, Shyam-Sunder and Myers (1999) and Lemmon and Zender (2010) observed that the pecking order can be attributed to an excellent descriptor of a firm's financing behaviour. In contrast, Adedeji (2002) asserted that new debt

issues do not have any significant relationship with deficits. Frank and Goyal (2003) as well as Fama and French (2005) noted that net equity issues tracked the financing deficits more closely than the net debt issues. Leary & Robert (2010) further observed that only 20 per cent of firms adhere to the pecking order theory.

Extending the pecking order model by splitting firms into deficit and surplus groups, Jong, Verbeek and Verwijmeren (2010) were of the view that net debt issues provide an excellent fit for surpluses (0.90), which is a reasonable fit for small and medium deficits (0.74). However, it was an extremely poor fit for large deficits (0.09). Observing the pecking order behaviour in emerging economies, Seifert and Gonence (2009) stressed that firms in these economies mainly financed their deficits with equity issues.

Didier and Schmukler (2013) noted that capital markets are not a significant source of financing deficits in India and China. From the perspective of India, Dutta (2013), Komera and Lukose (2014), and Chaklader and Chawla (2016) disagreed that Indian firms follow the pecking order theory. Both the pecking order theory and the trade-off theory jointly explain Indian firm's financing decisions (Chakraborty, 2010; Majumdar, 2010).

Looking at China, Tong and Green (2005) and Chong, Law and Zou (2012) supported the pecking order theory due to China's over dominated bank financing. In contrast, Ni and Yu (2008) observed that there was no evidence to support the pecking order theory among Chinese firms. Others (Feng & Cui 2007) found that the capital structure of Chinese firms was more in tune with their trade-offs. Chen (2004) and Zou and Xiao (2006) noted that the Chinese firms follow a "new pecking order" which includes retained earnings, equity and long-term debts. The pecking order theory and the trade-off theory are not mutually exclusive among Chinese firms (Yue, 2011).

3. Data and Methodology

Data for this study were extracted from Indian firms which were listed on the Bombay Stock Exchange (BSE) 500 Index and Chinese firms which were listed on the Shanghai Stock Exchange (SSE) 380 Index. The firms were selected based on their market capitalisation over an 11 year period - 2003-2014. Bloomberg's database was used to collect the relevant secondary data. Following standard practice, we excluded the banking and financial firms (Frank & Goyal, 2003; Leary & Roberts, 2010;

Bhama et al., 2016) for India while China does not have any financial firms on the SSE index. We further excluded firms with missing values of any variable, either in cash flow statement or balance sheet. Firms with at least one year of data availability were included in our study as the deficits and surpluses have been calculated each year and were independent of the values of other years. In total, 405 Indian firms and 312 Chinese firms have data availability. Initially, we split the firms as deficit and surplus firms (using a conceptual framework mentioned below) for each year as per the equation below, Equation (1).

$$SUR_t = C_t - I_t \quad (1)$$

where,

SUR_t = Positive or negative surplus in year t ;

C_t = Net cash from operating activities (adjusted) of firm i in year t ;

I_t = Net capital investments of firm i in year t ;

In Equation (1), the positive value indicates surplus with a firm (referred as surplus firms), whereas, negative value denotes fund deficits (referred as deficit firms). These deficits and surplus values were calculated for each year. They are independent from the values of another year. Our approach aims to test² this theory in deficit and surplus conditions by using gross debt issues and gross debt redemptions. As both the models (pecking order and trade-off) do not work well (Bontempi, 2002), there was a need to remodel the pecking order theory because researchers have mentioned that previous methodology provided misleading inferences (Vasiliou et al., 2009).

The division of firms (deficit and surplus) would provide a better picture of firms' financing decisions in both situations. Equity issues and repurchases have been ignored in the regression equations in both

² We tested the pecking order theory for both economies using the net debt issues approach on aggregate basis as suggested by Shyam-Sunder and Myers (1999) and Jong, Verbeek and Verwijmeren (2010) for measuring the separate effects for deficits and surpluses. This is to investigate whether the findings are in tune with the observations made by other studies using similar approach, specifically in the Indian and Chinese context. For the whole set of firms, we found that the coefficient values are 0.24 for Indian firms and 0.32 for Chinese firms. Evidently, the low coefficient values convey that the pecking order adheres less among these economy firms. Further testing the results separately for deficit and surplus firms, we found that the coefficient values for Indian deficit (0.43) and surplus firms (-0.11) are weak. Similar is in the case of Chinese deficit (0.34) and surplus firms (0.20). Based on these reasons, the study focuses on the gross debt issues and redemptions.

situations due to negligible values. They had been tested by Bhama et al. (2016) who used net debt issues. Their results were weak in comparison to the results noted by Jong et al. (2010). Nonetheless, their results were in tune with previous findings of the Indian and Chinese contexts. Due to these fragile results, we thus changed the approach for testing the pecking order theory by using gross debt issues and redemptions in this paper.

3.1 Pecking Order Tests of Deficit and Surplus Firms

Deficit Situation

The pecking order theory suggests the issuing of debt first, during deficiency (Myers, 2001). For testing the same in our study, the following equation was formulated:

$$DI_{it} = \alpha + \beta_{po}DEF_{it} + \varepsilon_{it} \quad (2)$$

where, DI_{it} is the gross debt issued by firm i in year t , β_{po} is the pecking order coefficient of deficit firms, DEF_{it} is the actual deficit (negative surplus) of firm i in year t , ε_{it} is the error term.

Surplus Situation

For estimating firm's propensity to redeem debt from available surplus funds, the following equation is used:

$$DR_{it} = \alpha + \beta_{po}SUR_{it} + \varepsilon_{it} \quad (3)$$

where, DR_{it} is the debt redemption by firm i in year t , β_{po} is the pecking order coefficient of surplus firms, SUR_{it} is the surplus of firm i in year t , and ε_{it} is the error term.

3.2 Pecking Order Model - The Extension

Equations 2 and 3 indicate the results for gross debt issues during deficiency and gross debt redemptions in surplus situations. It was observed that firms redeemed debts during deficiency but firms issued new debt in times of surpluses. It is imperative to control the impact of debt repurchases on gross debt issues and new debt issues on gross debt redemptions. Therefore, we extended this model to regress the total funding requirements (comprising deficit and debt redemptions)

on debt issues and the availability of surplus and new debt issues on debt redemptions through Equations 4 and 5. Regressing total fund requirement on gross debt issues is a better measure as it explains how deficit firms are able to redeem the existing debts even when they are in need of more funds. Likewise, in the case of surplus firms, adding new debt issues in surpluses indicates the extent to which firms redeem the existing debts by using new debt proceeds together with the existing surpluses. This is to examine firms' further debt issues and redemptions in deficit and surplus conditions.

Deficit Situation

During deficiency, firm's total funding requirements³ (deficit + redemption of existing debt) are regressed on debt issues by considering the following model:

$$DI_{it} = \alpha + \beta_{po}TFR_{it} + \varepsilon_{it} \quad (4)$$

where, DI_{it} is the gross debt issued by firm i in year t , β_{po} is the pecking order coefficient of deficit firms, TFR_{it} is the total funds required (deficit + debt redemption) for firm i in year t , and ε_{it} is the error term.

Surplus Situation

In this context, the results are based on surpluses and debt funds (surplus + issue of new debt) during surplus conditions. We employed the following model:

$$DR_{it} = \alpha + \beta_{po}SDF_{it} + \varepsilon_{it} \quad (5)$$

where, DR_{it} is the debt redemption by firm i in year t , β_{po} is the pecking order coefficient of surplus firms, SDF_{it} is the availability of surplus and debt funds (surplus + issue of new debt) for firm i in year t , and ε_{it} is the error term.

Ordinary Least Square (OLS) regression was used to derive the coefficient values. The mean value of debt equity ratios was also calculated for understanding firms' pecking order, at varying levels of debts.

³ Ideally, equity buy back should be added to calculate the value of total funding requirements (TFR). However, we have ignored equity buy back owing to the fact that it has recently been allowed in China (Jiang & Kim, 2013). These observations have also been supported by negligible values on equity repurchases (constituting almost zero amounts).

4. Results

Table 1 compares the percentage of deficit and surplus firms from India and China, for the period 2003-2014. The analysis indicates that the percentage of Indian deficit firms varied from 43 to 68. The percentage of Chinese deficit firms varied from 55 to 74. It is evident from the statistics that the percentage of firms having fund deficiency is relatively more in the case of China. As far as surplus firms are concerned, the percentage of Indian firms varied from 32 to 57 per cent whereas the Chinese firms varied from 25 to 45 per cent, indicating that the percentage of firms having surpluses were relatively more in the case of India.

Table 1: Percentage of Deficit and Surplus Firms

Year	Deficit Firms		Surplus Firms	
	% of Indian Firms	% of Chinese Firms	% of Indian Firms	% of Chinese Firms
2003	42.73	61.37	57.27	38.63
2004	49.79	62.08	50.21	37.92
2005	51.97	69.20	48.03	30.80
2006	62.21	69.80	37.79	30.20
2007	66.15	67.61	33.85	32.39
2008	68.48	59.77	31.52	40.23
2009	60.27	60.23	39.73	39.77
2010	53.44	55.08	46.56	44.92
2011	60.48	66.54	39.52	33.46
2012	63.08	74.70	36.92	25.30
2013	56.67	62.31	43.33	37.69
2014	59.22	61.62	40.78	38.38

Note: The table reports the percentage of Indian and Chinese firms having deficits and surpluses each year.

The mean value of debt equity ratios of the Indian and Chinese firms are compared in Table 2. The results conveyed that Indian firms, in comparison to Chinese firms, held more long-term debts in their capital structure for both deficit (0.72) and surplus (0.37) conditions. In contrast, Chinese firms borrowed more from short-term debts rather than long-term debts (Bhabra et al., 2008). The LTD/E and STD/E ratios were relatively higher in deficit conditions for both India and China. As

Table 2: Mean Values of Debt Ratios

	Deficit Firms			Surplus Firms		
	India	China	Mean Difference (t-test)	India	China	Mean Difference (t-test)
LTD/E ratio	0.72	0.22	25.50***	0.37	0.11	13.48***
STD/E ratio	0.32	0.50	-12.90***	0.22	0.39	-10.38***
TD/E ratio	1.04	0.72	12.54***	0.58	0.50	3.15***

Note: *** indicates significance level at 1%. LTD/E is the long-term debt to equity ratio. STD/E is the short-term debt to equity ratio and TD/E is the total debt to equity ratio.

far as the composition of the total debt is concerned, the TD/E ratio is satisfactory for Indian and Chinese firms in both conditions (the ratios are 1.04 and 0.72 in deficit conditions and 0.58 and 0.50 in surplus conditions). This outcome is indicative of the fact that firms in India as well as China, follow the outlines of trade-off theory by keeping their debt ratios in safe zones (Feng & Cui, 2007).

Table 3 compares the mean value of pecking order variables of firms in India and China in both conditions. From the mean values noted, it seems evident that there are statistical differences for the deficit firms from India and China. Although the percentage of Chinese deficit firms was more (as indicated in Table 1), the deficit amount was significantly higher among the Indian firms (164.35 USD millions) as compared to Chinese firms (61.96 USD millions). While the fund deficiency in Indian firms was attributable to the requirement of financing their huge capital investment (224.67 USD millions) needs (Bhama et al., 2016), the fund deficiency of Chinese firms was due to the negligible cash flows accruing from operating activities (Poncet et al., 2010).

It was observed that the new debt issues were exceptionally large in amount among the Chinese deficit firms (thrice the amount of their deficits). This is because firms inevitably retire their existing short-term debts due for redemption so as to keep their debt ratios low (Faulkender & Petersen 2006; Fan et al., 2012). In contrast, the debt redemptions were of lower amount for the Indian deficit firms. With most of the debts being long-term, the firms liked to redeem debts at the time of maturity (Bhama, Jain & Yadav, 2017). Although the equity issues were modest in sum, equity buy-backs were almost zero for both countries.

Table 3: Mean Differences between Firms in India and China

	Deficit Firms			Surplus Firms		
	India	China	Mean Difference (t-test)	India	China	Mean Difference (t-test)
Net cash available from operating activities (adjusted) ^a	60.32	0.53	8.01***	158.15	58.49	7.03***
Net funds required for capital expenditure ^b	-224.67	-62.49	-12.55***	-74.73	-24.88	-5.54***
Deficits/Surplus ^{a-b}	-164.35	-61.96	-10.89***	83.42	33.61	6.68***
Debt issues	205.27	169.84	2.40**	52.99	61.86	-1.10
Equity issues	34.03	12.01	5.66***	5.52	3.55	1.81*
Redemption of debt	-72.01	-130.64	6.68***	-62.61	-68.63	0.72
Buy-back of equity	-0.92	0.00	-4.13***	-0.77	0.00	-3.97***

Note: ***, ** and * indicate significance level at 1, 5 and 10 per cent. Net cash available from operating activities (adjusted)^a = Net cash from operating activities 1 in year t; Net funds required for capital expenditure^b = Net capital investments in year t; Deficits/Surplus^{a-b} = Net cash available from operating activities (adjusted)^a - Net funds required for capital expenditure^b; Debt issues = Gross debt issues in financing activity of cash flow statement; Equity issues = Equity issues in financing activity of cash flow statement; Redemption of debt = Debt redemption in financing activity of cash flow statement; Buy-back of equity = Equity buy back in financing activity of cash flow statement; Figures are in USD millions.

Looking at the surplus firms, it can be seen that the surplus amount for firms in India was significantly more. This is because of the large amounts of cash flow acquired from operating activities and the relatively lower capital expenditures in Indian firms. Despite surplus availability, the Indian firms, in general, compensated debts with low amounts. Indian firms retained an overwhelming portion of surpluses and new debt issues for future use so as to avoid the high cost of debt financing. In contrast, Chinese firms redeemed debts that were twice the amount of their surpluses. The redemption of such magnitude was possible due to the new debt proceeds. In operational terms, the new debts generally replace the existing short-term debts.

Comparing the coefficient values of the pecking order test of firms in India and China, it was observed that the deficit firms in both countries issued large amount of debts during deficiency condition, as presented in Table 4. The coefficient values (in column 1) were 1.13 and 1.96 for Indian and Chinese firms, respectively. Accordingly, the pecking order behaviour to a marked extent, existed among the deficit firms. The debt issues were substantially large among Chinese firms owing to their heavy reliance on borrowings, in the form of short-term debts (on account of low interest rates) in their capital structure. In contrast, the cost of debt financing in India is relatively high during the period of study. Therefore, Indian firms raised debts to the extent of their deficiencies. Despite debt issues, firms in both countries restricted themselves to keeping their debts in safe limits (Table 2), indicating the adherence to the trade-off theory.

When looking at surplus conditions, the results appeared to be different for both sets of firms. The coefficient value (in column 3) is robust for Chinese firms (0.71) and Indian firms (0.39). Accordingly, Chinese firms use the overwhelming portion of surpluses to retire debt owing to the short time span of most of their debts (to avoid the credit risk). In contrast, Indian firms retained most of their surpluses because they already have low debt ratios in surplus conditions.

Further, by regressing surpluses and new debt issues on debt redemption, marginal improvements were observed in the coefficient values (Column 4). This proves that Indian firms redeem debt to a partial extent while considering the surpluses and new debt issues. In comparison, Chinese firms made most use of their funds to retire the existing debt. Therefore, it can be concluded that pecking order adherence is strong for Chinese surplus firms in comparison to Indian surplus firms.

As depicted in Table 4, a further decline in the coefficient values (column 2) suggests that the deficit firms in India redeemed debts with a lower amount while the deficit firms in China redeemed debts at a fast pace, owing to the shorter tenure of most of their debts. Thus, during the deficit condition, Indian firms as well as Chinese firms followed a 'modified pecking order' where both the pecking order theory and the trade-off theory were adhered to (Feng & Cui, 2007; Chakraborty, 2010; Majumdar, 2010). Hence, both sets of firms issued debts as well as keep their debt ratios in limit.

Table 4: Pecking Order Tests of Deficit and Surplus Firms

	Deficit Firms				Surplus Firms			
	Indian firms		Chinese firms		Indian firms		Chinese firms	
	DI (1)	DI (2)	DI (1)	DI (2)	DR (3)	DR (4)	DR (3)	DR (4)
Constant	18.97 (0.01)	-5.76 (0.23)	48.72 (0.00)	-13.54 (0.00)	29.84 (0.00)	-4.26 (0.26)	44.86 (0.00)	-10.66 (0.00)
$\beta_{po}DEF$	1.13***		1.96***					
$\beta_{po}TFR$		0.89***		0.95***				
$\beta_{po}SUR$					0.39***		0.71***	
$\beta_{po}SDF$						0.49***		0.83***
R square	0.68	0.85	0.42	0.96	0.16	0.63	0.08	0.82
Observations	2162	2162	1824	1824	1517	1517	1008	1008

Note: The table indicates pecking order results for deficit and surplus firms. The data is from 2003-2014. The impact of deficit (DEF) on debt issues (DI) is determined in column (1). Column (2) measures the impact of total funding requirements (TFR) on debt issues (DI). The impact of surpluses (SUR) on debt redemption (DR) is determined in column (3). Column (4) measures the impact of surplus and debt funds (SDF) on debt redemption (DR). *** indicates significance level at 1 per cent.

Firms with Different Levels of Deficit and Surpluses

Table 5 indicates the mean value of debt equity ratio of Indian and Chinese firms with varying levels of deficits and surpluses. The table reports that Indian firms have different deficit levels. Generally, they borrow more from the long-term debt sources. For instance, firms with large or very large deficits have relatively high LTD/E ratio (0.75 and 1.11). Owing to the large portions of finances emerging from the long-

Table 5: Debt Equity Ratios of Firms with Various Levels of Deficits and Surpluses

	Deficit Firms			Surplus Firms		
	India	China	Mean Difference (t-test)	India	China	Mean Difference (t-test)
<i>Long-Term Debt to Equity Ratio</i>						
Firms with small deficits/surpluses	0.45	0.15	9.85***	0.45	0.14	-7.64***
Firms with medium deficits/surpluses	0.59	0.17	-12.91***	0.43	0.12	7.00***
Firms with large deficits/surpluses	0.75	0.23	14.31***	0.32	0.08	-7.57***
Firms with very large deficits/surpluses	1.11	0.32	15.61***	0.24	0.07	4.98***
<i>Short-Term Debt to Equity Ratio</i>						
Firms with small deficits/surpluses	0.30	0.47	-5.89***	0.28	0.41	4.24***
Firms with medium deficits/surpluses	0.33	0.48	5.60***	0.20	0.40	-6.81***
Firms with large deficits/surpluses	0.32	0.53	-7.00***	0.21	0.33	3.87***
Firms with very large deficits/surpluses	0.33	0.51	-6.64***	0.18	0.38	-5.32***
<i>Total Debt to Equity Ratio</i>						
Firms with small deficits/surpluses	0.75	0.62	3.07***	0.73	0.55	-3.33***
Firms with medium deficits/surpluses	0.92	0.65	-5.84***	0.63	0.52	1.99**
Firms with large deficits/surpluses	1.07	0.75	6.36***	0.53	0.42	-2.32**
Firms with very large deficits/surpluses	1.43	0.83	9.91***	0.42	0.46	-0.64

Note: *** and ** indicate significance level at 1 and 5 per cent.

term debt sources, the TD/E ratio is near 1 for all deficit groups except firms with very large deficits (1.43). Contrary to this, Chinese firms employed comparatively more short-term debts in their capital structure (0.47 to 0.53) unlike Indian firms (0.30 to 0.33). Despite high deficiencies, the TD/E ratio of Chinese firms is not more than 1 for all deficit firms.

During surplus conditions, the mean value indicates that firms employed reasonably low debts in their capital structure as the level of surplus increases. Despite low debt ratios, Indian firms borrowed relatively more from the long-term debt sources (the LTD/E ratio is from 0.24 to 0.45); the ratio tends to decline as firms gain more surpluses. Thus, firms attempt to pay back the existing debt that may be expensive or is due for redemption. While the LTD/E ratio of Chinese firms was very low (0.07 to 0.14), their short-term debt financing was relatively higher than the Indian firms. The TD/E ratio was not more than 0.73 and 0.55 for the Indian and Chinese surplus groups.

Table 6 illustrates the comparison of the empirical evidence between Indian and Chinese firms with different deficit quantum. Here, it is noted that Indian firms with small and medium deficits issued debts which amounted to more than their deficits (coefficient values being 2.36 and 1.45). The findings supported the pecking order theory, which states that pecking order works better for firms without any debt capacity constraints (Komera & Lukose 2014). These firms issued new debts to pay back the existing debt which may be expensive or are due for repayment; (the coefficient values decline significantly from 2.36 to 1.09 for small deficits and 1.45 to 0.87 for medium deficits), or the firms may add funds if they expect a deficit in the future.

In contrast, Chinese firms with small and medium deficits, issued exceptionally high amount of debts that is more than their deficits (coefficient values being 5.54 and 5.28). The extraordinary size of the debt issues among these firms were typically based on two reasons. First, these firms have positive cash flows with low investment needs. This results in the low amount of deficiencies (Appendix A). Second, the existing debt ratios of these firms are in safe limits (Table 5). These firms utilised most of the new debt proceeds to compensate the existing debts because they were of shorter-tenure where the coefficient values declined significantly from 5.54 to 0.98 for firms with small deficits and from 5.28 to 1.03 for firms with medium deficits (column 2).

A low pecking order coefficient was expected for firms with large deficits. Our study found robust pecking order coefficient values for Indian and Chinese firms. It was 1.11 and 1.10 for large deficit firms

Table 6: Pecking Order Tests of Firms with Various Levels of Deficits

Level of Deficits	Indian Firms		Chinese Firms	
	DI (1)	DI (2)	DI (1)	DI (2)
<i>Firms with Small Deficits</i>				
Constant	30.88 (0.00)	5.19 (0.29)	36.76 (0.00)	-0.83 (0.66)
β_{po_DEF}	2.36***		5.54***	
β_{po_TFR}		1.09***		0.98***
R ²	0.43	0.83	0.18	0.96
Number of Observations	534	534	465	465
<i>Firms with Medium Deficits</i>				
Constant	-3.14 (0.59)	0.46 (0.92)	-21.96 (0.05)	-15.14 (0.00)
β_{po_DEF}	1.45***		5.28***	
β_{po_TFR}		0.87***		1.02***
R ²	0.56	0.69	0.51	0.96
Number of Observations	516	516	447	447
<i>Firms with Large Deficits</i>				
Constant	10.01 (0.40)	-11.63 (0.14)	-35.68 (0.01)	-17.99 (0.00)
β_{po_DEF}	1.11***		3.33***	
β_{po_TFR}		0.85***		0.96***
R ²	0.66	0.85	0.56	0.97
Number of Observations	532	532	442	442
<i>Firms with Very Large Deficits</i>				
Constant	-29.94 (0.06)	-28.36 (0.01)	24.82 (0.04)	-21.74 (0.00)
β_{po_DEF}	1.09**		1.41***	
β_{po_TFR}		0.90***		0.88***
R ²	0.81	0.91	0.66	0.91
Number of observations	545	545	448	448

Note: The table indicates pecking order results of Indian and Chinese firms with different deficit levels. The data is from 2003-2014. Firms are sorted yearly into quartiles using scaling of deficits by total assets. The impact of deficit (DEF) on debt issues (DI) is determined in column (1). Column (2) measures the impact of total funding requirements (TFR) on debt issued (DI). *** indicates significance level at 1 per cent.

and very large deficit Indian firms, respectively, and 3.33 and 1.41 for Chinese large and very large deficit firms, respectively. Accordingly, firms with large amounts of deficiencies continue to raise more debts because their debt ratios are not significantly high (less than or equivalent to 1 in Table 5). Indian firms with large amounts of deficiencies utilised most of their funds to finance deficits only; they utilise new debt issues to compensate the existing debts which are negligible (Appendix B). In comparison, Chinese firms with large amounts of deficiencies utilised new proceeds to retire the existing debts which were of shorter tenure. Firms with very large amounts of deficiencies, however, do not pay back the existing debts but instead, they issue new debts to finance their deficits.

The pecking order results of the small versus large surpluses are reported in Table 7. This study had expected a high coefficient value to retire the debt for firms with small and medium surpluses. This is due to the relatively large debts in their capital structure (Table 5) and the relatively weak coefficients for firms with large surpluses, on account of low debts to equity ratios.

The results indicated that the coefficient values for Indian firms with small and medium amounts of surpluses are 2.98 and 1.46 (column 1) respectively. Accordingly, these firms used their entire surpluses to reduce their debt levels; thereby indicating adherence to the pecking order. We further observed the reduced coefficient values of 0.72 and 0.69 for these firms (column 2) which corroborates with the fact that firms used surpluses as well as new debt issues up to a level of 72 and 69 percent (as the existing surpluses are not adequate to retire the entire debt). The remaining portion of new debt proceeds were retained by these firms. In comparison, the coefficient values were exceptionally high for Chinese firms with small (7.14) and medium surpluses (4.78). Accordingly, these firms redeemed more debts than their available surpluses, thereby indicating their adherence to the pecking order hypothesis. These excessive redemptions were reinforced by new debt issues as shown by the reduced coefficient values of 0.95 from 7.14 and 0.90 from 4.78 (in column 2). The retentions were negligible for these firms.

Similarly, the results were reasonably good for firms with large surpluses (0.70 for Indian firms and 0.97 for Chinese firms), but the results were extremely poor for firms with very large surpluses (0.21 for Indian firms and 0.22 for Chinese firms). The results found in this study are consistent with the hypothesis only, but only for firms with very large surpluses since the pecking order coefficient was weak for these firms.

Table 7: Pecking Order Tests of Indian and Chinese Firms with Various Levels of Surpluses

Level of Surpluses	Indian Firms		Chinese Firms	
	DR (1)	DR (2)	DR (1)	DR (2)
<i>Firms with Small Surpluses</i>				
Constant	6.49 (0.17)	2.04 (0.48)	25.05 (0.00)	-0.46 (0.82)
$\beta_{po}SUR$	2.98 ***		7.14***	
$\beta_{po}SDF$		0.72***		0.95***
R ²	0.28	0.70	0.24	0.95
Number of Observations	377	377	258	258
<i>Firms with Medium Surpluses</i>				
Constant	5.77 (0.52)	-3.81 (0.41)	-3.85 (0.78)	-9.99 (0.00)
$\beta_{po}SUR$	1.46***		4.78***	
$\beta_{po}SDF$		0.69***		0.90***
R ²	0.38	0.82	0.29	0.96
Number of Observations	370	370	242	242
<i>Firms with Large Surpluses</i>				
Constant	0.83 (0.94)	-19.28 (0.00)	10.27 (0.08)	-0.11 (0.98)
$\beta_{po}SUR$	0.70***		0.97***	
$\beta_{po}SDF$		0.59***		0.59***
R ²	0.26	0.78	0.23	0.60
Number of Observations	370	370	239	239
<i>Firms with Very Large Surpluses</i>				
Constant	10.93 (0.08)	6.39 (0.29)	25.89 (0.00)	2.93 (0.54)
$\beta_{po}SUR$	0.21 ***		0.22***	
$\beta_{po}SDF$		0.21***		0.39***
R ²	0.25	0.29	0.06	0.42
Number of Observations	373	373	248	248

Note: The table indicates pecking order results of Indian and Chinese firms with different surplus levels. The data is from 2003-2014. Firms are sorted yearly into quartiles using scaling of surpluses by total assets. The impact of surpluses (SUR) on debt redemption (DR) is determined in column (1). Column (2) measures the impact of surplus and debt funds (SDF) on debt redemption (DR). *** indicates significance level at 1 per cent.

5. Conclusion and Implication

The present study had examined and compared the pecking order results of Indian and Chinese firms, which had been segregated into deficit and surplus groups. The findings conveyed that Indian as well as Chinese firms issued large amounts of debts during an increase in deficiency, thereby indicating their adherence to the pecking order hypothesis. However, the debt issues were exceptionally higher than the deficits for China. This is because Chinese firms do not have adequate amounts of internal cash flows for financing their investment needs. Among external financing, it seems that equity and bond markets in China were inefficient due to their limited roles. Thus, Chinese firms only considered debts as a major source to finance their deficits. If we consider just the debt amounts, it can be said that the figures for the debts amounts in India were quite high.

Evidently, Chinese firms preferred more short-term debts in their capital structure because of their limited financing options and also the favourable interest rates offered by banks and institutions. In comparison, Indian firms generally kept more long-term debts in their capital structure. Despite large debt issues, Indian and Chinese firms kept themselves in safe zones (the debt equity ratio is near 1). Thus, both sets of firms, during deficit conditions, followed a 'modified pecking order', where both the pecking order and trade-off theory were adhered to. A major chunk of new debt proceeds was used to finance deficits only in the case of India, whereas, Chinese firms redeemed debts faster (using new debt proceeds) because of their short tenure.

In surplus conditions, adherence to the pecking order adherence was strong among Chinese firms but weak among Indian firms. Chinese firms necessarily compensated old debts (short-term debt) faster to avoid the credit risk. Chinese firms do not retain sizeable funds. The overwhelming proportion of these funds was more often utilised to compensate the existing debts. In contrast, Indian firms were reluctant to retire debts at a fast pace even during surplus conditions. This is because surplus firms typically have low debts to equity ratios. Second, due to more long-term debts in their capital structure, firms may prefer to redeem debts at the time of maturity. In that regard, they retained most of the funds for future investments to avoid the external financing costs.

The pecking order worked extremely well for Indian firms with small and medium deficits where some parts of the new proceeds were used to pay back the existing debts. Firms with large and very large defi-

cits also adhered to the pecking order. The pecking order is robust for Chinese firms with different deficit levels and most of the new proceeds were used to retire the old debts. As far as the quantum of surpluses was involved, the results were robust for all surplus groups for firms India and China, except those with very large amounts of surpluses.

This study has implications for corporate managers. Managers in India should redeem more debts during surplus conditions whereas managers in China should opt for more long-term debts in their capital structure. This can help to reduce their high liquidity risks and to incorporate equity financing so as to balance their capital structure. From the bankers' perspective, liquidity risks among Chinese firms should be assessed carefully while granting additional loans because these firms do not have significant reliance on other sources of financing such as long-term debts and equities.

The findings also contribute to the existing literature by distinguishing itself from previous studies. This has been achieved through the comparative analysis model used in the context of Indian and Chinese firms. This kind of comparison (with the extension of model) has not been performed so far in the literature.

Definitions

1. Net cash available from operating activities (adjusted)^a = Net cash from operating activities¹ in year t (i.e. Earnings after taxes + Depreciation + Amortization + Other non-cash adjustments + Change in non-cash current assets² + Change in operating liabilities + Change in short-term borrowings - Dividends paid).
2. Net funds required for capital expenditure^b = Net capital investments in year t (i.e. Purchase of fixed assets - Sale of fixed assets + Purchase of investments - Sale of investments + other long term investments).
3. Deficits/Surplus^{a-b} = Net cash available from operating activities (adjusted)^a - Net funds required for capital expenditure^b.
4. Debt issues = Gross debt issues in financing activity of cash flow statement.
5. Equity issues = Equity issues in financing activity of cash flow statement.
6. Redemption of debt = Debt redemption in financing activity of cash flow statement.

7. Buy-back of equity = Equity buy back in financing activity of cash flow statement.
8. Total Funding Requirements = deficit and debt redemptions.

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Appendix A

Mean Differences of Pecking Order Variables Firms with Various Levels of Deficits

	Firms with Small Deficits			Firms with Medium Deficits			Firms with Large Deficits			Firms with Very Large Deficits		
	India	China	MD (t-test)	India	China	MD (t-test)	India	China	MD (t-test)	India	China	MD (t-test)
	Net cash available from operating activities (adjusted) ^a	95.55	22.55	6.12***	56.27	12.47	-6.37***	39.43	-4.95	4.77***	-6.38	-30.27
Net funds required for capital expenditure ^b	-119.85	-31.81	-6.19***	-112.89	-40.87	7.40***	-210.33	-59.58	-7.54***	-349.12	-109.26	-7.095***
Deficits ^{a,b}	-24.30	-9.26	-4.44***	-56.62	-28.40	6.56***	-170.90	-64.53	-7.23***	-355.50	-139.53	-7.198***
Debt issues	88.23	88.10	0.01	79.03	127.94	3.54***	199.72	178.96	0.83	360.51	221.90	3.617***
Equity issues	11.84	3.48	3.12***	7.71	6.12	-1.04	31.31	13.54	3.39***	53.41	18.32	4.934***
Redemption of debt	-51.70	-81.74	2.73***	-34.04	-111.19	-7.24***	-78.17	-139.69	3.62***	-76.78	-137.04	3.893***
Buy back of equity	-0.69	0.00	-3.24***	-0.25	0.00	2.63***	-1.11	0.00	-2.51***	-0.61	0.00	-2.511***

Note: *** indicates significance level at 1 per cent; figures are in USD millions; MD = Mean difference.

Appendix B

Mean Differences of Pecking Order Variables of Firms with Various Levels of Surpluses

	Firms with Small Surpluses		Firms with Medium Surpluses		Firms with Large Surpluses		Firms with Very Large Surpluses					
	India	China	India	China	India	China	India	China				
	MD (t-test)	MD (t-test)	MD (t-test)	MD (t-test)	MD (t-test)	MD (t-test)	MD (t-test)	MD (t-test)				
Net cash available from operating activities (adjusted) ^a	83.54	31.96	-3.29***	104.94	47.78	3.83***	146.52	49.32	-4.84***	176.91	76.68	4.205***
Net funds required for capital expenditure ^b	-74.24	-26.22	3.18***	-66.55	-29.26	-3.58***	-65.08	-18.54	4.17***	-18.76	-11.81	-0.858
Surplus ^{a-b}	9.30	5.74	-3.17***	38.39	18.51	3.66***	81.44	30.79	-4.94***	158.15	64.87	4.835***
Redemption of debt	-34.19	-66.02	-3.61***	-61.72	-84.69	1.42	-57.99	-40.26	1.23	-43.94	-39.89	-0.460
Buy back of equity	-0.16	0.00	2.65***	-0.44	0.00	-2.24**	-0.72	0.00	2.48***	-1.54	0.00	-2.326**
Debt issues	35.03	64.07	3.21***	56.51	75.26	-1.19	49.51	37.80	-0.78	18.45	30.98	-2.155**
Equity issues	5.23	2.36	-1.86*	2.60	4.45	-1.52	5.97	2.27	-1.83*	3.55	2.06	0.982

Note: ***, ** and * indicate significance level at 1, 5 and 10 per cent; figures are in USD millions; MD = Mean difference.

Corporate Governance and Dividend Smoothing: Evidence from Pakistani Listed Banks

Zahid Ali*, Yang Hanming and Assad Ullah

ABSTRACT

Manuscript type: Research paper

Research aims: This paper empirically examines the effects of ownership and board structure on dividend smoothing in Pakistani listed banks between 2006 and 2014.

Design/Methodology/Approach: This study employs random Tobit regression to analyse the effects of ownership and board structure on dividend smoothing. It also applies principal component analysis (PCA) to develop a corporate governance index.

Research findings: The findings indicate that Pakistani banks with concentrated and foreign ownership, small size audit committee and less independent boards, exhibit higher levels of dividend smoothing. Interestingly, the study finds Pakistani banks having a joint position of CEO and chairperson, demonstrate lesser dividend smoothing. The study concludes that increasing dividends is an alternative monitoring mechanism for shareholders who are enclosed within a weak corporate governance environment such as Pakistan.

Theoretical contribution/Originality: This study contributes to previous literature on corporate governance and dividend smoothing by investigating the role of the boards and the ownership structure. It also fills the research gap by investigating the impact of corporate governance on dividend smoothing by using the CG-Index.

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Practitioner/Policy implications: The findings of this study offer practical implications for payout and corporate governance policies. Higher information asymmetry and regulatory requirements, low shareholders' rights and weak corporate governance environment make dividend smoothing another tool for safeguarding the interest of minority shareholders in Pakistani listed banks. Currently, regulators in Pakistan are only focusing on corporate governance mechanism as a means of protecting shareholders. This study recommends that smooth dividends can serve as an additional instrument to help safeguard the minority shareholders' interest from expropriation.

Research limitation: The findings of this study may not be generalised due to the small sample size.

Keywords: Dividend Smoothing, Corporate Governance, Tobit Regression, Principal Component Analysis, Pakistan

JEL Classification: G350, G300, C24, C19

1. Introduction

Dividends are one of the returns earned by shareholders through their investment. The dividends announced by a firm may attract investors. This may increase the demand of the firm's stocks and so affect its share price significantly (Gordon, 1963). However, if the firm announces an increase in dividends by compromising future investment projects, the market will react negatively (Litzenberger & Ramaswamy, 1982). Many scholars (e.g. Lintner, 1956; Javakhadze, Ferris, & Sen, 2014; Baker & Kapoor, 2015) have empirically confirmed the positive response towards dividend initiations and the negative response towards dividend omissions and cuts. Market response to dividend cuts and omissions, however, is severe when compared to dividend increase. Therefore, firms are hesitant to cut dividends. Such a situation is so serious that even managers opt for external financing and forgo economically attractive projects in the bid to avoid dividend cuts (Gordon, 1963; Brav, Graham, Harvey, & Michaely, 2005). The market also tends to give emphasis to premium dividends over stable or consistently increasing dividends. Consequently, the management tends to put efforts into achieving the smoothness of dividends (Lintner, 1956).

The concept of dividend smoothing is rooted in Lintner (1956) who documented that offering shareholders with predictable dividends is

more rewarding than offering them dramatic changes of dividends. This is achieved by maintaining the target dividend payout ratio and adjusting their dividend policy towards this target. Dividends are adjusted partially to their earnings so as to avoid any erratic changes. This is because shareholders prefer stable payments over volatile dividends. Lintner's (1956) findings were empirically confirmed by subsequent studies (e.g. Fudenberg & Tirole, 1995; Leary & Michaely, 2011; Jeong, 2011, 2013; Javakhadze et al., 2014; Hussain & Shah, 2015) which proposed a number of theoretical explanations such as the agency and informational asymmetry theories.

The agency theory deduces that dividend smoothing helps to mitigate agency conflict between managers and shareholders. Firms suffering greater agency conflict are more likely to practice dividend smoothing. In comparison, the informational asymmetry theory observes that a firm's dividend policy can assist in conveying the information held by insiders with regards to the firm's future prospects. Firms experiencing greater informational asymmetry will need to exhibit greater dividend smoothing so as to enable investors to evaluate the firm's earning ability and value.

Despite substantial empirical evidence (e.g. Leary & Michaely, 2011) and theoretical explanations, a majority of these studies were conducted using the data of developed countries. Hence, it is doubtful whether the practice of dividend smoothing is peculiar to the developed economies or are they also pronounced in emerging economies where the tax and the institutional and economical environments are different. Noticing this disparity, the current study, hence aims to investigate the dividend smoothing practice of banking institutions in Pakistan. Several distinct economic and institutional features place the Pakistani banking sector as a unique and interesting environment to examine the stability of the dividend policy. For instance, over the years, the phenomenon of globalisation, bank privatisation and technological advancement in Pakistan have exposed the country's banking sector to higher risks. Compared to the non-financial sectors, the agency problem in the banking sector is not confined to just manager-shareholder conflicts but also other issues. As an example, banks are operated by the depositors' funds. This makes it vital for the banks to safeguard the interest of the depositors as well as the shareholders. Pakistani banks are regulated by the State Bank of Pakistan (SBP) which is governed by the Corporate Governance Act 2013, coupled with augmented regulations.

Pakistani banks are required to seek the SBP's prior approval for the appointment of their CEOs and directors. In addition, appointed executive directors cannot exceed one-fourth of the board size and the bank's key executives are not allowed to hold any position in other financial institutions (SBP, 2006). In this regard, Pakistani banks are more vulnerable to agency risks which are mitigated externally through additional governance. Majority of the dividend smoothing literature have been restricted to looking at the firm's financial characteristics only (e.g. Jeong, 2011, 2013). Very few studies (e.g. Javakhadze et al., 2014) have addressed the relationship of firm ownership and board structure in the context of dividend smoothing. Studies on dividend smoothing (Leary & Michaely, 2011; Jeong, 2011, 2013; Javakhadze et al., 2014) also seemed to concentrate on non-financial sectors. To the best of our knowledge, the banking sector of Pakistan has not been explored. Additionally, local corporate governance scandals such as the Mehran and Crescent banks in Pakistan have motivated the interest to examine whether or not scandals of this nature can be avoided by committing to large smooth dividends. To address the gap in literature, this study will relate board and ownership structure to dividend smoothing in Pakistani listed banks.

This study specifically aims to determine if dividend smoothing can be accomplished through the agency risk alleviation or by reducing information asymmetry between managers and outsiders. It thus investigates the role of corporate governance in the context of dividend smoothing, i.e., whether dividend smoothing is the substitute or the outcome of good corporate governance. This study particularly examines the effect of the board and ownership structure on dividend smoothing for banks listed on the Karachi Stock Exchange (KSE). It thus offers a comprehensive analysis of the major aspects of dividend smoothing in light of the agency and signaling theories. It commences by addressing the joint impact of corporate governance measured via CG-index developed through the principal component analysis.

The remainder of this paper is organised as follows: Section 2 reviews the literature relating to corporate governance and dividend smoothing. Section 3 develops the hypotheses. Section 4 describes the methodology employed. Section 5 presents the summary statistics for the payment of dividends, and also reports on some descriptive statistics for the samples. Section 6 concludes by discussing the research findings, implications and limitations of the study.

2. Literature Review

2.1 *Dividend Smoothing Theories*

Dividend smoothing was developed by Lintner (1956) about 60 years ago. It was tested in various empirical studies (e.g. Fudenberg & Tirole, 1995; Leary & Michaely, 2011; Jeong, 2011, 2013; Javakhadze et al., 2014; Hussain & Shah, 2015) but despite the substantial empirical evidence recorded on dividend smoothing, there has been little consensus over why some firms smooth more than others. In this section, models relating to dividend smoothing are presented. These models can be broadly divided into two categories based on the market fractions: the asymmetric information-based model and the agency problem model.

In the context of the asymmetric information-based model, firms may use dividends as signals to convey their private information about current and future earnings (Jeong, 2011; Leary & Michaely, 2011). Using dividends as signals is more pronounced when there is higher information asymmetry between the managers and shareholders or between the informed and uninformed investors. Therefore, young opaque firms with few growth opportunities and less tangible assets will exhibit a higher degree of dividend smoothing (Jeong, 2011; Leary & Michaely, 2011). Outside shareholders develop their expectations about firm's earnings based on the firm's cash flows. These shareholders tend to give more weight to recent earnings. This occurrence helps to protect managers from being fired through the dividend smoothing process, in other words, underreporting today's performance to enable themselves for future's over reporting (DeMarzo & Sannikov, 2008). Despite this, the degree of smoothing is expected to decline over time with the amount of information generated by the market analyst and then publicised by corporations, which tend to increase significantly due to rapid information technology and market sophistication (Leary & Michaely, 2011).

From the perspective of agency costs, Jensen (1986) asserted that managers with substantial free cash flow can increase dividends. They can thus pay out cash that could otherwise be invested in low-return projects or be wasted. In other words, higher dividends may reduce the agency costs of free cash flow. Easterbrook (1984) and Jensen (1986) highlighted that commitment to pay large stable dividends causes firms to raise finances from external markets which act as a barometer for disciplining them. This exposure to the external market helps firms to diminish the agency costs. Lower levels of leverage provide firms with financial flexibility but it simultaneously exposes them to agency

costs. Mature firms with high smooth dividends are exposed to a lower level of agency costs without affecting their access to low-cost external finances. Allen, Bernardo and Welch (2000) reported that for institutional investors to be better monitors, they can be attracted by large smooth dividends because of their dividend tax advantage. The authors added that once the firms are able to attract institutional investors, they can put a penalty for any decrease or dividend omission, in other words, follow the managerial rent-seeking behaviour. Lambrecht and Myers (2010) affirmed this behaviour of managers in the context of smooth dividends. They reported that managers demanded smooth dividends because of their risk aversion and rent-seeking behaviour. The high level of dividends is associated with the shareholder's weak rights. According to Javakhadze et al. (2014), the types of shareholders can influence the dividend smoothing behaviour. It appears that government controlled firms were expected to suffer highly from the agency problem as these firms were owned by the citizens. Since citizens only form as indirect shareholders for this type of company, they are believed to have little incentive in monitoring the management. Hence, managers of these firms will desire a stable dividend policy with high rates so as to keep their principals happy.

2.2 Corporate Governance and Dividend Smoothing in Pakistan

Lazarides, Drimpetas and Dimitrios (2009) referred to corporate governance as the way in which corporations were governed. Corporate governance strives to protect shareholders and other stakeholders' interest by ensuring transparency and enforcing accountability within corporations. Ur Rehman and Mangla (2010) found empirical evidence of corporate governance impacting on the performance of financial institutions has enticed regulators to ensure good corporate governance practices in Pakistan (SBP, 2006). According to the SBP's handbook, "Corporate governance is the system by which business corporations are directed and controlled by structuring the rights and responsibilities of different participants within a corporation such as boards, managers, shareholders and stakeholders. Doing so, provides structure for setting corporate objectives and for mustering resources to attain those goals without compromising fairness, ethics, transparency and accountability". Similarly, the International Finance Corporation (IFC, 2016) stated that, "Corporate governance is the structure and process by which companies are directed and controlled". Corporations with good governance

operate efficiently; they have easy access to the capital market; they diversify risks and they have fewer chances of mismanagement than their counterparts. Good governance improves accountability and transparency in corporations; it enables them to respond to stakeholders' concerns effectively. Good governance also plays a role in economic development by attracting new investments and creating employment avenues through improving capital access (IFC, 2016).

International scandals like Parmalat, WorldCom, Enron, Ahold as well as other local corporate governance scandals such as Pakistan Telecommunication Company Limited's privatisation, the National Insurance Company Limited, Pakistan Railway (Fatima, 2016) have raised issues regarding corporate governance in Pakistan. In this regard, issues relating to independent boards, external candidature for CEOs, increasing CEO compensations, CEOs' shorter tenures and CEOs' lower prerequisite consumptions are all recent corporate governance trends set within the world (Hermalin, 2005). Since the financial sector in developing countries is flimsier than those of developed countries, it would seem that they cannot afford to have corporate scandals as big as those like Enron.

In Pakistan, the financial sector contributes to approximately 52 per cent of its GDP (Rehman, Hasan, Mangla, & Sultana, 2012). While Reaz and Arun (2006) have highlighted the importance of good corporate governance in the financial sector of Bangladesh and its GDP, Ur Rehman and Mangla (2010) noted that corporate governance impacts the performance of both Islamic and conventional banks in Pakistan. Linked to this, Rehman et al. (2012) found that there was a positive association of large boards with bank performance in Pakistan.

Global corporate governance scandals have forced regulators in Pakistan to strive for a strong corporate governance culture. The State Bank of Pakistan (SBP) and the Securities and Exchange Commission of Pakistan (SECP) are striving for good corporate governance culture by establishing standard auditing and disclosure requirements and promoting ethical values. Despite these efforts, more needs to be done because corporate governance in Pakistan is weak in the areas involving the board's monitoring capacity, policy formulation, board committee's performance, internal control environment and also internal audit (SBP, 2006). In this respect, the SECP recently issued corporate governance guidelines in 2013, under which listed firms are governed.

In a weak corporate governance environment where the compliance level is low, dividends can be used as a source to alleviate agency costs

(Al-Malkawi, 2005). Since the dividend-paying behaviour in developing countries is different from that of developed countries due to the difference in tax, information asymmetry and market volatility (Al-Kuwari, 2009; Wardhana, Tandelilin, Wayan Nuka Lantara, & Junarsin, 2014), it is likely that dividends are more susceptible in playing the monitoring role which then enable minority shareholders to control the managers and large shareholders. Iqbal (2013) found that Pakistani firms' board independence and non-CEO duality tend to reduce chances of dividends announcement.

High and stable dividends are good sources for alleviating agency costs (Easterbrook, 1984; Jensen, 1986). Firms that are exposed to high agency costs exhibit higher degrees of dividend smoothing while weakly governed firms tend to opt for a higher degree of dividend smoothing (Leary & Michaely, 2011; Javakhadze et al., 2014). This is an occurrence where corporate governance and dividend smoothing serve as each other's substitutes. However, some authors (Kowalewski, Stetsyuk, & Talavera, 2007) believe that by virtue of their strong rights, shareholders are able to influence the firm's payout policy; they can also ask for high and stable dividends where dividend smoothing becomes the outcome of a strong corporate governance.

Regular and stable payout policies have a two-way effect on companies. The smooth dividends declared by firms reduce the chances of expropriation by management while simultaneously also exposing these firms to the external financial market. They not only act as barometers but may also affect financial costs. Therefore, firms always try to strike the optimal dividend policy and an appropriate level of dividend smoothing.

Firms operating in an environment with weak shareholder rights such as those in Pakistan tend to pay smooth dividends (Javakhadze et al., 2014). Similarly, firms with weak corporate governance, follow a high dividend policy where dividends act as a substitution of corporate governance. In other words, the link between corporate governance and dividends is negative (Sawicki, 2009). From their study, Javakhadze et al. (2014) found that companies with strong corporate governance exhibited less dividend smoothing. Likewise, Leary and Michaely (2011) emphasised that companies with weak corporate governance exhibited more dividend smoothing. They noted that firms with weak growth potentials and corporate governance have greater proportions held by institutions going for higher dividend smoothing.

Literature (e.g. Leary & Michaely, 2011; Jeong, 2011, 2013) highlights the influencing role of corporate governance on dividend smoothing, particularly for those companies that are in emerging economies such as Pakistan. Following previous empirical works of Leary and Michaely (2011) and Javakhadze et al. (2014), this study incorporates board independence and ownership concentration as proxies for corporate governance. This study extends on existing literature by including other pertinent proxies such as board size, CEO/chairperson duality and audit committee size. The following section discusses the hypotheses development.

3. Hypotheses Development

Fama and Jensen (1983) argued that the board of directors makes significant efforts to reduce the agency problem. This is because the central focus of corporate governance is to monitor the executive management. Nonetheless, boards can only effectively monitor and take corrective actions if they have enough representation of the independent directors (Jensen, 1993; Setia-Atmaja, Tanewski, & Skully, 2009). According to Jensen (1993) and Yermack (1996), large boards may not always be efficient monitors. Large boards have the issue of coordination among the board members; therefore small boards with enough proportion of independent directors are more efficient in monitoring the executive management. Based on Jensen's (1993) argument, it would seem that large boards are indicators of weak monitoring. In this regard, firms with large boards were more exposed to the agency problem and would have more tendency to smooth their dividends.

Most firms in Pakistan are controlled by families, thus they may perceive independent directors as a threat to family control. In this regard, it is expected that large boards in Pakistan will have weak monitoring roles and alternatively, will monitor through large and smooth dividends (La Porta, Lopez-de-Silanes, Shleifer, Vishny, 2000). Based on this, this study posits that:

H₁: Board size and dividend smoothing in Pakistani banks are positively associated.

Boards with CEO duality and those crowded by executive directors would not be good monitors and may not challenge management decisions (Jensen, 1993). Since 2017, firms operating in Pakistan must have a majority of independent directors on their boards (SECP, 2013).

Merely electing non-executive directors onto boards may not serve well as they cannot always challenge the management although they are able to safeguard their self-interests. As a result of this, the SECP took to addressing the characteristics of independent directors in its 2013 ruling. It proposed that independent directors can serve as good monitors and also safeguard shareholders' interest better (Jensen & Meckling, 1976; Sharma, 2011; Armstrong, Core, & Guay, 2014). They can give independent judgment without being influenced by the management (Fama & Jensen 1983; Lehn, Patro, & Zhao, 2009), thereby avoiding agency conflict which occurs because of the management-ownership conflict (type I agency problem) or as a result of the conflict of interest between minority and controlling shareholders (type II agency problem) (Bebchuk & Weisbach, 2010; Florackis, Kanas, & Kostakis, 2015). Thus, independent boards can safeguard the interests of minority shareholders from being expropriated by major shareholders. This, in turn, helps to reduce both type I and type II agency problems (Raheja, 2005; Sharma, 2011; Armstrong et al., 2014). The stakeholder theory states that independent directors outperform insiders while guarding the interests of stakeholders because they are experienced and have more ethical and legal obligations (Rodriguez-Dominguez, Gallego-Alvarez, Garcia-Sanchez, 2009).

Studies (Maury & Pajuste, 2002; Krishna Prasanna, 2014) have indicated that companies with more non-executive directors were less likely to use dividends as a monitoring device for agency cost reduction as they can monitor themselves effectively. Other studies (Ghosh & Sirmans, 2006) noted that independent directors on the board tend to ask for large dividends in order to counter the use of free cash flows for self-interests. The current study takes the notion that independent directors are effective monitors who can challenge management decisions, hence independent boards can serve as an effective channel for good corporate governance. It would appear that the demand for smooth dividends diminishes when the company elects more independent directors onto its board. Based on this, the current study hypothesises that:

H₂: Board independence is negatively associated with dividend smoothing in Pakistani banks.

The audit committee is a standing committee that consists of non-executive directors of the board. It has a vital role in good corporate governance. The audit committee of the company is in the best position to identify any overruling by the management and to react immediately.

Nevertheless, the audit committee should be chaired by a non-executive director; it should be crowded by independent directors (SECP, 2013). Neither the chairperson nor the CEO could be its member. The audit committee has various responsibilities comprising the reviewing of the internal audit department, the audit plans as well as the annual and audit reports of the company. It also needs to look after the appointment of external auditors, review the accounting control and protect company assets (Setia-Atmaja et al., 2009). It also has to make recommendations about related party transactions to the board of directors (SECP, 2013).

The primary purpose of the audit committee is to safeguard the shareholders' interest. McMullen (1996) have noted that reliable information is linked with the presence of the audit committee. The audit committee's independence is positively linked to the private benefits of the management (Setia-Atmaja et al., 2009). The audit committee's independence safeguards minority shareholders from expropriation i.e., it reduces agency problem (Raheja, 2005). Based on the above argument, dividend smoothing is expected to play a substitution role for good governance. Therefore, it is expected that as long as the audit committee's independence is increased, the company will be able to reduce agency problems and so, will have less information asymmetry. The SECP compels banks to maintain a majority of independent directors in their audit committee, thus the audit committee's size is directly linked to its independence. Based on this, it is hypothesised that:

H₃: Pakistani banks with large audit committees smooth their dividends less.

As chief executive officer, CEOs are important but CEOs who also act as chairpersons are more powerful. They can dominate board decisions. In such situations, the CEO may disagree with the external (outside) directors, thereby compromising the monitoring role of the board. On the other hand in case of CEO-duality, CEO is also involved in the process of self-evaluation (Petra, 2002). To prevent this, the CEO and the chairperson positions need to be separated (Fama & Jensen, 1983). According to the entrenchment hypothesis, companies with CEO-duality influence the monitoring ability of the board. This can lead to higher information asymmetry and expose firms to greater agency problems which then causes frequent large cash dividends (Ghosh & Sirmans, 2006; McGuinness, Lam, & Vieito, 2015). However, the stewardship hypothesis argues that most of the time, the CEO is a well-

informed person in the organisation and that he/she does not occupy this joint position intentionally. It is possibly due to his/her position as the clearest visionary person in the company that the duality may yield a better performance (Peng, Zhang, & Li, 2007). Firms with CEO/chairperson duality concentrates on reinvestment policies, thus under the stewardship view, companies with CEO duality pay dividends less frequently and will also smooth dividends less (Zhang, 2008).

Since most firms in Pakistan are controlled by families, it is expected that the CEO/chairperson duality will affect the monitoring power of the board which can result in greater agency problem and higher information asymmetry. As a consequence, a high level of dividend smoothing is expected under the entrenchment view. Thus, it is hypothesised that:

H₄: The CEO-duality is positively associated with dividend smoothing in banks.

Based on the agency theory, companies with low management ownership are exposed to severe agency conflict. Such conflict is alternatively reduced by paying high dividends, according to the substitution hypothesis (La Porta et al., 2000). CEOs with more equity ownership opt for low dividends because of greater alignment while entrenched CEOs (CEOs acting as chairpersons, having long tenures, can influence boards with more ownership) pay low dividends (Ghosh & Sirmans, 2006). Similarly, companies with director's stock options do not need an external mechanism for using dividends to reduce the agency conflict. This finding has been consistent for firms with excessive free cash (Boumosleh & Cline, 2015).

Two views regarding management ownership and dividends are pertinent. According to the alignment view, the negative association between management ownership and dividends is expected as firms with high management ownership have greater alignment and ultimately, low agency problems (Lee, 2011; Florackis et al., 2015). However, if the management ownership exceeds a certain level, then, according to the entrenchment hypothesis, expropriation is expected (Farinha, 2003). Pakistani banks have a low level of management ownership, therefore, its alignment effect is expected. The signaling theory states that the cost of false signaling is high for companies with CEO ownership; therefore such companies adopt low payout policies.

Keeping in view the underlying mechanism of both the agency and signaling theory, we postulate that banks with higher management own-

ership will have higher alignments, face lower level agency problems and ultimately, opt for a low level of dividend smoothing. Hence:

H₅: Pakistani banks having more management ownership will smooth dividends less.

The presence of foreign directors on boards in firms is a common trend these days and Pakistan is no exception (Haque, Jalil, & Naz, 2007). Foreign directors bring diversity, innovation and uplift the firm's performance (Sharif & Rashid, 2014). Literature does not depict a very clear image of the association between foreign ownership with dividends but Liljeblom and Maury (2016) reported that foreign ownership is associated with low dividends for Russian firms. They asserted that this finding could be because of the discriminatory tax treatment of foreigners. They also noted that in Russia, dividends were taxed at the rate of 6 per cent for locals and at the rate of 15 per cent for foreigners.

Firms with a high level of foreign ownership have less financial constraints and can recover quickly from any financial distress; therefore, they always prefer a high level of stable dividends. Especially in a politically unstable environment, foreigners desire a quick recovery of their investment, following the rental hypothesis of dividends (Bebczuk, 2005). The association between foreign ownership and dividends was reported to be positive for Korea (Jeong, 2011) where it was noted that foreign investors in Korea have a preference for high dividends. In similar lines, Baba (2009) also found an association of high-level foreign ownership with higher probability and high levels of dividend. It was reported that an increase in foreign ownership lowers the probability of dividends reduction. Therefore, the following hypothesis was formulated:

H₆: Pakistani banks with high foreign ownership exhibit a higher level of dividend smoothing.

The role of ownership structure in dividend smoothing is quite significant (Michaely & Roberts, 2011). Firms opt for smoothed dividends in order to minimise the agency conflict. Firms facing a high conflict of interest will pay a high and stable dividend in order to minimise those conflicts. Firms with a concentrated ownership have more power to control the management (Shleifer & Vishny, 1986). They are exposed to a lower level of type I agency problem (management-shareholders conflict). Therefore, large block holders may bear with

dividend cuts and go for less dividend smoothing. At the same time, however, minority shareholders in such firms are at risk of being expropriated by major shareholders, termed as type II agency problem. Firms with large block holders are exposed to a lower level of type I agency problems but they face a higher level of type II agency problem (Shleifer & Vishny, 1997). As the ownership structure in Pakistan is characterised by family concentrated ownership (Institute of Cost and Management Accountants of Pakistan, 2011), we therefore expect greater type II agency problems in banks. Thus, it is hypothesised that:

H₇: Pakistani banks with concentrated ownership will have the tendency to smooth dividends more.

4. Methodology

4.1 Sample

The initial sample is comprised of 34 banks listed on the Karachi Stock Exchange (KSE) over a 9-year period, from 2006 to 2014. The corporate governance data were manually collected from the annual reports of the concerned banks. The financial data of the respective banks were collected from the balance sheet analysis issued by the State Bank of Pakistan while the stock prices data were retrieved from the business recorder. In order to gauge dividend smoothing (measured via SOA), we excluded banks that have never paid dividends. Doing so helped us to avoid any spurious results because dividend smoothing does not arise naturally, rather, it is intended management policy. Doing so also helped us to exclude banks with losses as dividends in Pakistan are only paid out of the corporate's current earnings. We maintained only those banks which have announced dividends for at least three consecutive years. Following this, our final sample comprised of 19 listed Pakistani banks. We took 2006 as the starting year because of the unavailability of corporate governance data prior to 2006.

The list of the 19 banks selected for the study is attached in Appendix 1 which describes those banks. The first column of the table depicts the average dividend per share during the sample period. The second column shows the average board size in terms of the number of directors. The next column reports the proportionate board independence of the banks and the subsequent column specifies the size of the audit committee. The last three columns depict the proportionate

ownership of the management, foreign and top five shareholders of the banks during the sample period.

4.2 *Speed of Adjustment (SOA)*

For measuring the level of dividend smoothing across the banks, we followed Fama and Babiak (1968) which adopted the modified form of Lintner's (1956) partial adjustment model. Previous studies by Leary and Michaely (2011) and Jeong (2011, 2013) have used the Lintner (1956) model which states that:

$$\Delta D = \alpha_i + \beta_1 X + c_i (\gamma_i \text{EPS}_{i,t} - \text{Dividend}_{i,t-1}) + \varepsilon_{i,t} \quad (1)$$

or

$$\Delta D = \alpha_i + \beta_{i,1} \text{EPS}_{i,t} - \beta_{i,2} \text{Dividend}_{i,t-1} + \varepsilon_{i,t} \quad (2)$$

In the above equation α_i is intercept, while $\varepsilon_{i,t}$ represents error term. $\text{EPS}_{i,t}$ denotes the earnings per share of firm i year t . The speed of adjustment (SOA) given by c_i , theoretically ranges between 0 and 1. As the SOA approaches 1, the level of dividend smoothing lowers and as the SOA approaches zero, it reflects a higher level of dividend smoothing. $\beta_{i,1} = c_i$, while γ_i and $\beta_{i,2} = -c_i$. The above model explains 85 per cent variation in dividends (Lintner 1956). The level of dividend smoothing (SOA) is estimated as $-\beta_{i,2}$.

4.3 *Random-Tobit Model*

Conceptually, the SOA lies between zero and one i.e. $0 \leq \text{SOA} \leq 1$ (Leary & Michaely, 2011). Theoretically, the SOA approaching one means that the banks' dividends move independent of previous dividends and the SOA close to zero shows the practice of higher dividend smoothing (Lintner, 1956). Keeping the nature of the dependent variable (SOA) in view, the ordinary-least-squares (OLS) regression is not an appropriate methodology for analysing dividend smoothing. Any value of the latent variable of $\text{SOA} > 1$ will be right censored at one while $\text{SOA} < 0$ will be left censored at zero. Ultimately, there will be two mass points at 0 and 1 in the censored sample. The appropriate methodology adopted here will be censored regression introduced by Tobin (1958) rather than the OLS. Huang (2011) and Al-Malkawi (2005) have used the Tobit model in the context of dividends. In this regard, we followed Leary and Michaely (2011) by using the Tobit model for dividend smoothing.

The observed dependent variable (SOA) is given as:

$$SOA = \beta_0 + \beta_1 X + \varepsilon_{it} \quad (1)$$

$$SOA \left(\begin{array}{l} = 0 \text{ if } SOA^* < 0 \\ = SOA^* \text{ if } 0 < SOA^* < 1 \\ = 1 \text{ if } SOA^* > 1 \end{array} \right)$$

where the SOA^* is latent variable, X represents a vector of explanatory variables, and β_1 represents unknown parameters. β_0 and error term (ε_{it}) are needed to be independent and identically distributed of order $N(0, \sigma^2\beta)$ and $N(0, \sigma^2\varepsilon_{it})$ respectively (Al-Malkawi, Bhatti, & Magableh, 2014). The Tobit model for the above equation will be estimated through maximum likelihood estimation (MLE). It is worth mentioning that this study will incorporate both banks with $0 > SOA > 1$ and $0 \leq SOA \leq 1$ with the help of the Tobit model which will avoid the selection bias ρ which suggests that addressing the panel level variance is important. Therefore, random-Tobit is preferred over the pooled-Tobit.

We estimated the impact of corporate governance on dividend smoothing via:

$$SOA = \beta_0 + \beta_1 X + \beta_2 Duality + \beta_3 Bsize + \beta_4 Bind + \beta_5 Asize + \varepsilon_{it} \quad (2)$$

While the impact of ownership structure on dividend smoothing is estimated via:

$$SOA = \beta_0 + \beta_1 X + \beta_2 Mgt + \beta_3 Foreign + \beta_4 Concentration + \varepsilon_{it} \quad (3)$$

Finally, corporate governance index was developed through the principal component analysis (PCA) and its impact on dividend smoothing was estimated through the following model:

$$SOA = \beta_0 + \beta_1 X + \beta_2 CG - index + \varepsilon_{it} \quad (4)$$

where X in the above equations is a vector of the control variables chosen from the literature.

4.4 Variables

Table 1 depicts the control and independent variables used in the study along with their expected signs and description.

Table 1: Variables of the Study

Variable	Nature	Expected relation with DS	Description
Speed of Adjustment (SOA)	Dependent		
Risk	Control	(+)	Standard deviation of EPS over last five years.
Size	Control	(+)	Natural logarithm of total assets.
Age (History)	Control	(-)	The number of years listed on the KSE.
Growth (MBR)	Control	(-)	Market value of equity plus book value of assets minus book value of equity, all divided by book value of assets.
Board Size (Bsize)	Independent	(+)	No. of the directors on the board.
Board Independence (Bind)	Independent	(-)	Proportionate no. of non-executive directors.
CEO Duality (Duality)	Independent	(+)	1 if CEO is also chairman of the board and 0 otherwise
Audit committee Size (Asize)	Independent	(-)	No. of directors in audit committee
Management Ownership (Mgt)	Independent	(-)	No. of shares held by directors, their spouses, and children in proportion to the total outstanding shares.
Foreign Ownership (Foreign)	Independent	(+)	No. of shares held by foreign shareholders and Pakistani residing abroad in proportion to the total outstanding shares.

4.5 Principal Component Analysis

This study aims to estimate the effect of corporate governance in the smoothing of dividends by banks in Pakistan. In this regard, we developed the corporate governance index (CGI) via the principal component analysis. This study uses board size, board independence,

audit committee size, CEO-duality, management ownership, foreign ownership and shareholders concentration to develop the corporate governance index. The principal component analysis PCA techniques have certain advantages such as enabling firms to incorporate information of the individual bank's corporate governance mechanism to the single index (Agrawal & Knoeber, 1996). Besides this, the PCA can control for the possible existence of multicollinearity issue among the individual corporate governance variables (Bebchuk & Cohen, 2005). The PCA also assigns weights to different variables automatically, rather than arbitrarily or similarly.

Two issues were addressed before deciding on the validity of the PCA. One is that the correlations between variables should be higher than that of between errors (sample adequacy) and the other is that the correlation matrix should be factorable i.e., the correlation matrix should be different from the identity matrix (Pett, Lackey, & Sullivan, 2003). Following Tarchouna, Jarraya and Bouri (2017), this study uses the Kaiser-Meyer-Olkin (KMO) statistic for sample adequacy and Bartlett's test for sphericity.

5. Results and Discussion

5.1 Descriptive Statistics

Table 2 depicts the characteristics of the dividend-paying and non-dividend paying banks. The last two columns report the difference in characteristics between the two sub-samples. Table 2 also reports that non-dividend paying banks were riskier than dividend-paying banks in Pakistan. The difference between the two groups is significant in terms of risk. Similarly, dividend-paying banks were larger in size and have higher growths than non-dividend paying banks. Nonetheless, the ages of both groups were not significantly different. The results are consistent with the agency theory.

Further, Table 2 demonstrates that dividend-paying banks have larger boards and crowded by external directors while the case of non-dividend paying banks was otherwise. The difference between the boards of the two groups was statistically significant. However, the difference of the CEO duality and the audit committee size of both groups were not statistically significant.

While the ownership structure of both types of banks as shown in Table 2 depict that dividend-paying banks were controlled by five

Table 2: Descriptive Statistics

Variables	Observations	Payers (Mean)	Non-Payers (Mean)	Observations	Coefficients	p-value
Risk	180	2.739	2.776	108	-1.24779	0.0555
Size	173	7.916	7.345	100	-.5344483	0.0000
History	103	6.485	6.145	69	-.3405094	0.4707
MBR	169	1.198	0.831	100	-.2557195	0.0768
EPS	179	5.328	-0.445	106	-6.124338	0.0000
Bsize	142	8.451	7.859	99	-.5851228	0.0016
Bind	138	76.76	6.313	99	2.944015	0.0802
Duality	141	0.0496	0.0300	100	-.0166667	0.5120
Asize	143	3.294	3.350	100	.0736842	0.3644
Mgt	140	8.583	8.428	99	-.5166613	0.7620
Concentration	119	72.47	66.76	95	-5.291362	0.0215
Foreign	115	15.52	2.171	93	-13.2192	0.0000

largest shareholders who own 72 per cent shares, the difference between the two groups was statistically significant regarding the concentration. This might be signaling the type II agency problem. Moreover, foreigners prefer dividend-paying banks rather than non-dividend banks; hence this finding is consistent with the rent hypothesis. From the two types of banks, we further grouped the dividend paying banks into two sub-groups based on the dividend smoothing perspective. Banks having the speed of adjustment (SOA) greater than the sample mean value were termed as non-smoothing and banks having the SOA of less than the sample mean value were in the other group.

Table 3 illustrates that banks involved in smoothing were riskier, larger in size, high growing and relatively new. These results were grounded both in the agency and information asymmetry theory. Besides this, dividend smoothing banks were shown to be having statistically larger earnings (depicted by both the EBIT and EPS). Similarly, dividend smoothing banks were paying statistically higher dividends (on average Pak Rs.3.26 against Rs.2.02 for non-smoothers).

Table 3 reports that banks involved in higher dividend smoothing were having larger boards and less crowded by outside directors. This supports H_1 and H_2 of the study. The results are in line with the agency theory. Interestingly, all the dividend smoothing banks in the sample

Table 3: Smoothing vs Non-smoothing Banks

Variables	Observations		Mean		Coefficients	p-value
	Smooth	Non-Smooth	Smooth	Non-Smooth		
Risk	99	81	2.846377	2.60811	.2382668	0.4827
Size	92	81	8.036103	7.780549	.2555543	0.0992
History	58	45	6.241379	6.8	-.5586207	0.3613
MBR	91	78	1.497717	.8477504	.6499662	0.0000
EBIT	99	81	9273667	4763766	4509901	0.0044
DPS	92	81	3.262626	2.029938	1.232688	0.0150
EPS	91	78	6.165657	4.291627	1.87403	0.0824
Bsize	89	53	8.640449	8.132075	.508374	0.0908
Bind	89	49	76.53159	77.16502	-.6334313	0.8094
Asize	90	53	3.377778	3.150943	.2268344	0.0574
Duality	88	53	0	.1320755	-.1320755	0.0004
Concentration	74	45	77.06428	64.90292	12.16137	0.0005
Mgt	87	53	7.129304	10.96836	-3.839054	0.0853
Foreign	77	38	19.14938	8.168897	10.98048	0.0449

were free from the CEO duality. By looking at the ownership statistics in the above table, it was observed that banks with a higher degree of dividend smoothing were having low management ownership and were more controlled by five largest shareholders. These results were consistent with the agency and information asymmetry theories. Similarly, Table 3 also reports that foreign investors prefer banks offering smooth dividends. All these ownership statistics affirm our hypothesis.

5.2 Dividend Smoothing: Cross-sectional Regressions

We used the random Tobit technique to estimate the impact of governance on dividend smoothing banks, both in Table 4 and Table 6. The likelihood ratio test reported that the pooled Tobit was significantly different at the 1 per cent level from the random-Tobit. Therefore, the panel level variance could not be ignored. Details of all the likelihood ratio tests were not reported for the purpose of brevity. Table 4 depicts the results of the random Tobit estimated through maximum likelihood

estimation (MLE). The seven columns in Table 4 depict the impact of each independent variable on dividend smoothing, along with the controls which include risk, size, age and growth of the banks.

Column 1 of Table 4 depicts that banks having volatile earnings and are large in size opted for more dividend smoothing. Our results were parallel to Leary and Michaely (2011). These results were supported by the agency based explanation of dividend smoothing because such firms were exposed to higher levels of the agency problem. Parallel to the findings of Javakhadze et al. (2014), this column also reports that old and fast growing (measured by the market to book ratio) Pakistani banks, opted for a lower level dividend smoothing. Column 1 reports that large boards result in higher levels of dividend smoothing, thereby supporting H_1 of the study which states that large boards have coordination problems and are not good monitors. This positive association of board size and dividend smoothing is parallel to the results of La Porta et al. (2000).

Column 2 of Table 4 shows that banks with independent boards opt for a low level of dividend smoothing. Increasing board independence by a unit will cause a 0.25 per cent reduction in dividend smoothing. This affirms that dividend smoothing is an alternative mechanism of monitoring, thereby supporting H_2 of the study. The negative association of board independence and dividend smoothing was also witnessed by Javakhadze et al. (2014).

Consistent with H_3 of the study and in line with Raheja (2005), Column 3 of Table 4 depicts that an increase in audit committee size of the banks lowers the demand for dividend smoothing. H_3 was based on the notion that increasing the size of the audit committee directly increases the number of independent directors on the committee as the SECP had banned executive directors, CEOs or chairpersons from being on the audit committee in Pakistan.

Column 4 of Table 4 depicts interesting results; it shows that banks with CEO-duality opted for a low level of dividend smoothing. This result was not consistent with H_4 of the study. It supported the stewardship view which states that CEOs in Pakistani banks might not have willingly availed the joint position but were given the positions due to the persons being the most well informed and visionary one in the bank. This result is parallel to the findings of Zhang (2008).

Column 5 of Table 4 shows that banks with more management ownership practiced lower level dividend smoothing which is consistent with the agency based explanation of dividend smoothing. As banks with more management ownership have greater alignment, and face a

Table 4: Dividend Smoothing: Cross-sectional Regressions

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Risk	-0.0937*** (0.000930)	-0.0315*** (0.00124)	0.00437*** (0.00136)	-0.00345*** (0.00115)	-0.119*** (0.000808)	0.0143*** (0.00171)	-0.0200*** (0.000505)
Size	-0.0523*** (0.00183)	-0.0709*** (0.00239)	0.0829*** (0.00253)	0.0714*** (0.00314)	-0.0651*** (0.00176)	-0.0156*** (0.000474)	-0.0573*** (0.00128)
History	0.00257*** (0.000420)	0.00355*** (0.000572)	-0.00402*** (0.000664)	-0.00326*** (0.000614)	0.00298*** (0.000515)	0.00112*** (0.000128)	0.00316*** (0.000368)
MBR	0.00459*** (0.00122)	0.00615*** (0.00167)	-0.00714*** (0.00196)	-0.00569*** (0.00177)	0.00512*** (0.00149)	0.00125*** (0.000368)	0.00449*** (0.00113)
Bsize	-0.002634* (0.001536)						
Bind		0.00252* (0.00151)					
Asize			.0004944* (.0001788)				
Duality				0.0150** (0.00697)			
Mgt					0.000372** (0.000158)		
Foreign						-0.00035*** (1.83e-05)	
Concentration							-0.00023*** (8.00e-05)
Constant	1.156*** (0.0231)	1.187*** (0.0296)	-0.0749*** (0.0242)	-0.0368 (0.0265)	1.363*** (0.0158)	0.485*** (0.00399)	1.089*** (0.0133)
Observations	83	79	83	84	83	58	78
Log likelihood	156.437	157.1297	208.38388	185.30234	150.44068	177.82008	216.91284
Wald Chi ² (5)	3132.21	11000.98	393020.59	12023.82	17745.75	13620.52	5936.59
p-value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Note: Dependent: Speed of Adjustment (SOA), Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

lower level of agency risk, they were thus likely to ask for a lower level of dividend smoothing. These results were consistent with the outcome generated by Farinha (2003).

Column 6 of Table 4 also shows that companies with more foreign ownership opted for a higher level of dividend smoothing which is consistent with the rent hypothesis of dividends. The last column of Table 4 shows that banks with a higher level of ownership concentration opted for higher dividend smoothing, which is consistent with H_7 of the study. Banks with a higher level of ownership concentration were exposed to low level type-I agency problems but to a higher level of type-II agency problems. This result of the study is consistent with the expropriation hypothesis and also consistent with the findings of Jeong (2011).

The overall outcome drawn from Table 4 suggests that banks with good corporate governance choose a low level of dividend smoothing. In other words, banks with small independent boards, large audit committees, and having a joint position of CEO and chairperson, tend to choose a low level of dividend smoothing. Similarly, banks with a low proportion of management and higher level foreign ownership go for a higher degree of dividend smoothing. Finally, banks with high ownership concentration were involved in a higher level of dividend smoothing. These results were also comparable to the findings of Leary and Michaely (2011) and Javakhadze et al. (2014).

5.3 Corporate Governance Index

Our study used the principal component analysis (PCA) for developing the corporate governance index (CGI). The main purpose of the PCA was to reduce the number of variables into uncorrelated components. The first component of the PCA incorporated the largest variance of the data. Following Tarchouna et al. (2017), we also chose the first factor which represents the largest variation of board size, board independence, audit size, CEO-duality, management, foreign and majority ownership in Pakistani banks between 2006 to 2014. The PCA combined these seven variables into a linear combination which we have termed as corporate governance index.

Table 5 depicts the weights of all the seven corporate governance variables used in the corporate governance index for Pakistani banks during the sample period. Table 5 demonstrates that both board size and board independence have a positive contribution to the corporate governance index. This indicates that large boards crowded by indepen-

Table 5: Weights of the Corporate Governance Index

Variables	Corporate Governance Index
Board size	0.852
Board independence	0.493
Audit size	0.670
CEO-Duality	-0.304
Mgt	0.178
Foreign	-0.248
Concentration	-0.686
Kaiser-Meyer-Olkin Statistic	0.576
Bartlett's test p-value	0.000

dent directors have good monitoring power. Such banks exhibit good corporate governance. Similarly, it can be noticed that audit committee has a positive contribution to corporate governance. This is in line with our notion that increasing audit committee size automatically increases the number of independent members on the committee in Pakistan, in light of the rules developed by the SBP and the SECP. Banks with large audit committees reflect good corporate governance (Raheja, 2005).

Likewise, the contribution of the CEO-duality to corporate governance was negative which state that banks with CEO-duality in a family-controlled firm will affect the monitoring power of the board. Similarly, management ownership has a positive contribution to the corporate governance. This is in line with the notion that banks with high ownership have greater alignment. It was also observed that foreign ownership contributes negatively and this may be due to the fact that foreigners were more interested in the rent extraction, thereby avoiding good corporate governance. The contribution of the ownership concentration to corporate governance index was large and negative. This is in line with the notion that the higher the control of major shareholders, the higher the chances of expropriation.

5.4 Final Results

Table 6 shows our main results with the speed of adjustment (SOA) as the dependent variable, estimated through equation (1). We employed random Tobit techniques to account for the panel-level variance

component. As the results of the likelihood ratio test recommended, the pooled Tobit results were significantly different from the random-Tobit results. Across all the regressions of Table 6, we have controlled for size, age, earnings volatility and firms' growth. The results noted in Table 6 support the hypotheses of this study. By including board and ownership structure in the above regressions, it was noted that all variables have predicted signs at a significant level, except for the CEO-duality.

The first column of Table 6 is in line with H_1 , board size has a negative and significant coefficient. Banks with large board size smooth dividends more. This result is consistent with our conjecture that large boards have coordination problems and are not good monitors until crowded by the independent directors. Our result is consistent with La Porta et al. (2000). Column 1 in Table 6 also shows that banks with a high proportion of independent directors smooth less. This supports H_2 . This result is according to our conjecture which observed that banks with independent boards would be exposed to low level agency problems, therefore, they would opt for less smooth dividends. Our results were parallel to the findings of Krishna Prasanna (2014) and Ghosh and Sirmans (2006). Similar to Raheja (2005), the results in Table 6 indicates that banks with large audit committees smooth dividends less. Large audit committees were expected to have many independent directors which then reduce the level of agency conflict and information asymmetry. Consequently, such firms exhibit a lower level of dividend smoothing.

Interestingly our result for the CEO duality was contrary to H_4 of the study. In line with the stewardship view, we found that banks having a joint position of CEO and chairperson smooth less, hence CEOs might not have availed the joint position unless he/she is the most informed person in the bank. This result is parallel to the findings of Zhang (2008). It is an interesting result in the article, as the information asymmetry caused by the CEO duality was not substituted by smooth dividends but instead, exhibited support for the stewardship view.

In column 2 of Table 6, we estimated the relationship between ownership structure and dividend smoothing. In line with the study of Boumosleh and Cline (2015), Table 6 shows that Pakistani banks with high management ownership smooth less because of greater alignment, caused by high management ownership. Banks with low insider ownership have severe agency problems, hence they smooth more. Consistent with the rental hypothesis and in line with the outcome of Baba (2009), Table 6 depicts that banks with a high proportion of foreign ownership opted for more dividend smoothing. Consistent to H_7 , we

Table 6: Panel Tobit Regression: Role of Corporate Governance in Dividend Smoothing

Variables	(1) Board	(2) Ownership	(3) CG-Index
Risk	-0.0707*** (0.0247)	0.0679*** (0.00611)	0.0684*** (0.00921)
Size	-0.172*** (0.0581)	-0.0327 (0.0212)	0.0690** (0.0316)
History	-0.00242 (0.0145)	0.00853 (0.00841)	-0.0138 (0.0103)
MBR	-0.0873* (0.0466)	-0.0497** (0.0198)	-0.0786** (0.0314)
Board size	-0.161** (0.0642)		
Board independence	0.110** (0.0506)		
Audit size	0.174* (0.0920)		
CEO-Duality	0.302** (0.123)		
Mgt		0.00673*** (0.000805)	
Foreign		-0.00837*** (0.00137)	
Concentration		-0.0158*** (0.00416)	
CG-Index			0.148*** (0.0345)
Constant	2.307*** (0.600)	1.766*** (0.431)	-0.197 (0.234)
Observations	79	57	57
Log likelihood	170.08003	96950.83	61636.26
Wald Chi ² (5)	17382.04	178.60845	173.60339
p-value	0.0000	0.0000	0.0000

Note: Dependent: Speed of Adjustment (SOA), Robust standard errors in parentheses, *** = p<0.01, ** = p<0.05, * = p<0.1.

found that banks with concentrated ownership smooth more. This is because concentrated banks have low level type I but high level type II agency problems. In this respect, concentrated banks used dividend smoothing as an alternative monitoring mechanism. This result is in line with the findings of Shleifer and Vishny (1997) which showed that high agency conflict exists between controlling and minority shareholders. Therefore, this positive association of dividend smoothing and ownership concentration could be due to type II agency problem or it could be an effort to dilute the impression of the expropriation of minority shareholders.

In the last column of Table 6, we regressed the speed of adjustment (SOA) with corporate governance index developed via the PCA by incorporating board size, board independence, audit committee size, management, foreign ownership and five largest shareholders. We found a negative association of the corporate governance index with dividend smoothing. This is in tandem with the substitution hypothesis which states that in weak corporate governance environment, dividend smoothing is an alternative monitoring mechanism. This result is parallel to those of Leary and Michaely (2011) and Javakhadze et al. (2014).

6. Conclusion and Implications

This study has examined the impact of corporate governance on dividend smoothing in 19 listed Pakistani banks for the period ranging between 2006 and 2014. The study found evidence of dividend smoothing in Pakistani banks by using Lintner's (1956) approach. The study addressed elements which could impact the degree of dividend smoothing in these banks which encompass board size, board independence, audit committee size, CEO-duality, management, foreign ownership and five largest shareholders. Unlike developed economies, Pakistan is a country known for its weak shareholders' rights and weak corporate governance. Firm ownership structure in Pakistani corporations is mostly characterised by the family-controlled structure. In this scenario, dividend smoothing becomes an alternative monitoring mechanism to good corporate governance.

This study offers evidence which show that small boards crowded by outside directors have a strong monitoring power. Pakistani banks with large boards crowded by inside directors tend to opt for a higher level of dividend smoothing. Banks with large audit committees go for the lower level of dividend smoothing. Interestingly, banks with CEO

duality were involved in lower level of dividend smoothing which is in line with the stewardship view. Banks with a higher level of ownership consisting of directors and their spouses were involved in less dividend smoothing as a result of greater alignment. We also found that banks with higher foreign ownership opted for higher level of dividend smoothing while we noticed that foreign shareholders demanded large and stable dividends in accordance with the rent hypothesis. Our study also found that banks with concentration ownership paid smooth dividends in order to reduce type-II agency problems, i.e., to reduce chances of expropriation by major shareholders. After constituting the corporate governance index through the PCA based on the seven corporate governance variables, we found that dividend smoothing substitutes as corporate governance, as exhibited by the Pakistani banks.

Our study has contributed to the dividend smoothing literature in several ways. First, our study is the first dividend smoothing study conducted in a developing country like Pakistan. Second, to the best of our knowledge, it is the first dividend smoothing study related to banks. Third, our study is the first of its kind which estimated the effects of individual corporate governance mechanism on dividend smoothing. Our study found that corporate governance and dividend smoothing played a substitution role in the listed banks of Pakistan. In other words, stable and increasing dividends are the alternative monitoring mechanism for shareholders. Higher information asymmetry in banks, high regulatory requirements, low shareholders rights and weak corporate governance environment make dividend smoothing another tool for safeguarding minority shareholders in Pakistani listed banks. The SBP and SECP have been focusing only on corporate governance mechanisms for protecting shareholders. Nonetheless, our study concludes that committing banks to the smooth dividends will help to safeguard minority shareholders' interest from expropriation.

Our study found that banks with CEO duality smoothed less; therefore, future research could investigate the impact of CEO characteristics on dividend smoothing. Our study found concentrated firms to smooth more as a measure to counter type II agency problems. This may be further investigated by looking at the moderating role of type II agency problem in the same context. Since our study was based on a small sample, its findings may not be generalised to the whole of Pakistan. Therefore, the results may be empirically investigated by focusing on larger samples of data.

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Appendix

Name of Bank	DPS	BSize	Bindep	Asize	Mgt_Own	Foreign_Own	Own_Con
Habib Bank Limited	6.17	7.67	39.29	3.5	0.11	0.48	94.53
National Bank of Pakistan	6.11	6.33	83.85	3.4	0.008	7.13	82.85
United Bank Limited	5.89	8	84.01	2.86	9.99	57.93	72.22
MCB Bank Limited	11.9	11.89	91.47	4.67	9.69	33.12	43.02
Allied Bank Limited	4.36	9.33	70.83	3.33	45.47	0.378	86.04
Bank Alfalah Limited	1.12	7	85.71	2.78	18.99	51.29	37.39
Bank Al Habib	2.08	10	80	4.67	10.69	2.84	72.46
Askari Bank Limited	0.5	10.89	74.42	3.33	0.075	2.03	50.65
Meezan Bank Limited	0.81	10.33	80.56	3	2.44	0.28	88.73
Standard Chartered Bank (Pak)	0.92	7	58.93	3	0.0034	99.06	99.16
Habib Metropolitan Bank Ltd	1.11	8.67	78.09	3	3.23	10.10	69.92
Faysal Bank Ltd	0.83	8	79.12	3	0.034	13.56	65.57
Summit Bank Limited	1.94	7.11	57.34	3	0.91	1.58	75.11
Trust Investment Bank Limited	0.33	7.44	83.73	3.11	16.85	0	59.2
JS Global Capital Limited	4.05	8	87.5	3.25	0.025	0.07	93.72
Escorts Investment Bank Ltd	0.67	7.89	77.03	3	20.49	0	71.02
First National Bank Modaraba	0.69	7.12	58.93	3	0.02	0	55.16
Bank of Punjab	0.31	9	82.44	3.14	.001	2.50	69.32
Soneri Bank Limited	0.71	8	87.5	2	1.28	6.07	56.13

Note: DPS = Dividend Per Share.

Capital Investment Appraisal Practices in the Emerging Market Economy of Sri Lanka

Lingesiya Kengatharan* and Mohamed Nurullah

ABSTRACT

Manuscript type: Research paper

Research aims: This study aims to investigate the prevalent choice of capital investment appraisal practices and the influence of firm characteristics on the choice of these practices.

Design/Methodology/Approach: A survey is conducted by using a sample of 186 Chief Financial Officers (CFOs) from companies listed on the Colombo Stock Exchange platform in Sri Lanka.

Research findings: This study reveals that the most popular capital investment appraisal techniques used in Sri Lanka encompass Net Present Value (NPV), followed by Internal Rate of Return (IRR), Payback (PB), Accounting Rate of Return (ARR) and Discounted Payback (DPB). As for the capital investment appraisal tools incorporating risks, Sri Lankan firms prefer uncertainty absorption in cash flows, followed by sensitivity analysis, probability analysis, scenario analysis, and adjusting the required returns. Emerging real options are used at the embryonic stage in Sri Lanka. The use of naive capital budgeting practices is mostly preferred by small firms managed mainly by CFOs with non-MBA educational qualifications with short tenures in the firms. In contrast, sophisticated and advanced capital budgeting practices are mostly used by large firms managed by MBA qualified CFOs with a long tenure in the firms. As for industry differences, ARR is primarily applied by non-MBA CFOs in most non-manufacturing firms. None of the other methods trigger any significant difference in terms of industry types.

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Theoretical contributions/Originality: This study makes contextual contributions by providing evidence of the application of capital investment appraisal practices in an emerging market economy, namely Sri Lanka. This study also provides parametric contributions as it identifies the influence of firm characteristics on the choice of capital budgeting practices.

Practitioner/Policy implications: This study raises the awareness of top management, policy makers, practitioners and stakeholders of companies with regards to capital investment appraisal practices and the influence of firm characteristics on these practices.

Research limitations/Implications: A more detailed study encompassing other countries with a similar culture like Sri Lanka is beneficial for further validation, replication and generalisation. Future studies may also consider looking at the influence of behavioral factors in making capital budgeting choices.

Keywords: Capital Budgeting, Risk, Developing Countries

JEL Classification: G30, G31, G32

1. Introduction

Capital budgeting is a major terrain in the sphere of financial management. It is defined as a set of procedures, routines, methods and techniques used for making decisions on how to allocate resources among investment projects so that corporate profitability and the financial growth of a firm is ensured (Segelod, 1998; Al-Mutairi, Naser, & Saeid, 2018). This is supported by the International Federations of Accountants (2013) which stated that to maintain a strong and sustainable economic growth, it is important for a firm to adopt a systematic, analytical and thorough investment appraisal approach that is sound in judgement. Considering the importance of capital budgeting, it is not surprising that this area of research has been a subject of growing theoretical and empirical interest among scholars (Al-Muthairi et al., 2018; Verma, Gupta, & Batra, 2009; Segelod, 1998; Dixit & Pindyck, 1994; Roll, 1977; Lintner, 1965; Sharpe, 1964).

The past six decades have generated much literature (e.g. Dixit & Pindyck, 1994; Roll, 1977; Lintner, 1965; Sharpe, 1964) which emphasises on the many overarching theories and models that can be used to facilitate the process of identifying the best investment alternatives. Nonetheless, the applicability of such theories and models may no longer serve the current generation (Sangster, 1993; Slagmulder, Bruggeman,

& Wassenhove, 1995). This can be attributed to the global financial crisis, sustainable development goals, environmental uncertainty in the market, increased globalisation, shortened product lifecycles and the need for more customisation and cutting edge technological developments. These factors contribute to the new challenges that corporate financial management is experiencing today. They also impact the enormous changes happening in capital budgeting (Slagmulder et al., 1995; Verbeeten, 2006; Verma et al., 2009). This is endorsed by Meyer and Kiyamaz (2015) who expected firms to give more weight to sustainability dimensions in their capital budgeting decisions by focussing more attention on the triple bottom line *ipso facto*. However, many renowned research scholars (e.g., Mao, 1970; de Andrés, de Fuente, & San Martín, 2015) have noted that there are gaps in the theory of capital budgeting and its applicability. In the beginning of the new millennium (during the 2000s), researchers (Arnold & Hatzopoulos, 2000) have foreseen that the capital budgeting theory is not going to be applicable for all times. Moreover, capital budgeting practices have not been static and many studies (Brounen, de Jong, & Koedijk, 2004) have also diverged from the theories. It was further asserted that while concepts such as the capital asset pricing model have been largely taught in classrooms, the extent of it being practised in the corporate world is debatable. Arnold and Hatzopoulos (2000) stressed that uncertainty, information asymmetry, multiple objectives, real options and multi period project are also great concerns which further complicate capital budgeting decisions, beyond the focus of the theory. Consequently, literature (Kersyte, 2011; Mutairi, Tian, Hasan, & Tan, 2012; de Andrés et al., 2015) emphasised that budgeting exercises give one the view that there is no unique correct technique. It was further mentioned that there is a need for multiple methods to be used in practices by incorporating risk and uncertainty with capital budgeting techniques. Highlighting the gap that exists between what is theoretically right and what is actually preferred in practice, de Andrés et al. (2015) has thus stressed that there is a need to have a more intensive approach in corporate finance literature, especially for the business environment. In this regard, it is important to investigate capital budgeting practices.

This study focuses on the application of capital investment appraisal/budgeting practices and the influence of firm characteristics on the choice of these practices within an emerging market, namely Sri Lanka. As a country experiencing robust economic growth since the end of its 30-year civil war, Sri Lanka has also shown a more

sustainable growth since May 2009 onwards. The Central Bank of Sri Lanka (2017) has stated that all key sectors of the economy demonstrate a commendable performance for 2016 and 2017, establishing itself as a middle income economy. This result is possible due to Sri Lanka's peaceful domestic environment, improved investors' confidence, favourable conditions of macroeconomic factors, and the gradual recovery of the global economy. From being a country embedded in the deepest recession in history, Sri Lanka's economy is transitioning from a predominantly rural-based economy to one that is more urbanised, revolving around the manufacturing and service industries. According to the World Bank Group (2018), Sri Lanka has recorded an increase in gross domestic product (GDP) of 1.4 per cent in the fourth quarter of 2017, as compared to the same quarter in the previous year. It has also made significant progress in its economic growth in terms of socio-economic and human capital indicators. Sri Lanka was ranked among the highest in South East Asia in terms of social indicators, with its national poverty headcount ratio declining by approximately 10 per cent, from 2006 to 2016. Its stable economic environment has also attracted foreign interests for investment as supported by the report made by the Central Bank of Sri Lanka (2017), showing the highest ever inflows in 2017 supported by improving investor sentiments. Sri Lanka's positive economic development is expected to open up more international capital markets and to bring in more investors who are targeting emerging markets with strong projected growth. Presently, investment decisions play a more vital role than ever before in Sri Lanka. In the post war recovery phase, the ongoing reforms of the financial market had served as the fundamental factor which accelerated Sri Lanka's economic growth more than ever before. Greenberg (2013) stated that Sri Lanka's emerging economy is evidenced by the following: (1) In 2010, the Sri Lankan stock exchange posted an increase of 95 per cent for the year; (2) Sri Lanka has maintained itself as an important trade port linking Western Europe and Africa to Eastern Europe and Asia; (3) Sri Lanka has current investments in infrastructure such as roads, railroads and telecommunications; (4) Sri Lanka has a high level of literacy rate supported by its skilled/educated workforce and (5) Sri Lanka has a strong tourism sector. All of these are, evidently, an important part of being an emerging economy, hence, the reason why this study chose to focus on Sri Lanka.

In the literature (Koralalage & Mudiyaeselage, 2014; Nurullah & Kengatharan, 2015; Pathirawasam, 2016) of capital budgeting practices,

very few studies have looked at the terrain of capital budgeting over the last four decades within the country setting. While existing studies have provided some insights into the capital budgeting practices of Sri Lanka, these have been limited in scope, focusing mainly on the purpose of investment for capital budgeting, methods employed and their antecedent factors. In contrast, the current study aims to expand on previous studies by covering different aspects of capital budgeting practices employed by firms operating in different sectors of the economy. In this regard, the current study compares the results generated with those gained from previous empirical studies done in the US, Europe and India. It is hoped that this comparison can facilitate in filling in the research gaps in terms of contextual setting. Although capital budgeting theory appears to be applicable to all countries, to a certain extent, the actual practices of capital budgeting varies according to the “country effect” (Graham & Harvey, 2001; Hermes, Smid & Yao, 2007). Therefore, the findings of this study are expected to benefit both the academicians and practitioners. The results would assist academicians in terms of conducting future research and also in revising the curriculum adopted by business schools currently operating in Sri Lanka and similar emerging countries in terms of economic development. This study will also benefit practitioners by helping firms and organisations to make better investment decisions by using the right capital budgeting technique.

The rest of this paper is arranged as follows: Section 2 reviews the relevant literature on capital budgeting techniques. Section 3 explains the methodology employed. Section 4 presents the results and discussions. Section 5 concludes while Section 6 highlights the limitations and suggestions for future research.

2. Literature Review

2.1 Prior Studies on Capital Budgeting

Studies (e.g. Graham & Harvey, 2001; Hermes et al., 2007) looking at capital budgeting can be classified into two main areas. The first area concerns capital budgeting techniques most frequently used in practice. For example, Babu and Sharma (1995) investigated 73 Indian companies. They found that Internal Rate of Return (IRR) and Payback (PB) were the most prevalent techniques used. This finding is found to be inconsistent with Singh, Jain and Yadav (2012), which is also based on Indian listed

firms. Looking at 35 firms listed on the Karachi Stock Exchange, Zubairi (2008) highlighted that the techniques used depend very much on firm size. He further noted that bigger size firms were more inclined towards IRR while smaller firms preferred Net Present Value (NPV) and PB. From the perspectives of Western countries, Graham and Harvey (2001) found NPV and IRR to be the most popular methods, while Adjusted Present Value (APV) appeared to be the least used method in the US. This finding was consistent with Ryan and Ryan (2002). Other scholars like Brounen et al. (2004) attempted to make a comparative study. Looking at four European countries namely the UK, France, Germany and the Netherlands, Brounen et al. (2004) found differences in the capital budgeting technique used across the countries. While NPV and PB are more prevalent in the UK, Netherlands and Germany, France recorded lower usage on NPV methods.

Following the techniques, the second area of capital budgeting looks at the relationship between the use of capital budgeting techniques and firm attributes. Nishat and Haq (2009), for instance, related capital budgeting techniques with firm size. They were able to establish that small firms in Pakistan tended to use PB as their preferred method while large firms mainly used the single factor Capital Asset Pricing Model (CAPM) to ascertain the cost of capital. They also used CFOs and Chief Executive Officers (CEO) as respondents. In another study, Verma et al. (2009) identified the company's age and the CEO's educational background as the predicting factors for Indian respondents. In a more recent study, Gupta and Batra (2016) reported an association between the techniques used and firm size in India. In Kuwait, Al-Mutairi et al. (2018) found the nature of the project under assessment and the academic and professional capabilities of corporate personnel as the determinant for the choice of techniques. Within the context of developed countries, Daunfeldt & Hartwig (2014) discovered that the choice of capital budgeting techniques of firms listed on the Stockholm Stock Exchange depended very much on leverage, growth opportunities, dividend payout ratios, choice of targeted debt ratio, industry and CEO personal traits. In Spain, de Andrés et al. (2015) sampled 140 non-financial firms. They revealed that corporate size and industry were factors that influenced the firms' preferred choice of capital budgeting techniques.

The review of these literature (Al-Muthairi et al., 2018; Gupta & Batra, 2016; Daunfeldt & Hartwig, 2014; Nishat & Haq, 2009; Brounen et al., 2004) disclosed that various capital budgeting methods are adopted by various firms from various countries. In this regard, the

capital budgeting techniques that were practised could be placed into three different categories, namely: naive, advanced and sophisticated. Naive practices include Discounted Payback (DPB), ARR and PB. Advanced techniques include sensitivity analysis/break-even analysis, scenario analysis, IRR, modified IRR, NPV and profitability index. Finally, sophisticated techniques include Real Options, Game Theory Decisions, Decision Tree and CAPM. All these three categories of techniques have their own advantages and limitations. Their applications also depend on many factors (i.e. firms' age, CEOs' characteristics, and industry types). Over the years, scholars (Truong, Partington, & Peat, 2008; Maroyi & Poll, 2012; Lima, da Silveira, Matos, & Xavier, 2017) also claimed that many firms across the globe are increasingly employing more sophisticated capital budgeting techniques for making investment decisions. This phenomenon is due to the expansion of increased uncertainty and risks. Since uncertainty affects future cash flows and causes estimation difficulties, various risk analysis and management science techniques have been developed to supplement the current traditional value-based decision models. In today's dynamic environment, firms need to be actively looking for opportunities so as to exploit their strategic capabilities. They need to seek improvement in every area of their business processes to ensure that they are quick to respond. The integration of sustainability in daily operations, for example, entails the right type of investment because an appropriate investment would help to maintain low prices and also achieve reduction in costs (Mangiaracina, Tumino, Miragliotta, Salvadori, & Perego, 2017; Warren, 2014). Thus, it can be seen that decision-making for investments is not an easy task since it needs to be considered together with other risk factors such as technology upgrading, price fluctuations, competitors' actions, change in customer preferences, regulations, legislations, and also the political and economic environment. Therefore, it is essential that decision-makers employ an evaluation tool that has the advantage of integrating all the risk elements that are related to their investment decision making process.

2.2 Prior Studies in Sri Lanka

Considering the multiple and dynamic contexts discussed in the literature review, it is clear that decision-making for capital budgeting is still a complex persisting issue. A few studies (Nurullah & Kengatharan, 2015; Koralalage & Mudiyaesalage, 2014) have examined capital budgeting

practices in Sri Lanka. For instance, Koralalage and Mudiyaeselage (2014) examined the use of capital budgeting techniques in 50 large businesses in Sri Lanka. They found that large firms relied heavily on NPV, IRR and DPB. In another study, Nurullah and Kengatharan (2015) focused on the capital budgeting practices of 32 listed manufacturing and trading companies in Sri Lanka. Their results disclosed that NPV, PB and IRR were the most predominant. Recently, Pathirawasam (2016) studied the capital budgeting practices of 44 Sri Lankan listed companies. It was revealed that NPV, IRR and PB were the most prevalent methods used.

Although these studies (Pathirawasam, 2016; Nurullah & Kengatharan, 2015; Koralalage & Mudiyaeselage, 2014) focused on capital budgeting practices in Sri Lanka, their findings have been asymmetrical because they had focused on a particular sector only. In comparison, the current study aims to address the gap in literature by using a larger number of listed companies from multiple sectors listed on the Colombo Stock Exchange. It also aims to investigate how firm characteristics such as capital budgeting size, industry types, educational qualification of CFOs and CFOs tenure influence the companies' use of capital investment appraisal practices. The present study also advances the understanding of capital budgeting practices by comparing the current findings with those of previous studies conducted in different countries.

2.3 Hypotheses Development

As highlighted earlier, studies have documented that the decision on which capital budgeting methods to choose from, may be affected by "country effects" such as economic factors, cutting edge technology (i.e., decision support system), political factors, accounting policies, accounting standards and other infrastructure facilities. Therefore, even though capital budgeting theory is applicable to all countries, to a certain extent, the actual practices of capital budgeting vary (e.g., Graham & Harvey, 2001, Hermes et al., 2007). Some scholars (Liu, Wu, Li, & Li, 2015; Graham & Sathye, 2018) have noted that since managers in the emerging country or developing economy would typically experience higher levels of environmental uncertainty, they were thus, more inclined towards using sophisticated capital budgeting practices. It was also highlighted that the use of sophisticated capital budgeting practices in Indonesia suited the country's context (Graham & Sathye, 2018). For instance, formal approaches were found to be useful in mitigating risks throughout the project management. Thus, it is deduced that the same

phenomenon is also likely to occur in Sri Lanka. This is because as an emerging economy, Sri Lanka has high levels of uncertainty due to local factors such as political instability as well as poor legal and regulatory frameworks (Appuhami & Perera, 2016). Based on these arguments, it is hypothesised that:

H₁: Sri Lankan listed companies use sophisticated capital budgeting practices

The present study also considers the firms' underlying demographic characteristics which are expected to account for the differences in the firms' use of capital budgeting practices, vis-à-vis the size of the firm's capital budget, industry differences, and the CFO's educational qualification and experience in the field. All these factors are in line with prior studies (e.g. Verma et al., 2009; Bennouna, Meredith, & Marchant, 2010; de Andrés et al., 2015).

Firm size is one of the major determinants in capital budgeting practices. Research (e.g., Ho & Pike, 1992; Graham & Harvey, 2001; Farragher, Kleiman, & Sahu, 2001; Brounen et al., 2004; Verbeeten, 2006) has shown that large firms adopt more innovative capital budgeting methods such as sophisticated capital budgeting practices when compared to smaller firms (see Williams & Seaman, 2001). Large firms, undoubtedly, have the capacity and resources to use sophisticated capital budgeting practices (Ho & Pike, 1992). It was further documented by Payne, Heath and Gale (1999) as well as Ryan and Ryan (2002), that large firms' capital budget size tend to include more sophisticated capital budgeting practices because large firms have larger projects which makes using sophisticated capital budgeting practices less costly. Large firms were also more likely to have full time staff members for capital budgeting (Verbeeten, 2006) and they make considerable capital expenditures on new plants and equipment which require more sophisticated capital budgeting practices. However, the nature of the relationship between the size of a company's capital budget and its capital budgeting practice has not been clearly established in Sri Lanka. Thus, it is hypothesised that:

H₂: Sophisticated capital budgeting practices are used when a firm's capital budget is large.

Nonetheless, companies of different industrial types may vary in their use of capital budgeting practices. This may be attributed to the nature of the business activity, differences in technology, competition

and human resource skills, the amount of investment in fixed assets, business risks, and so forth. Much empirical research in the past (e.g., Ho & Pike, 1998) has shown that capital budgeting practices are different across industries. For example, the widespread use of real options and game theory is more prevalent in the pharmaceutical industry (e.g., Bowman & Moskowitz, 2001; McGrath & Nerkar, 2004), the extraction industry (e.g., Trigeorgis, 1993), the financial services industry and the high-tech industry (e.g., Billington, Johnson, & Triantis, 2003; Verbeeten, 2006). Daunfeldt and Hartwig (2014) found that industry types influence the choice of capital budgeting practices. They also emphasised that manufacturing companies used more sophisticated methods because they were often larger and possessed more capital intensives with higher sunk costs. Based on this, it is hypothesised that:

H₃: Manufacturing firms in Sri Lanka use more sophisticated capital budgeting practices.

In one study, Hornstein (2013) found that managers and CFOs significantly influence corporate behaviour and performance. In particular, the educational qualifications of the CFOs served as a determinant of the capital budgeting practices (Graham & Harvey, 2001). There has also been a general consensus that a CFO with a higher level of education will have fewer problems in understanding more sophisticated capital budgeting techniques, thus they will be capable of using them. A positive relationship has been identified between the educational background of CFOs and the use of sophisticated methods (Hermes et al., 2007; Daunfeldt & Hartwig, 2014). Among the US sample, a positive association was found between the CFOs' education and the use of sophisticated capital budgeting practices (Graham & Harvey, 2001). These findings were parallel to those observed in the Netherlands, Germany and France, but not in the UK (Brounen et al., 2004). In Scandinavia, Horn, Kjærland, Molnár and Steen (2015) stated that a quarter of the responding firms with CFOs who possess a PhD qualification use sophisticated capital budgeting practices. Thus, it is hypothesised that:

H₄: Chief Financial Officers (CFO) with higher educational qualifications use more sophisticated capital budgeting practices.

Besides their educational qualifications, the experiences of CFOs may also determine their choice of capital budgeting practices (Graham & Harvey, 2001; Brounen et al., 2004). A handful of studies (e.g., Hermes

et al., 2007; Verma et al., 2009) have reported that the experiences of CFOs will determine the use of capital budgeting methods since over time, they become more familiar with more sophisticated capital budgeting methods. Based on this, it is hypothesised that:

H₅: Chief Financial Officers with a greater number of years of experience use more sophisticated capital budgeting practices.

3. Research Methodology

This study employed a quantitative technique, using survey to collect data. The survey questions measuring the capital budgeting practices of the companies were adopted from previous seminal studies (Arnold & Hatzopoulos, 2000; Graham & Harvey, 2001; Brounen et al., 2004; Verma et al., 2009) (Appendix 1). Nonetheless, some fundamental changes were made to the questionnaire in order to adapt it to the Sri Lankan context. Respondents were asked to indicate on a five-point Likert scale (ranging from 1 = never to 5 = always) the extent to which they agreed with the statements provided. The questionnaire was pre-tested by an academic and industry expert. Feedback (e.g. inconsistency of wording, unclear or ambiguous items) from the pre-test was used to refine the questions for pilot testing and the larger study. In this study the pilot survey was conducted using a paper-based self-administered questionnaire with five CFOs. The respondents understood all of the questions in the way that the questionnaire was intended and they each spent 10 minutes completing the questionnaire. The CFOs did not express any concerns about the questionnaire, hence, the refined questionnaire was distributed among the larger group of potential respondents.

The larger study comprised a total of 287 companies which were listed on the Colombo Stock Exchange. They made up the total of Sri Lanka's small population of companies. By selecting the whole population, the results could be generalised. Each of the questionnaires was accompanied by a cover letter before they were mailed to the Chief Financial Officers (CFO) of the listed companies. The questionnaire survey was conducted between June to December 2013. Reminders were sent to CFOs to elicit a high response rate. In total, 186 questionnaires were retrieved, representing a response rate of 64 per cent. Table 1 depicts the sample characteristics of the respondents.

As depicted in Table 1, the recruited companies were mainly from the manufacturing industry (52.7 per cent) with a majority of the

Table 1: Sample Characteristics of the Respondents

Firm Characteristics	Frequency	Percentage
<i>Educational qualification of the CFO</i>		
Bachelor degree	7	3.8
MBA	54	29.0
Non-MBA Master's	25	13.4
Above Master's degree	97	52.2
Professional qualification	3	1.6
<i>Experience of the CFOs in Years</i>		
Less than 5 years	7	3.8
5-9 years	21	11.3
10-19 years	81	43.5
20 years and more	77	41.4
<i>Types of Industry</i>		
Financial Service Industry	9	4.8
Manufacturing Industry	98	52.7
Diversified Holdings	11	6.0
Health Care Industry	6	3.2
Hotel Industry	29	15.6
Other Non-financial Industry	33	17.7
<i>Size of the Capital Budget</i>		
Less than LKR 10 million	17	9.2
LKR 10-99 million	51	27.4
LKR 100-499 million	3	39.2
LKR 500-999 million	19	10.2
LKR 1 billion and over	26	14.0

companies headed by CFOs (94.6 per cent) who possessed Masters qualification and above. It is also interesting to note that more than half (52.2 per cent) of the CFOs also held a PhD degree. Most of the CFOs (86.7 per cent) also have academic qualifications in business related studies, with almost half (43.5 per cent) of them holding 10 to 19 years of work experience. In terms of the size of capital budget, a majority of the companies (39.2 per cent) have a capital budget of between LKR100-499 million. Only 14 per cent of the companies recorded a capital budget of above one billion.

4. Findings and Discussion

4.1 Prevalent Capital Budgeting Practices in Sri Lanka

As discussed in the literature, there is a tendency among firms to use multi-methods in making capital budgeting decisions (e.g., Arnold & Hatzopoulos, 2000). As a caveat, capital budgeting decision tools, namely capital budgeting methods and capital budgeting tools for incorporating risks, were subjected to principal component analysis with Varimax rotation, consistent with many research scholars (e.g., Verbeeten, 2006). The results are presented in Table 2.

Table 2: Principal Components Analysis with Varimax Rotation for Determining Capital Budgeting Methods

Variables	Components/Methods		
	Advanced Capital Budgeting Practices	Sophisticated Capital Budgeting Practices	Simple/Naive Capital Budgeting Practices
Probability Analysis	.819		
Scenario Analysis	.798		
Adjusting Required Return	.771		
Internal Rate of Return	.765		
Uncertainty Absorption in Cash Flows	.736		
Sensitivity Analysis	.697		
Net Present Value	.670		
Real Options		.793	
Game Theory Decisions		.779	
Decision Trees		.750	
CAPM/ β Analysis		.749	
Discounted Payback Period			.857
Accounting Rate of Return			.809
Payback Period			.667
Eigen Value	5.822	2.108	1.365
Proportion of Variance Explained	38.815%	14.052%	9.101%
Cumulative Percentage Explained	38.815%	52.867%	61.968%
Cronbach's Alpha - Reliability of factors	0.890	0.809	0.744
Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.888); Bartlett's Test of Sphericity-Approx. Chi-Square (1221.845), <i>df</i> (105)			

In this regard, the findings were consistent with literature (e.g. Verbeeten, 2006; Wolffsen, 2012). The capital budgeting practices were grouped into three classes: advanced capital budgeting practices (probability analysis, IRR, scenario analysis, adjusting required return, uncertainty absorption in cash flows, sensitivity analysis and NPV); sophisticated capital budgeting practices (real options, CAPM/ β analysis, game theory decisions and decision trees); and naive/simple capital budgeting practices (DPB, ARR and PB). Although techniques such as Adjusted Present Value, Profitability Index, and Value at Risk were included in the survey, they were found to be less popular among companies in Sri Lanka, therefore, they were eliminated in the factor analysis.

Table 3: Summary of the Prevalent Capital Budgeting Practices in Sri Lanka (%)

	Never	Rarely	Some- times	Often	Always	Mean & Rank
<i>Naive Method</i>						
DPBP	1.1 (2)	10.8 (20)	64.0 (119)	24.2 (45)	-	3.11 (9)
ARR	3.8 (7)	13.4 (25)	61.8 (115)	19.9 (37)	1.1 (2)	3.01 (10)
PBP	2.2 (4)	13.4 (25)	34.4 (64)	37.6 (70)	12.4 (23)	3.45 (8)
<i>Advanced Method</i>						
Probability Analysis	1.1 (2)	3.2 (6)	13.4 (25)	68.8 (128)	13.4 (25)	3.90 (4)
Scenario Analysis	1.6 (3)	5.4 (10)	12.4 (23)	65.1 (121)	15.6 (29)	3.88 (5)
Adjusted RRR	2.7 (5)	5.9 (11)	14.0 (26)	63.4 (118)	14.0 (26)	3.80 (7)
IRR	6.5 (12)	5.9 (11)	8.6 (16)	55.9 (104)	23.1 (43)	3.83 (6)
Uncertainty absorption in cash flows	0.5 (1)	1.6 (3)	12.4 (23)	69.9 (130)	15.6 (29)	3.98 (2)
Sensitivity Analysis	1.6 (3)	8.1 (15)	11.3 (21)	52.7 (98)	26.3 (49)	3.94 (3)
NPV	1.6 (3)	2.2 (4)	12.4 (23)	51.6 (96)	32.3 (60)	4.11 (1)
<i>Sophisticated Method</i>						
Real Options	78.0 (145)	15.6 (29)	6.5 (12)	-	-	1.28 (13)
Game Theory Decisions	83.9 (156)	26.0 (14)	2.2 (4)	-	-	1.18 (14)
Decision Trees	65.6 (122)	27.4 (51)	7.0 (13)	-	-	1.41 (11)
CAPM/ β Analysis	77.4 (144)	11.8 (22)	8.6 (16)	2.2 (4)	-	1.35 (12)

Note: DPBP = Discounted Payback Period, PBP = Payback Period, ARR = Accounting Rate of Return, RRR = Required Rate of Return, IRR = Internal Rate of Return, NPV = Net Present Value. Number of respondents in parentheses.

As can be noted from the results, the NPV was the most preferred method of capital budgeting, with a mean value of 4.11. This was followed by Uncertainty absorption in cash flows ($M = 3.98$), Sensitivity analysis ($M = 3.94$), Probability analysis ($M = 3.90$), Scenario analysis ($M = 3.88$), IRR ($M = 3.83$), Adjusting RRR ($M = 3.80$), PBP ($M = 3.45$), DBP ($M = 3.11$) and ARR ($M = 3.01$). Methods such as Real option, Game theory decisions, Decision tree and CAPM/ β analysis which had been classified as sophisticated methods were, however, not popular, yielding mean values of less than 2.0. Based on the mean value and percentage analysis, it is fair to say that the more dominant capital budgeting practice used by Sri Lankan companies is the advanced capital budgeting practices (top seven practices). Further analysis (chi-square test) was conducted to test the hypothesis and the results are presented in Tables 4 and 5.

Table 4: Chi-Square test of Naive, Advanced and Sophisticated Methods

	Naive	Advanced	Sophisticated
Observed (O)	85.13	93.17	6.62
Expected (E)	61.64	61.64	61.64
O-E	23.49	31.53	-55.02
(O-E) ²	551.78	994.14	3027.20
(O-E) ² /E	8.95	16.13	49.11
Calculated chi-square $\Sigma(O-E)^2/E = 74.19$ ($df=2$)			

The observed values were the average percentage of “sometimes”, “often” and “always”. As a caveat, it was assumed that the three capital budgeting practices were equally used by the companies, thus the expected value was the average value of three types of capital budgeting practices $[(85.13+93.17+6.62)/3]$. As can be seen in Table 4, the calculated chi-square is 74.19, which is greater than the chi-square critical value of 0.05 (5.99) and 0.01 (9.21). Thus, there is sufficient evidence to verify that capital budgeting practices are different at the 0.01 significance level. The high percentage of the advanced capital budgeting practices indicate that they were practices that were more prevalent among companies in Sri Lanka. However, it was noted that the percentages between naive capital budgeting practices and advanced capital budgeting practices

were close. This makes it difficult to ascertain what the true difference between those two methods were. Therefore, the chi-square test was further performed to examine the significant differences between the naive and advanced methods [“often” and “always” was considered in comparison to Verma et al. (2009)].

Table 5: Chi-Square test of Naive and Advanced Methods

	Naive	Advanced
Observed (O)	31.7	81.1
Expected (E)	56.415	56.415
O-E	-24.685	24.685
(O-E) ²	609.35	609.35
(O-E) ² /E	10.80	10.80
Calculated chi-square $\Sigma(O-E)^2/E = 21.60$ (<i>df</i> =1)		

As can be seen in Table 5, the calculated chi-square was 21.60, which is greater than the chi-square critical value of 0.05 (3.84) and 0.01 (6.63). Thus, there is sufficient evidence to indicate that capital budgeting practices were different at the 0.01 significance level between the naive and advanced methods. Consequently, there is also sufficient statistical evidence to infer that the advanced capital budgeting practices were more prevalent in Sri Lankan firms. In this regard, H_1 stating that Sri Lankan listed companies use sophisticated capital budgeting practices is not supported.

From the results indicated in Table 6, it can be noted that the most preferred capital budgeting technique used by companies in Sri Lanka is NPV (always/often 83.9 per cent), followed by IRR (always/often 79 per cent), PB (always/often 50 per cent), ARR (always/often 21 per cent) and DPB (always/often 24.2 per cent). In contrast, Graham and Harvey (2001) noted that the most preferred technique used in the US was IRR (always/almost always 75.7 per cent), followed by NPV (always/almost always 74.9 per cent), and PB (always/almost always 56.7 per cent).

From the European perspective, Brounen et al. (2004) found that PB was the most frequently used capital budgeting method in the UK (69.2 per cent), the Netherlands (64.7 per cent), Germany (50 per cent) and France (50.9 per cent). The IRR and NPV methods were also

Table 6: Comparison of the Current Results with Previous Studies Using Similar Questionnaires on Capital Investment Appraisal Practices/Capital Budgeting Practices

	Current Study	Verma et al. (2009)	Graham & Harvey (2001)	Brounen et al. (2004)			
Country	Sri Lanka	India	USA	UK	Netherland	Germany	France
Year Surveyed	2013	2009	1999	2002/2003			
Survey Sample	287	100	4440	2000	500	2000	2000
Usable Response	186	30	392	68	52	132	61
Percentage of Response Rate	64	30	9	5			
<i>Capital Budgeting Techniques (Percentage of Usage)</i>							
	Always/or often		Always/or almost always				
PB	50.0	80.0	56.7	69.2	64.7	50.0	50.9
DPB	24.2	23.3	29.5	25.40	25.0	30.5	11.3
ARR	21.0	26.7	20.0	38.10	25.0	32.2	16.1
NPV	83.9	63.3	74.9	47.0	70.0	47.6	35.1
IRR	79.0	76.7	75.7	53.1	56.0	42.2	44.1
Adjusted Present Value	-	16.6	11.0	14.1	8.16	7.8	14.6
Profitability Index	-	40.0	12.0	15.9	8.16	16.1	37.7
<i>Capital Budgeting Method of Incorporating Risk (Percentage of Usage)</i>							
	Always/or often		Always/or almost always				
Sensitivity Analysis	79.0	73.4	51.5	42.9	36.7	28.1	10.4
Value at risk/ other simulation analysis	-	20.0	13.7	14.5	4.3	23.7	29.8
CAPM	2.2	36.7	-	-	-	-	-
High cut off rates	-	16.7	56.9	27.0	41.7	28.8	3.85
Shorter pay-back	-	50.0	-	-	-	-	-
Real Option	6.5	10.0	26.6	29.0	34.7	44.0	53.1
	(some-times)						

Note: DPBP = Discounted Payback Period, PBP = Payback Period, ARR = Accounting Rate of Return, RRR = Required Rate of Return, IRR = Internal Rate of Return, NPV = Net Present Value.

commonly applied in the UK, the Netherlands, Germany and France. Among firms in India, Verma et al. (2009) found that the most preferred technique was PB (always/often 80 per cent), followed by IRR (always/often 76.7 per cent) and NPV (always/often 63.3 per cent). In the current study, only 6.5 per cent of the CFOs in Sri Lanka reported using Real Options “sometimes” ($M = 1.28$) for evaluating their investment projects. Therefore, it is fair to say that Real Options was more preferred by Sri Lankan firms (6.5 per cent) only at the embryonic stage, unlike France (53.6 per cent), Germany (44.0 per cent), the Netherlands (34.7 per cent), the UK (29.0 per cent), and the US (26.6 per cent). In comparison to India, the results drawn from Sri Lanka (10 per cent) were somewhat similar to those of India which used Real Options (Verma et al., 2009). From these reports, it can be said that different practices are applied by different countries, hence it can be deduced that the “country effects” have an influence on the practices. Country effects such as economic policies, taxation systems, accounting policies and social practices, culture of the people, technological factors, government control, political factors and infrastructure facilities may differ from one country to another, from one company to another company and from one project to another project. In addition to this, it may be apt to add that while technology has boosted academic research and the appearance of a more complex model, firms in Sri Lanka may not always be able to keep up with the trend due to national constraints such as very less usage of human capital which leads to high cost for investment appraisal process and lack of effective corporate governance mechanism when compared with well developed countries.

4.2 Firms’ Characteristics and Capital Budgeting Practices

The current survey has carefully considered firms’ underlying characteristics such as: size of capital budget, educational qualification of CFOs, experience of CFOs and types of industry. The aim is to uncover how these characteristics affect differences in the use of capital budgeting practices. Each characteristic (i.e. educational qualifications of CFO, experiences of CFO, types of industry and size of capital budget) is grouped into two different categories, following the recommendations of Graham and Harvey (2001) and Brounen et al. (2004). The educational qualifications of the CFOs are grouped into MBA level and above and non-MBA and others. The experience of the CFOs are grouped as short tenure (less than 10 year) and long tenure (10 years

and above). The types of industry are grouped into manufacturing and non-manufacturing while the size of capital budget is grouped as large (capital budget greater than LKR 1 billion) and small (capital budget less than 1 LKR billion). The mean difference in the statistics of the independent sample t-test is employed. The differences in the use of the capital budgeting practices in terms of firm characteristics are summarised in Table 7.

Based on Table 7, it is observed that the use of payback criterion is significant at 0.05; it is mostly preferred by small firms mainly managed by CFOs with non-MBA educational qualifications and with a short tenure in experience. Industry differences do not have any significant impact in the use of PB but DPB is more significantly used by small firms managed by CFOs with non-MBA educational qualifications. ARR is also used by small firms more than by large firms. However, the difference is not statistically significant. ARR is primarily applied by non-MBA CFOs and it is preferred by non-manufacturing firms. In contrast, NPV and IRR are used more by large firms which are significantly managed by MBA-qualified CFOs with long tenures. These differences are statistically significant at 0.01. Similarly, sophisticated capital budgeting practices, in terms of Real Option and Game Theory Decisions, are significantly preferred by large companies managed by MBA-qualified CFOs who have long tenures rather than by small companies. Findings of the current study is consistent with the findings of prior studies noted by Graham and Harvey (2001), Brounen et al. (2004) and Verma et al. (2009) who had mentioned that large firms were most likely to use more sophisticated capital budgeting techniques when it comes to evaluating large and risky capital projects. According to the study of Brounen et al. (2004), PB was a more popular method used by small firms except for the UK companies. Simultaneously, NPV was used most significantly by large firms managed by CFOs with MBA qualifications in the Netherlands, Germany and France. A similar pattern is also observed in Sri Lanka where it is noted that small firms in Sri Lanka are less likely to use both NPV and sensitivity analysis. The findings of this study are also in concordance with Graham and Harvey (2001).

When considering the firms' underlying characteristics which may influence firms' usage of risk-taking tools in capital budgeting practice, it appears that sensitivity analysis, uncertainty absorption in cash flows and adjusting the required return, are significantly preferred by large firms more than by small firms. Moreover, these are also significantly managed by MBA-qualified CFOs rather than non-MBA CFOs. The

Table 7: Firms' Characteristics and the Use of Capital Budgeting Practices

Capital Budgeting Technique	Always/Often (Percentage)	Mean	Size		Educational qualification of CFOs		Tenure of CFOs		Industry	
			Small	Large	MBA & Above	Non-MBA & Others	Short	Long	MANU	NMANU
<i>Naïve</i>										
PB	50.0	3.45	3.63**	2.35	3.34	3.91**	3.79*	3.39	3.41	3.49
DPB	24.2	3.11	3.18**	2.73	3.05	3.37**	3.18	3.10	3.08	3.15
ARR	21.0	3.01	3.13**	2.31	2.93	3.37**	3.14	2.99	2.92	3.11*
<i>Advanced</i>										
NPV	83.9	4.11	3.97	4.96**	4.35**	3.06	3.75	4.17*	4.04	4.18
IRR	79.0	3.83	3.73	4.50**	4.12**	2.60	3.64	3.87	3.80	3.88
Sensitivity Analysis	79.0	3.94	3.79	4.85**	4.17**	2.97	3.68	3.99	3.89	4.00
Scenario Analysis	80.7	3.88	3.84	4.08	4.07**	3.03	3.79	3.89	3.87	3.89
Uncertainty absorption in cash flows	85.5	3.98	3.91	4.46**	4.13**	3.34	3.64	4.04**	4.03	3.93
Adjusted RRR	77.4	3.80	3.76	4.08**	3.99**	2.97	3.64	3.83	3.78	3.83
Probability Analysis	82.2	3.90	3.88	4.04	4.05**	3.26	3.79	3.92	3.93	3.88
<i>Sophisticated</i>										
Real Options	6.5 (Sometimes)	1.28	1.13	2.23**	1.33**	1.09	1.11	1.32**	1.23	1.34
Game Theory Decision	-	1.18	1.08	1.81**	1.21**	1.06	1.00	1.22**	1.19	1.17
Decision Trees	-	1.41	1.26	2.35**	1.47*	1.17	1.11	1.47*	1.39	1.44
CAPM/ β Analysis	2.2	1.35	1.16	2.58**	1.40**	1.14	1.11	1.40**	1.39	1.32

Note: DPBP = Discounted Payback Period, PBP = Payback Period, ARR = Accounting Rate of Return, RRR = Required Rate of Return, IRR = Internal Rate of Return, NPV = Net Present Value, MANU = Manufacturing, NMANU = for non-manufacturing. ** t is significant within the specific capital budgeting method at the 0.01 level, * t is significant within the specific capital budgeting method at the 0.05 level.

scenario and probability analysis are also significantly managed by MBA qualified CFOs rather than non-MBA qualified CFOs. Further to that, the usage of decision trees and CAPM/ β analysis is significantly most frequently cited by large firms rather than by small firms. Likewise, these are significantly managed by MBA-qualified CFOs who have a significantly longer tenure with the firms.

While naive capital (simple) budgeting practices are significantly used by small firms, advanced and sophisticated capital budgeting practices are significantly used by large firms. Consequently, Hypothesis 2 which states that sophisticated capital budgeting practices are used when a firm's capital budget is large, is supported. In all cases except ARR, the type of industry is not significantly different on the use of capital budgeting practices. The results only supported the notion that the use of ARR is significantly greater in non-manufacturing firms than in manufacturing firms. Therefore, in the majority of cases which hypothesised (H_3) that manufacturing firms use more sophisticated capital budgeting practices, the hypothesis is not supported. Naive (simple) capital budgeting practices are significantly used by CFOs with non-MBA qualification while advanced and sophisticated capital budgeting practices are significantly used by CFOs with MBA qualifications. Accordingly, Hypothesis 4 which states that CFOs with higher educational qualifications use more sophisticated capital budgeting practices is supported. In all cases, simple (naive) capital budgeting practices are mostly used by CFOs with short tenure (significantly different only for PB) but advanced and sophisticated capital budgeting practices (NPV, real option, game theory decision, uncertainty absorption in cash flows, decision trees and CAPM/ β analysis) are significantly used by CFOs with long tenures. Subsequently, Hypothesis 5 which states that CFOs with a greater number of years of experience use more sophisticated capital budgeting practices, is supported.

5. Conclusion and Implications

Capital budgeting is of paramount importance to firms when making corporate financial decisions. This is because it facilitates firms in making the right investment decisions that will ensure corporate profitability and growth. In this study, an attempt was made to empirically investigate the capital budgeting practices in an emerging economy, specifically Sri Lanka. A questionnaire was distributed to a sample of 287 companies listed in the Colombo Stock Exchange. The results

of the analysis highlighted that companies in Sri Lanka tend to choose advanced rather than sophisticated capital budgeting techniques. While some scholars (Liu et al., 2015; Graham & Sathye, 2018) assert that managers in emerging countries have started to use sophisticated capital budgeting practices since they were more exposed to higher levels of environmental uncertainty, this phenomenon was found to be different in Sri Lanka. A comparison of the findings of this study was also made with previous studies conducted in developed countries such as the UK, the Netherlands, Germany and France (Graham & Harvey, 2001; Brounen et al., 2004). The comparison showed that developed economies used sophisticated techniques more frequently while real options were rarely used by companies in Sri Lanka. Although there is a widespread use of sophisticated capital budgeting practices (Maroyi & Poll, 2012; Baker, Dutta, & Saadi, 2011) within emerging economies since they are facing higher uncertain environment, this situation was not observed in Sri Lanka. Our current findings show that despite the fact that real options had been introduced more than 30 years ago, companies were still using less complex and traditional methods. Nevertheless, the choice to use more sophisticated techniques vs. naive (simple) alternatives tend to vary with firms' attributes (size, available human capital, etc.).

This study has revealed that capital budgeting practices were influenced by the background of the CFOs, in terms of their education as well as experiences. This outcome was expected because the decision is unstructured and involves high risks. Hence, in many cases, the CFOs tend to use various methods based on their level of education and experiences. CFOs with MBA or PhD degrees were expected to utilise their knowledge, skills and expertise to enable themselves to use more sophisticated techniques. This finding suggests that the factors affecting capital budgeting practices are reflected through the CFOs' education, background and perspective. Notwithstanding this, as the application of sophisticated budgeting is more complex and entails a substantial cost, time and effort, it is expected that large firms would be more inclined towards using sophisticated budgeting practices rather than their small counterparts. This result implies that small firms in Sri Lanka were less ready to use sophisticated capital budgeting techniques due to less access to human capital, which causes sophisticated methods to be more difficult. This research has provided valuable insights into the capital budgeting practices that are practised in the Sri Lankan context. Considering the importance of sophisticated capital budgeting in mitigating risks, especially for emerging countries

such as Sri Lanka, it is suggested that firms in the country start thinking about the appropriate level of sophisticated capital budgeting to be used for firms' net benefits against costs. It is also recommended that the key to improve the capital budgeting processes would be by ensuring that proper training is conducted for the decision makers in the company, especially the small firms.

6. Limitations and Future Direction

Many studies conducted in developed countries (Graham & Harvey, 2001; Brounen et al., 2004) have found that firms used more sophisticated capital budgeting practices. Nonetheless, in Sri Lanka, advanced capital budgeting practices were more prevalent. Therefore, future research needs to consider the challenges faced by CFOs with regards to the use of sophisticated capital budgeting practices (i.e. organisational barriers/knowledge gap of CFOs, technological challenges) as these can lead to increased performance.

Future research may also consider investigating other organisational characteristics (e.g. business unit strategies, reward and incentive structures, distribution of decision rights and financial structure) which have been shown to affect capital budgeting practices. As this study focused on capital budgeting practices and the influence of firms' characteristic on the choice, future researchers could focus on the behavioural aspects.

No study has attempted to identify the relationship between supportive capital information systems (software products that make the required analysis easier in comparison with manual systems) and capital budgeting decision-making. Similarly, the environment in which organisations work, can impact on their ability to make quality decisions. Based on this, future researchers should concentrate on scanning organisational environments which can contribute to making good investment decisions rather than depending purely on financial theories. This is of paramount importance in the current context.

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Appendix 1

ASSESSING COMPANY'S DEMOGRAPHIC INFORMATION AND CORPORATE PRACTICES REGARDING CAPITAL BUDGETING

Section 1

I) Please answer to the following questions for general information of your company

- a. Name and age of your company:
- b. Ownership of company: Public or Private
- c. What is your company's planning horizon for capital expenditure budgets: (choose best option)
 1 year ahead 2 years ahead 3 years ahead 4 years ahead More than 4 years ahead
- d. Size of capital budget in LKR:
 <10 Million 10-99 Million 100-499 Million 500-999 Million
 >1 Billion

II) Please answer to the following questions for general information of respondents

- e. Please specify length of your experience in capital budgeting practices (in years):
- f. Your educational qualifications:
 Undergraduate Bachelor degree MBA Non-MBA Masters
 PhD Professional Any other

Section 2

Specify the purpose of your company's capital budgeting (check all that apply)

- | | | | |
|--------------------------------|--------------------------|----------------------------|--------------------------|
| Expansion into new business | <input type="checkbox"/> | Equipment replacement | <input type="checkbox"/> |
| Investing new facilities | <input type="checkbox"/> | Modernisation | <input type="checkbox"/> |
| New product development | <input type="checkbox"/> | Employing new technology | <input type="checkbox"/> |
| Expansion of existing business | <input type="checkbox"/> | Research and development | <input type="checkbox"/> |
| Diversification | <input type="checkbox"/> | Training and development | <input type="checkbox"/> |
| Mergers and acquisition | <input type="checkbox"/> | Any other capital projects | <input type="checkbox"/> |

Section 3

From the following list of common capital budgeting methods (investment appraisal techniques), please tick *one* box for each question to indicate primary and secondary capital budgeting techniques. If you have extra comments, please leave them to the end of the questionnaire.

Capital budgeting methods	Pri- mary	Second- ary	Neither	Capital budgeting methods	Pri- mary	Second- ary	Neither
Simple payback period (PB)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adjusted present value (APV)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Capital Investment Appraisal Practices in the Emerging Market Economy of Sri Lanka

Discounted payback period (DPB)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Profitability Index (PI)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accounting rate of return (ARR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Real option theory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Net present value (NPV)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Game theory decision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internal rate of return (IRR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Non financial decision rules (please specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modified internal rate of return (MIRR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

Please state if you use any other methods

Please assign the capital budgeting techniques/ methods presented below a number between (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always) depending on the degree of usage of capital budgeting tools for a particular investment.

Capital budgeting methods	1	2	3	4	5	Capital budgeting methods	1	2	3	4	5
Simple payback period (PB)	<input type="checkbox"/>	Adjusted present value (APV)	<input type="checkbox"/>								
Discounted payback period (DPB)	<input type="checkbox"/>	Profitability index (PI)	<input type="checkbox"/>								
Accounting rate of return (ARR)	<input type="checkbox"/>	Real option theory	<input type="checkbox"/>								
Net present value (NPV)	<input type="checkbox"/>	Game theory decision	<input type="checkbox"/>								
Internal rate of return (IRR)	<input type="checkbox"/>	Non financial decision rules (please specify):	<input type="checkbox"/>								
Modified internal rate of return (MIRR)	<input type="checkbox"/>										

Please state if you use any other methods:

Please specify the relative usage of various supplementary capital budgeting methods/tools for incorporating risk and uncertainties (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = Always)

Capital budgeting methods	1	2	3	4	5	Capital budgeting methods	1	2	3	4	5
Sensitivity analysis/Break even	<input type="checkbox"/>	Market value added	<input type="checkbox"/>								
Scenario analysis	<input type="checkbox"/>	Complex mathematical model	<input type="checkbox"/>								
Monte Carlo simulations	<input type="checkbox"/>	Linear programming	<input type="checkbox"/>								
Decision trees	<input type="checkbox"/>	Shorter payback period (Adjusting the payback period)	<input type="checkbox"/>								
High cut off rates	<input type="checkbox"/>	Use of certainty equivalents instead of expected cash flows	<input type="checkbox"/>								
Uncertainty absorption in cash flows	<input type="checkbox"/>	Probability analysis	<input type="checkbox"/>								
Adjusting the required return	<input type="checkbox"/>										
Inflation adjusted cash flows	<input type="checkbox"/>										

4. Others (please specify):

Perceived Self-Efficacy and its Role in Fostering Pro-Environmental Attitude and Behaviours

Yoong Siew Wai*, Jamil Bojei, Syuhaily Osman and Nor Hashima Hashim

ABSTRACT

Manuscript type: Research paper

Research aims: This study examines perceived self-efficacy and its role in fostering pro-environmental attitude and behaviours.

Design/Methodology/Approach: This study employs a quantitative approach to explain the relationship among the variables. The data of 500 individuals are collected and then analysed through the partial least squared (PLS) approach.

Research findings: Results show that perceived self-efficacy has a positive influence on attitude; it enables individuals to orchestrate their capabilities in pursuing pro-environmental behaviours.

Theoretical contributions/Originality: This study expands on previous literature by adapting lifestyle-centric pro-environmental behaviour and social cognitive theory to identify the factors that motivate pro-environmental behaviours.

Practitioner/Policy implications: This study provides insights for marketers and other policy makers to better understand how perceived self-efficacy impacts the attitude and pro-environmental behaviours of individuals. The results imply that practitioners need to include attitude change campaigns and intervention programmes that can increase self-efficacy so as to encourage individuals to engage in more challenging environmental behaviours.

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Research limitation: Since this study focusses on the urban population of Malaysia only, the generalisability of the findings may be restricted. Future studies need to incorporate a larger and more diverse samples.

Keywords: Attitude, Intrinsic Motivation, Perceived Self-efficacy, Pro-environmental Behaviours, Social Cognitive Theory

JEL Classification: M310

1. Introduction

The climate changes that are currently occurring around the world is escalating at an alarming rate and this has impacted the ecosystems and threatened human health and safety. In response to these environmental problems, the United Nations (2015) stated that emphasis must be given to sustainable production and consumption practices throughout the world and across all levels of communities, whether public or private. In line with this emphasis, marketers and organisations have begun offering products and services that contain pro-environmental features. Although the production of environmental friendly products and services is encouraging, their take up rate is still low (Department for Business Innovation and Skills, 2013). It appears that the heightened awareness about environmental issues, and the government's initiatives towards nature restoration, and pro-environmental society promotions, have not been influential. The public's attitude towards pro-environmental behaviours is still lukewarm, as reported by the United Nations (2015). It highlighted a low indication of reducing usage or replacing non-environmental friendly products with pro-environmental products and services for sustainable consumption practice.

The findings of existing research (Yazdanpanah & Forouzani, 2015; Klöckner, 2013; Bauer, Heinrich, & Schäfer, 2012; Chen et al., 2011) speculate that the purchase intention towards pro-environmental products is influenced by several factors such as attitude, subjective norms and perceived behaviour control and the availability of facilities (Sheth, Sethia, & Srinivas, 2011; Ramayah, Lee, & Mohamad, 2010; Omran, Mahmood, Abdul Aziz, & Robinson, 2009) and information (Davies, Lee, & Ahonkhai, 2012; Sheth et al., 2011). In addition, current research (Evans, 2011; Sheth et al., 2011) also indicates that there is a spectrum of situational constraints that could affect sustainable behaviours, for instance, cost (Johnstone & Tan, 2015; Bucic, Harris

& Arli, 2012), perceived lower product quality (Johnstone & Tan, 2015; Baker, Davis, & Weaver, 2014; Haws, Winterich, & Naylor, 2014), distrust on environmental claims (Sheth et al., 2011) and limited accessibility (Davies et al., 2012). It was noted by Carrington, Neville and Whitwell (2010) that people's claim of their intention to consume sustainable products exceeds their actual behaviours.

This attitude-behaviour gap (Davies et al., 2012; Papaoikonomou, Valverde & Ryan, 2012; Phipps et al., 2013) demonstrates the incongruence of cognition and action as a hindrance to achieving and sustaining profound pro-environmental behaviours. When individuals face disparity between cognition (attitudes, beliefs or values) and behaviour, they will experience uncomfortable feelings. Premised on the theory of cognition dissonance, individuals always require consistency in beliefs, attitudes and behaviours. Therefore, if an inequilibrium occurs between these elements, individuals would experience discomfort. This discomfort then 'motivates' them to re-resonate between their beliefs and behaviours so as to attain a balance (Kroesen, Handy, & Chorus, 2017; Ratliff, Howell, & Redford, 2017; Johnstone & Tan, 2015; Juvan & Dolnicar, 2014). When there is dissonance between attitude and behaviour, individuals are more likely to adapt their attitude and maintain the original state of relationship (Kroesen et al., 2017). Studies (Poortinga, Whitmarsh, & Suffolk, 2013; Lin & Chang, 2012; Phipps et al., 2013; Wilcox, Vallen, Block, & Fitzsimons, 2009) indicate that there are various symptoms such as licensing effects and rebound effects (Akenji, 2014; Lin & Chang, 2012; Phipps et al., 2013; Miller, Rathouse, Scarles, Holmes, & Tribe, 2010; Mont & Plepys, 2008; Briceno & Stagl, 2006) which signify that pro-environmental behaviours may not be able to withstand in different spatial and temporal dimensions.

Studies (Howe & Krosnick, 2017; Celik & Yesilyurt, 2013; Visser, Bizer, & Krosnick, 2006) also denote that attitude is a significant predictor of behaviour and yet, the state of attitude is context-dependence (Davies et al., 2012; Papaoikonomou et al., 2012; Phipps et al., 2013; Mont & Plepys, 2008). Although attitude is one's inclination to respond to something positively or negatively, Kroesen et al. (2017) argued that attitude is a state of emotion directed towards a target subject and this can steer an individual's behaviour. Therefore, it is critical to understand the fundamental factors and the mechanisms that shape and sustain a desired attitude and the interaction these factors play in strengthening the relationship between attitude and behaviour. Since the defence mechanism for both attitude and behaviour is to be

environmental friendly, it is pertinent to identify the determinants for both attitude and behaviour as they are essential for the development of effective pro-environmental interventions. These determinants can be used by individuals in a sustainable and effective manner to instil pro-environmental behaviours across a wide spectrum of activities. Among all, self-efficacy appears to be a strong determining factor.

Perceived self-efficacy is the core in social cognitive theory. The theory states that an individual's collection of perceptions, assessments and regulations will direct his/her behaviour while responding to a complex web of environmental and social systems (Jin, 2013b; Bandura, 1991). Both the individual's attitude and behaviour are context dependent. They acknowledge external factors as the consideration factor for the underpinning behaviours. This study does not examine the individuals' perception with regards to the different social elements that may influence their pro-environmental behaviour adoption. Instead, this study seeks to investigate the resilience of attitude and behaviour. This study also aims to investigate whether perceived self-efficacy is able to provide a strong platform to sustain attitude and behaviour. In this regard, the current study aims to answer the following research questions:

- i) Does perceived self-efficacy discourage change in both attitude and pro-environmental behaviours?
- ii) Does perceived self-efficacy function as a shield to counter-balance factors such as self-doubt and second thoughts while the individual engages in pro-environmental behaviours?

The organisation of this paper is as follows: Section 2 outlines the theoretical dimension for the three main themes of the study namely: attitude, pro-environmental behaviours and perceived self-efficacy. Section 3 explains the methodology. Section 4 discusses the findings. Section 5 explains the implications of the study and Section 6 concludes.

2. Literature Review and Hypotheses Development

2.1 Lifestyle-Centric Pro-environmental Behaviours

The notion of pro-environmental behaviour is multidimensional; it is tagged with conflicting objectives thus there is a lack of consensus on its definition (Mont & Plepys, 2008). Pro-environmental behaviour is

multifaceted and it touches every point of the supply and demand chain. From the supply perspective, pro-environmental behaviour is relevant as it looks at the effective and efficient production processes and practices, while consumers prefer products which are convenient and affordable.

In order to understand the make-up of an individual who is pro-environment, it is essential to understand the process the individual goes through in acquiring the intention to minimise impact on the environment and to go beyond the point of consumption. Existing research (Shaw, McMaster, & Newholm, 2016; Jagers, Martinsson, & Matti, 2014; Moraes, Carrigan, & Szmigin, 2012) focus pro-environmental behaviour on a one-dimensional approach when combating climate change challenges. These studies are either product- or service-centric (for example, the adoption of environmental friendly products) or activity-centric (for example, recycling or green tourism). While environmental issues are multifaceted matters with spiralling effects, human behaviour is fluid and non-uniform. Therefore, pro-environmental behaviours can occur in an individual via different forms such as by purchasing energy efficient light bulbs for use, reusing packagings, switching from private to public transportations and others (Barr, Shaw, & Coles, 2011).

Scholars (Akenji, 2014; Leonidou & Leonidou, 2011; Sheth et al., 2011; Mont & Plepys, 2008) state that lifestyle-centric pro-environmental behaviours promote a better understanding of the role of consumption. It addresses environmental challenges, and it encourages pro-environmental adoption of both green and non-green products or services. Lifestyle-centric pro-environmental behaviours is an easier route for individuals because it increases the individuals realisation in making contributions to the environment. Carrington et al. (2010) stated that the availability of opportunity and situation is one of the factors deterring individuals from enacting their pro-environmental behaviour intentions. Under familiar settings and routines, individuals will experience a shorter learning curve when adopting pro-environmental behaviours, thus individuals can transit into the pro-environmental behaviour effortlessly.

As the individuals' alignment towards renewed pro-environmental behaviour is beyond consumption or utilitarian orientation (Shaw et al., 2016), this study will thus define pro-environmental behaviours with respect to individuals who modify their consumption behaviour by adopting any of the three sustainable modes of reduce, recycle and

reuse (Moraes et al., 2012). This study will not focus on the individuals' particular product or service orientation when dealing with the environmental phenomenon. In the context of this study, to reduce means to minimise household or domestic waste generated in daily activities (Sheth et al., 2011), reuse activities refer to the repeated use of things or materials either in part or whole, with its original function (Kirchherr, Reike, & Hekkert, 2017; Roberts & Bacon, 1997), for example clothings and furniture, and recycle activities refer to the repurposing of things which cannot be reused (Papaoikonomou et al., 2012; Rezaei, Teng, Mohamed, & Shamsudin, 2012), for instance glass bottles recycled into vases. These three modes of pro-environmental behaviour and their benefits are noted in various studies (Akenji, 2014; Leonidou & Leonidou, 2011; Sheth et al., 2011; Mont & Plepys, 2008; Steinhorst, Klöckner, & Matthies, 2015).

2.2 *Attitude*

Attitude is a latent layer of reference point in an individual's cognitive process. It is the affection an individual holds towards a specific product, brand or behaviour (Bhattacharyya & Cummings, 2014; Secchi, 2009). Attitude can also be the state of an emotion, whether negative or positive, acting as a precursor for the pro-environmental behaviour. At the helm of the individual's thought process, attitude drives behavioural change. Considering that attitude can predict behaviour, it is important to understand when and which kind of attitude can predict behavioural change so as to understand how individuals behave in relation to environmental issues (Miller & Peterson, 2004; Clary et al., 1998).

Having a positive attitude towards pro-environmental activities such as ecotourism (Zhang & Lei, 2012) is a precursor of the individual's behavioural intention (Carrington et al., 2010). This can generate an active involvement in pro-environmental behaviours (Cho, Thyroff, Rapert, Park, & Lee, 2012). However, Cornelissen, Pandelaere, Warlop and Dewitte (2008) asserted that attitude towards ecological behaviours can be changed, moulded and influenced. This can be achieved by understanding the component elements and by exploring the positive cues that can increase the participation of environmental behaviours. In this regard, the following hypothesis is developed:

H₁: There is a positive relationship between attitude and pro-environmental behaviours.

2.3 Social Cognitive Theory – Perceived Self-efficacy

Sustainable behaviour is motivated by intrinsic and extrinsic factors which include the individual's characteristics and the conversion incentives of the environment (Caruana, Carrington, & Chatzidakis, 2015; Shaw et al., 2016; Breunig, Murtell, Russell, & Howard, 2014; McDonagh & Prothero, 2014; Moraes et al., 2012; Soyeze, 2012; Videras, Owen, Conover, & Wu, 2012). Intrinsic factors are the internal elements that drive the individuals to perform something while extrinsic factors are related to external motivations.

In a situation where there is disagreement between the individual's cognition and behaviour, the individual would experience uncomfortable feelings. This motivates the individual to re-resonate between his/her beliefs and behaviour so as to attain equilibrium. This is because the individual has an inner drive to harmonise the cognition and the behaviour so as to reduce the discomfort, thereby restoring balance and consistency of cognition and behaviour (Juvan & Dolnicar, 2014; Poortinga et al., 2013).

The social cognitive theory provides a clearer way of understanding how the individual's behaviour functions by giving focus to self-efficacy. According to Bandura (2001), self-efficacy is one of the important concepts in human functionality. It is the core determinant for an individual to regulate and reflect on his/her own behaviour (Bandura, 1991). It is not a genetically endowed personality trait, rather it highlights an individual's goal-oriented capability of coordinating his/her skills and abilities so as to achieve the desired goal in a particular sphere. The individual's self-efficacy beliefs are established across spatial and temporal variations and experiences.

Self-efficacy is the self-evaluation of one's capability and controllability (Gist, 1987). An individual makes a decision based on his/her own reflection of his/her capabilities and abilities. It is the belief which the individual has of him/herself in managing the ability to achieve a desired goal (Ajzen, 2002; Ryan & Deci, 2017). According to Bandura (1991), self-efficacy is the individual's self-system. It helps the individual to monitor and gauge his/her personal standard; it also helps the individual to evaluate different aspects of his/her behaviour and reaction according to post-performance behaviours. Individuals with high self-efficacy believe that they have the capability to act towards the desired goal while individuals with low self-efficacy will not pursue the desired goal because they perceive the task to be beyond their capability.

This phenomenon can occur even in the presence of opportunities within their surroundings (Jin, 2013b; Bandura, 1991).

The belief in self-efficacy is a manifestation of self-confidence within a given environmental setting. It leads an individual to invest his/her efforts into a pattern of thoughts, whether optimistic or pessimistic (Bandura, 1991, 2001). Self-efficacy belief can influence the way people cope with efficacy. It also helps to shield people from mental pressure, subsequently strengthening their attitude towards an object. Individuals with a higher level of perceived self-efficacy are confident of their own effectiveness and competencies. Their actions are based on a clear understanding and awareness about the consequences and implications. Self-efficacy can also cushion attitude change due to negative feelings such as anxiety which arose from uncertainty or barriers encountered while performing certain pro-environmental activities. Undoubtedly, individuals with higher perceived self-efficacy will proactively be sourcing for satisfaction solutions to overcome such barriers. Therefore, perceived self-efficacy can be a resistance to any counter persuasion since it enables the individual to maintain his/her behaviour across times and settings (Bandura, 1991, 2001; Vallacher & Wegner, 1989). In this regard, self-efficacy belief can consequently determine whether people would react positively or negatively in a particular situation.

The social cognitive theory predicts that people who see attitude as important and relevant to self-efficacy not only develop favourable attitudes towards sustainable behaviour, they also have higher levels of attitude stability (Moore & Homer, 2008; Glasman & Albarracín, 2006). The theory states that perceived self-efficacy has an effect in fostering the attitude which maintains the consistency of attitude-sustainable behaviour relationship. The theory also maintains that perceived self-efficacy serves as a dual mechanism on attitude and behaviour. Premised on the confidence in capabilities, it helps the individual to execute a goal. Perceived self-efficacy can function as a navigation tool which orchestrates the individual's resources towards a goal. It also enables the individual to counteract other external factors that challenge the individual's attitude. Based on the above discussions, this study hypothesised that perceived self-efficacy is able to mitigate the effect of environmental deficiencies which impede the individual from pursuing his/her pro-environmental goal persistently. Thus, the current study aims to examine the effect of perceived self-efficacy on both attitude and pro-environmental behaviours. The hypotheses thus formulated are as follows:

H₂: There is a positive relationship between perceived self-efficacy and attitude.

H₃: There is a positive relationship between perceived self-efficacy and pro-environmental behaviours.

The three hypothetical relationships formulated for this study are depicted in Figure 1.

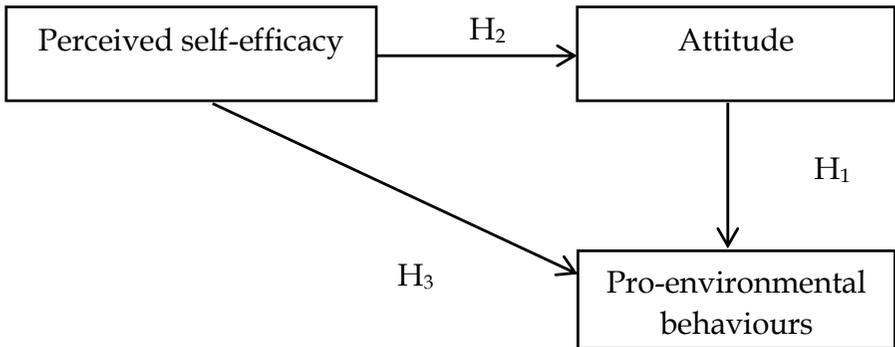


Figure 1: Research Framework

3. Methodology

3.1 Measure of Constructs

The constructs used in this study were adapted from literature to suit the context of this study (Appendix 1). In this regard, human behaviour is considered to be a fluid-like substance and is non-uniform and pro-environmental behaviours is deemed to occur within an individual through different modes such as reduce, re-use and recycle (Barr et al., 2011). Pro-environmental behaviours is operationalised as a wide spectrum of daily activities. For the purpose of this study, twelve items were adapted from scholars (Memery, Megicks, Angell, & Williams, 2012; Rezai et al., 2012; Han, Hsu, & Lee, 2009; Welsch & Kühling, 2009) to measure the pro-environmental behaviours, thirteen items were adapted from Jin (2013a, 2013b) and Schwarzer and Jerusalem (1995) to measure perceived self-efficacy and eight items were adapted from Boschetti, Richert, Walker, Price, and Dutra (2012) to measure attitude.

3.2 Survey Administration and Sample

This study employs the survey method. A questionnaire was developed based on the constructs adapted from literature so as to test the conceptual model and the hypotheses. The questionnaire was then piloted on 20 individual respondents. The feedback (e.g., inconsistency of wording, unclear or ambiguous items) from the pilot study was then used to refine the questions for a larger study.

Stratified random sampling technique was applied based on geographical location so as to avoid cases where members of the population would be significantly over or under represented (Churchill, 1996). This is an important consideration because in Malaysia, the local authorities are responsible for waste management. Consequently, the variations and effects across different geographical areas were considered. The samples were divided into five geographical regions of Malaysia: Northern, Central, Southern, the East Coast of Malaysia and East Malaysia. Thirteen towns were selected from these five geographical regions as shown in Table 1.

The distribution of the questionnaire was conducted based on the mall-intercept technique. For each of the towns selected, we identified a list of shopping malls. A call was made to the respective management of these shopping malls to obtain the number of mall visitors who visited

Table 1: Town and Shopping Malls Selected

Regions	Towns	Shopping Malls
Central	Petaling Jaya Damansara Utama Subang Jaya	One Utama Tropicana City Mall Subang Parade
Northern	Seberang Jaya George Town Air Hitam	Sunway Carnival Mall Gurney Plaza Sunshine Farlim Mall
Southern	Plentong Nusa Damai Johor Bharu	Giant Plentong Mall ECO AEON Tebrau
East Coast	Bentong Kuantan	Bentong Vega Mall Kuantan City Mall
East Malaysia	Kota Kinabalu Kuching	Imago Vivacity Megamall

each day. Based on the share of the shopping malls, we further selected one specific shopping mall. Permission to distribute the questionnaires was granted by the respective mall management prior to commencing the survey.

This study employed quota sampling as an approach where we selected 200 shoppers as our participants for each of the shopping mall. Prospective respondents were politely recruited as they exited from the mall. These participants, however, had to fulfil the selection criteria which encompass ethnicity, gender, age distribution, day of week and time of day so as to avoid systematic biases. A total of 2,600 questionnaires were distributed and the survey was conducted from 28 March 2015 to 2 September 2015 including weekdays and weekends. This helped to ensure that a wider range of profiles could be captured. Of the 2,600 questionnaires distributed, only 500 responses were obtained, generating 19 per cent response rate.

Table 2 depicts the respondents' profile. Sixty seven per cent of the respondents were Malays and Bumiputera, 25 per cent were Chinese, and eight per cent were Indians and others. Gender-wise, 52 per cent of the respondents were males and 48 per cent were females. This study include respondents aged 18 years old and above with 43 per cent being in the 18-35 age while 57 per cent were above 35 years old. About 68 per cent of the respondents were married with one out of two (50 per cent) married respondents having 1-2 children. The survey noted that

Table 2: Respondents' Profiles

	Frequency	Percentage
Region		
Central	225	45
Northern	50	10
Southern	85	17
East Coast	40	8
East Malaysia	100	20
Gender		
Male	260	52
Female	240	48
Ethnicity		
Malays and Bumiputera	335	67
Chinese	125	25
Indians and others	40	8

Table 2: (continued)

	Frequency	Percentage
Age		
18 - 25 years old	75	15
26 - 35 years old	140	28
36 - 45 years old	100	20
46 - 55 years old	85	17
56 years old and above	100	20
Marital status		
Married	339	68
Single	161	32
Number of children		
None	50	10
1-2	250	50
3-4	170	34
>5	30	6
Household size		
1-2 persons	46	9
3-4 persons	196	39
5-6 persons	186	37
7 persons or more	72	14
Highest level of education attained		
Primary or less	4	1
Secondary	78	16
Form 6/Pre-University or equivalent	35	7
College/Diploma/Vocational education or equivalent	142	28
Degree	171	34
Master degree and above	65	13
Professional courses/program	5	1
Employment		
Middle management or higher	87	17
Professional staff/supervisor/leader/engineer	123	25
Support staff/non-executive staff/administrative	111	22
Self-employed	81	16
Unemployed, students, retirees and housewives	98	20
Monthly personal gross income		
Less than RM2,000	132	26
RM2,000 - RM3,999	182	37
RM4,000 - RM5,999	96	19
RM6,000 - RM7,999	41	8
RM8,000 and above	50	10

39 per cent of the households comprised three to four members while 37 per cent stated that there were 5-6 persons in their households. From the socio-economic status, majority (76 per cent) of the respondents had attained at least a diploma or higher-level qualifications and 64 per cent of them were employed. Around 37 per cent reported having a monthly personal gross income of RM4,000 and above while 62 per cent claimed that their incomes were below RM4,000. Majority of the respondents were also above the Malaysian individuals' median monthly salaries and wages, specifically RM1,700 per month. This figure is in line with the statistics published by Khazanah Research Institute (2014).

4. Analysis and Findings

4.1 Pro-environmental Behaviours' Profile

The respondents' pro-environmental related activities are shown in Table 3. The figure indicates that reducing consumption activities occur more when compared to the recycling or reusing activities. These results imply that the respondents were conscious when it comes to utility consumption, specifically electricity and water consumption (Welsch & Kühling, 2009).

4.2 Measurement Model

A measurement model comprising all the three constructs, specifically pro-environmental behaviour, perceived self-efficacy and attitude were evaluated for validity and reliability. Traditionally, Cronbach's alpha is used to assess the internal consistency in social science research. However, applying Cronbach's alpha in PLS-SEM tends to generate conservative measurements and several researchers (Bagozzi & Yi, 1988; Hair, Sarstedt, Ringle, & Mena, 2012) have suggested using composite reliability as a replacement. In the context of this study, the internal consistency of the model was thus evaluated based on the composite reliability values. As depicted in Table 4, all the constructs have composite reliability of above 0.708, indicating that all the items are measuring the same phenomenon and they correlated highly with the respective constructs (Hair, Hult, Ringle & Sarstedt, 2014).

The measurement model was then assessed for convergent validity. Two dimensions were examined, namely (a) the outer loadings for each construct, where the outer loading value for all indicators should

Table 3: Activities Involve/Participate (percentage)

	Activities	Often	Occasionally	Never
Reduce	Reduce electricity consumption by turning off lights and using more energy efficiency appliances	89	11	0
	Make an effort to reduce water consumption	89	10	0*
	To buy fruits, vegetables and other groceries that are labelled as organic products	50	49	2
	Consciously choose to reduce consumption	75	24	0*
Recycle	Recycle plastics, glass, papers and other packaging materials	76	22	1
	Make use of recycling facilities	67	32	2
	Use recyclable shopping bags when going for shopping	64	33	3
	Store materials for recycling	74	25	1
	Separate and dispose all recyclable materials	68	30	2
Reuse	Reuse or amend items rather than throw them away	67	32	2
	Buy products in packages that can be refilled	73	26	1
	Look for ways to reuse things	69	29	1

Note: * Indicates less than 1%.

be above 0.7 or higher for further investigation, and (b) the average extracted variance (AVE) where all constructs should reach above the critical value of 0.5 (Chen & Peng, 2012; Parzefall & Kuppelwieser, 2012; Hair, Black, Babib & Anderson, 2009; Reisinger & Mavondo, 2007). In this study, both the outer loadings and the AVE were examined simultaneously. This step was performed so as to determine whether the removal of any item needs to be done so as to increase the AVE value. Any item with an outer loading of below 0.4 was eliminated (Hair et al., 2014). There were two items with outer loadings below 0.4 specifically, ATT3 and ATT4. Removal decision for these indicators was made using

Table 4: Convergent Validity

		Outer Loading	Composite Reliability	AVE
<i>Attitude (ATT)</i>			0.876	0.614
ATT1	I am personally committed toward preventing environmental problems.	0.801		
ATT2	I am personally committed toward improving environmental problems.	0.807		
ATT3	Environmental problems are as important as many other problems facing by the world today.	Deleted		
ATT4	I am concerned about environmental problems because of the potential consequences on my wealth.	Deleted		
ATT5	I am concerned about environmental problems because of the potential consequences on my lifestyle.	0.719		
ATT6	I am concerned about environmental problems because of the potential consequences on my health.	0.757		
ATT7	I am concerned about environmental problems because of the potential consequences on my community.	0.832		
ATT8	I am concerned about environmental problems because of the potential consequences on the world.	0.780		
<i>Perceived self-efficacy (PSE)</i>			0.942	0.590
PSE1	I can practice pro-environmental activities very easily.	0.717		
PSE2	I think that my ability to adopt pro-environmental lifestyle is greater than others.	0.735		
PSE3	I am able to understand the ways of sustaining the environment and apply it effectively.	0.770		
PSE4	I can solve difficult problems if I try hard enough.	0.723		
PSE5	If someone opposes me, I can find the means and ways to get what I want.	0.630		
PSE6	It is easy for me to stick to my aims and accomplish my goals.	0.785		
PSE7	I am confident that I could deal efficiently with unexpected events.	0.829		

Table 4: (continued)

		Outer Loading	Composite Reliability	AVE
PSE8	Thanks to my resourcefulness, I know how to handle unforeseen situations.	0.810		
PSE9	I can solve most problems if I invest the necessary effort.	0.806		
PSE10	I can remain calm when facing difficulties because I can rely on my coping abilities.	0.758		
PSE11	When I am confronted with a problem, I can usually find several solutions.	0.815		
PSE12	If I am in trouble, I can usually think of a solution.	0.828		
PSE13:	I can usually handle whatever comes my way.	0.757		
<i>Reduce</i>			0.771	0.597
ReD1	Reduce electricity consumption by turning off lights and using more energy efficiency appliances.	0.754		
ReD2	Make an effort to reduce water consumption.	0.850		
ReD3	Try to buy fruits, vegetables and other groceries that are labelled as organic products.	0.655		
ReD4	Consciously choose to reduce consumption.	0.817		
<i>Recycle</i>			0.900	0.715
ReC1	Recycle plastics, glass, papers and other packaging materials.	0.856		
ReC2	Make use of recycling facilities.	0.840		
ReC3	Use recyclable shopping bag when going for shopping.	0.785		
ReC4	Store materials for recycling.	0.875		
ReC5	Separate and dispose all recyclable materials.	0.868		
<i>Reuse</i>			0.896	0.827
ReU1	Reuse or amend items rather than throw them away.	0.909		
ReU2	Buy products in packages that can be refilled.	0.902		
ReU3	Look for ways to reuse things.	0.917		

Note: ATT 3 and ATT4 were excluded from further analysis, as they have loadings below 0.4.

the AVE as a guideline. When the first item (ATT3) was removed from Attitude (ATT), the ATT's AVE value increased from 0.477 to 0.545; and upon removal of the second item (ATT4), the result of the AVE for ATT rose even further to 0.614. Consequently, these two items were removed from ATT.

In this study, discriminant validity was also performed to ensure that no constructs overlapped, and that each individual construct is unique and distinct from other constructs. Three methods of the PLS-SEM were used to validate the discriminant validity (Hair et al., 2014) namely: (a) cross loading, (b) Fornell-Larcker criterion, and (c) Heterotrait-Monotrait Ratio (HTMT). Cross loading assessment was done to assess whether each item's outer loading on an associated construct is greater than the loadings on the other constructs. Table 5 shows all the items for each construct that meets the cross loading criteria, where all the items loaded highly on their respective construct, as compared to other constructs. All the constructs were also found to satisfy the Fornell-Larcker criterion (Hair et al., 2014), where the diagonal value, which is the squared root of the AVE of a specific construct, was found to be greater than the cross-correlation with other constructs (Table 6).

Discriminant validity was further analysed using the Heterotrait-Monotrait Ratio (HTMT), which compares the correlation of items across constructs to measure different phenomena and the correlation of items within the same construct for the same phenomena (Hair et al., 2014; Henseler, Ringle, & Sarstedt, 2014). The bootstrapping on HTMT inference yielded HTMT values that were significantly lower than 1 (Table 7).

Taken as a whole, all the constructs in the study were found to satisfy the validity and reliability assessments. In this study, the pro-environmental behaviours (PEB) being discussed were composed of three modes: reduce, reuse and recycle. Hence, the remaining analysis of this study will be based on the second order construct so as to assess the significant effect between the independent and the dependent variables in a parsimonious model. The second order construct for PEB was found to be valid and reliable where its composite reliability value is above 0.708 (Hair et al., 2014), and the average variance extracted (AVE) is greater than 0.5 (Chen & Peng, 2012; Parzefall & Kuppelwieser, 2012; Hair et al., 2009; Reisinger & Mavondo, 2007) (Table 8). Therefore, the second order construct for PEB is now ready for the next stage of assessment (Table 9).

Table 5: Discriminant Validity – Cross Loading

	ATT	PSE	Reduce	Recycle	Reuse
ATT1	0.801	0.568	0.456	0.418	0.465
ATT2	0.807	0.585	0.478	0.452	0.464
ATT5	0.719	0.430	0.255	0.238	0.261
ATT6	0.757	0.375	0.224	0.225	0.255
ATT7	0.832	0.520	0.345	0.367	0.404
ATT8	0.780	0.490	0.293	0.315	0.369
PSE1	0.618	0.717	0.427	0.443	0.451
PSE2	0.511	0.735	0.343	0.356	0.371
PSE3	0.636	0.770	0.395	0.409	0.443
PSE4	0.567	0.723	0.228	0.242	0.331
PSE5	0.379	0.630	0.246	0.146	0.245
PSE6	0.426	0.785	0.306	0.276	0.325
PSE7	0.430	0.829	0.272	0.300	0.344
PSE8	0.393	0.810	0.272	0.287	0.316
PSE9	0.476	0.806	0.230	0.241	0.303
PSE10	0.426	0.758	0.257	0.262	0.307
PSE11	0.526	0.815	0.342	0.256	0.322
PSE12	0.496	0.828	0.308	0.252	0.304
PSE13	0.343	0.757	0.223	0.211	0.273
ReD1	0.326	0.307	0.754	0.470	0.417
ReD2	0.372	0.298	0.850	0.531	0.474
ReD3	0.310	0.291	0.655	0.436	0.452
ReD4	0.394	0.336	0.817	0.561	0.497
ReC1	0.376	0.273	0.591	0.856	0.593
ReC2	0.372	0.361	0.605	0.840	0.638
ReC3	0.361	0.311	0.494	0.785	0.580
ReC4	0.387	0.328	0.508	0.875	0.666
ReC5	0.388	0.355	0.546	0.868	0.696
ReU1	0.432	0.350	0.520	0.750	0.909
ReU2	0.429	0.415	0.535	0.630	0.902
ReU3	0.471	0.459	0.571	0.668	0.917

Table 6: Discriminant Validity – Fornell-Lacker Criterion

	ATT	PSE	Recycle	Reduce	Reuse
ATT	0.783				
PSE	0.645	0.768			
Recycle	0.446	0.385	0.845		
Reduce	0.456	0.399	0.650	0.773	
Reuse	0.488	0.448	0.752	0.596	0.910

Table 7: Discriminant Validity – Heterotrait-Monotrait ratio (HTMT)

	ATT	PSE	Recycle	Reduce	Reuse
ATT					
PSE	0.671				
Recycle	0.482	0.401			
Reduce	0.529	0.454	0.779		
Reuse	0.531	0.474	0.835	0.720	

Table 8: Result Summary for Validity and Reliability Tests for Pro-Environmental Construct

	Composite Reliability	AVE	Discriminant Analysis
Reduce	0.771	0.597	YES
Recycle	0.900	0.715	YES
Reuse	0.896	0.827	YES

Note: Indicator reliability = Outer loading with the power of 2.

Table 9: Weights of First-Order Constructs on the Designated Second-Order Construct

Second Order construct	First Order construct	Weights	t-values	p-values
Pro-environmental behaviours (PEB)	Recycle	0.936	146.458	0.000*
	Reduce	0.820	45.688	0.000*
	Reuse	0.882	65.408	0.000*

Note: *Significant value at 0.001.

All the constructs hypothesised in the present study were examined. There was no evidence to indicate collinearity between the constructs (Table 10). This outcome is further supported by the VIF values for all the constructs which is less than 5 (Hair et al., 2014).

Table 10: Collinearity Assessment: Inner Variance Inflation Factor (VIF) Values

	ATT	PEB
ATT		1.880
PSE	1.467	2.157

4.3 Structural Model Analysis

The structural model relationships were examined for their significance and also to test the hypotheses. Through bootstrapping with an iteration of 2,500, the examination of the hypotheses was based on a significance level of five per cent, (5%), on the one-tail test with a t-value of above 1.645. As shown in Table 11, the relationship between attitude (ATT) and pro-environmental behaviours (PEB) was found to be positive ($\beta=0.290$; $t=5.702$; $p<0.05$) while perceived self-efficacy (PSE) was found to have a positive relationship with attitude (ATT) ($\beta=0.478$; $t=10.607$; $p<0.05$).

Table 11: Path Coefficients

Hypotheses	Path	Path Coefficients	t-values	p-values	Results
1	Attitude (ATT) → pro-environmental behaviours (PEB)	0.290	5.702	0.000*	accepted
2	Perceived self-efficacy (PSE) → attitude (ATT)	0.478	10.607	0.000*	accepted
3	Perceived self-efficacy (PSE) → pro-environmental behaviours (PEB)	0.060	1.098	0.136	rejected

Note: *Significance level, $p<0.05$, t-value at one-tail = 1.645.

Therefore, H_1 and H_2 were supported. In contrast, the relationship between perceived self-efficacy and pro-environmental behaviours was found to be not significant ($\beta=0.060$; $t=1.098$; $p>0.05$). Therefore, H_3 was rejected. Table 11 shows the results of the hypothetical relationships.

As H_3 was rejected, this study performed an additional subgroup analysis to further determine whether the result will remain similar with respondents who have higher pro-environmental behaviours. The derived mean score for pro-environmental behaviours was dichotomised into two different levels which include a high level with a score above the mean score and a low level where the score is below the derived mean score for pro-environmental behaviours. Group 1 featured respondents with high engagement in pro-environmental behaviours and Group 2 featured respondents with low engagement in pro-environmental behaviours.

The result drawn from Group 1 showed a positive relationship between perceived self-efficacy and pro-environmental behaviour. In contrast, there was no significant relationship between perceived self-efficacy and pro-environmental behaviour among Group 2 respondents with low levels of pro-environmental behaviour ($\beta=-0.011$; $t=0.123$, $p>0.05$) (Tables 12 and 13).

Table 12: Path Coefficients among High Level of Pro-Environmental Behaviours

	Path Coefficients	t-values	p-values
Perceived self-efficacy (PSE) → pro-environmental behaviours (PEB)	0.138	1.871	0.031*

Note: * Significance level, $p<0.05$, t-value at one-tail = 1.645.

Table 13: Path Coefficients among Low Level of Pro-Environmental Behaviours

	Path Coefficients	t-values	p-values
Perceived self-efficacy (PSE) → pro-environmental behaviours (PEB)	-0.011	0.123	0.451

Note: Significance level, $p<0.05$, t-value at one-tail = 1.645.

5. Discussion

This study has examined the effect of perceived self-efficacy on attitude and pro-environment behaviours of 500 respondents. In line with H₁, attitude has a positive relationship with pro-environmental behaviours in daily activities. Perceived self-efficacy also has a positive effect on attitude. However, the positive relationship between perceived self-efficacy and pro-environmental behaviours was only reported by individuals with high levels of pro-environmental behaviours.

5.1 *Attitude and Pro-environmental Behaviours*

Attitude can act as a reference frame for individuals to persist in reaching their desired behaviours (Akenji, 2014) since attitude has a significant relationship with pro-environmental behaviours, as supported by existing findings (White & Simpson, 2013; Cho et al., 2013; Zhang & Lei, 2012; Carrington et al., 2010; Ramayah et al., 2010; Welsch & Kühling, 2009; Cornelissen et al., 2008; Follows & Jobber, 2000).

The individual's attitude towards pro-environmental behaviour is a high determinant of the individual's desire to improve his/her living conditions and in adapting to environmental issues. This is crucial for a country because environmental consequences create serious impacts on a community. Besides being influential as a predisposition that can cause potential consequences on the world, the individual's attitude towards a certain behaviour such as health and lifestyles can also create consequences leading to environmental problems. This observation is also supported by previous findings (Akenji, 2014; Bucic et al., 2012; Sheth et al., 2011) which showed that individual goals and standards are the key motivating factors for individuals to adopt sustainable behaviours such as showing higher relevancy and closeness to environmental issues, showing greater favourable attitude towards pro-environmental behaviours, and having lesser psychological distance with the environment (Cornelissen et al., 2008).

5.2 *Perceived Self-efficacy and Attitude*

The social cognitive theory states that perceived self-efficacy has a significant impact on attitude. Likewise, the result of this study shows that perceived self-efficacy has a significant positive effect on attitude, thereby supporting the theory and is consistent with existing literature

(Jiang, 2015; Jin, 2013b; Moore & Homer, 2008). It appears that perceived self-efficacy can steer an individual's attitude towards self-confidence in efficiently dealing with unexpected events; it also encourages self-initiated solutions besides assisting the individuals in formulating alternate solutions for handling unforeseen situations.

Individuals have acknowledged that perceived self-efficacy enable their actions to be goal-oriented; it also helps them to understand and apply effective ways of sustaining the environment, including coping, handling and adopting capabilities that correspond to the environmental activities and lifestyles (Wilcox et al., 2009). Perceived self-efficacy can make individuals believe in their own efforts; it further enhances the individuals' confidence to practise pro-environmental activities with ease and so become capable of finding the resources, means and ways to react to any counteractions. This can subsequently lead to the development of a positive and confident attitude (Zunick, Teeny, & Fazio, 2017).

The positive influence of perceived self-efficacy on attitude further suggests that perceived self-efficacy serves as a psychological mechanism which maintains and increases the individual's evaluation of his/her internal quality. Perceived self-efficacy plays a significant role in reinforcing attitude formation. This is supported by the social cognitive theory which states that an individual's belief in his/her ability to perform will have some effect on the selection process which regulates one's behaviours, one's coping capabilities, one's level of motivation, and one's goal accomplishment. It not only affects human functioning directly, but also indirectly, through its impact on other important determinants such as the selection process, motivation, affection or attitude (Bandura, 1993, 2001). Therefore, perceived self-efficacy occupies a focal and pervasive pivotal role in causal structures.

5.3 Perceived Self-efficacy and Pro-environmental Behaviour

The outcome drawn from this study does not support the hypothesised direct influence of perceived self-efficacy on pro-environmental behaviours. Nonetheless, further analysis of the effect of perceived self-efficacy on different levels of pro-environmental behaviour revealed that the relationship between perceived self-efficacy and pro-environmental behaviours is significant, particularly among those whose pro-environmental behaviour engagement is high. Results indicate that the

higher the perceived self-efficacy is, the higher one's self-confidence in contributing to the environment through one's behaviour. This drives a higher level of pro-environmental engagement. The findings of this study suggest that high pro-environmental behaviour adoption is attributed to individuals who are confident that they can manoeuvre the challenges associated with pro-environmental behaviours.

In summary, this study has expanded knowledge on the stability of attitude and behaviour. This study also suggests that perceived self-efficacy has a direct influence on attitude. The positive relationship between perceived self-efficacy and attitude implies that perceived self-efficacy can strengthen one's attitude towards sustainable behaviour. With the presence of perceived self-efficacy, individuals will be more determined and more conscious of the consequences and effects of their own actions. They are also able to ascribe to the rationale of 'why' they acted in a certain way. As such, individuals will be consistent in their behaviour over time. Such individuals will choose an action that is aligned to their own capacity as supported by their own experiences (Steinhorst et al., 2015; Vallacher & Wegner, 1989).

Perceived self-efficacy is a cognitive evaluation process. It functions in self-evaluation and is subsequently transmitted to attitude formation (Jiang, 2015). The efficacy belief posits significant motivating effects, where the belief influences an individual to adapt or make necessary changes corresponding to the situation; either through own behaviour or by influencing surrounding characteristics. The current results contribute to current literature not only by expanding the understanding of the contributing factor in building the strength of attitude and behaviour but also by providing evidence which depicts that perceived self-efficacy can be a resistance to counter persuasions (Cheatham & Tormala, 2015).

5.4 Implications

The empirical evidence of this study points towards the congeniality of lifestyle-centric pro-environmental behaviours in daily routines within the personal setting. Driven by their attitude towards pro-environmental behaviours, individuals will strive to balance their environmental concerns with their capabilities and capacities (perceived self-efficacy).

Majority of the respondents in this study reported that they frequently and consciously reduce utility and other consumptions when compared to recycle and reuse activities. This may be explained by the fact that behaviour occurs in a personal setting and when

coupled with a high level of perceived self-efficacy, the behaviour will contribute to lower adoption barriers. It is easier for the individuals to adopt consumption reduction as there is no need to seek external assistance unlike the other two activities of reuse and recycle which are subjected to external factors. For example, recycling facilities and the nature of reusing packagings rely on the support provided by external organisations. Therefore, policy makers need to strategise so as to target different levels of pro-environmental behaviour adopters. Doing so can facilitate self-help among the general public thereby, sustaining their pro-environmental behaviours.

Acknowledging that the adoption level of pro-environmental behaviour is different between individuals, this study has highlighted that perceived self-efficacy exerts different modus orientations to diffuse the behaviour. Since perceived self-efficacy can lead to high pro-environmental behaviour engagement, it is essential for marketers and the government to provide an environment that is conducive and does not limit behaviours.

The findings of this study can be used as a guideline by marketers to develop their persuasion tools which can engage and educate environmental information seekers and subsequently, institutionalise pro-environmental attitudes into the daily activities of the society (Breunig, Murtell, Russell, & Howard, 2014; Hullett & Boster, 2001). Even though this study could not yield sufficient evidence to support that perceived self-efficacy has a direct influence on pro-environmental behaviours adoption, there is a probability that perceived self-efficacy exerts divergent effect on different levels of pro-environmental behaviours. There was an evident positive relationship between perceived self-efficacy and behaviour among high level adopters. This implies that when individuals engage in pro-environment behaviour in their daily activities, the experiences are similar to the actual competencies required in their daily behaviour.

Since self-efficacy has emerged as a factor that can promote attitude and encourage a behaviour that can resist persuasion attempts, it is possible for a marketer to increase its intervention efforts by targeting specific control beliefs which can enhance controllability. Marketers could emphasise that it is possible that 'you' expose yourself and family members to disadvantages when 'you' disengage from pro-environmental behaviours. Campaigns should emphasise that pro-environmental behaviours can happen in daily activities without requiring extra efforts such as reduce, reuse and recycle.

The findings of this paper expand on literature by providing an understanding of the motivational factors underpinning pro-environmental behaviours which is beyond product or service usage. Responding to the suggestion of scholars (Akenji, 2014; Leonidou & Leonidou, 2011; Sheth et al., 2011; Mont & Plepys, 2008), this study shows that lifestyle-centric pro-environmental behaviour promotes a better understanding of the role of consumption when addressing environmental challenges. It also shows how pro-environmental behaviour adoption can be motivated across green and non-green products or services.

According to Carrington et al. (2010), situational factors act as important stimulus for individuals to participate in pro-environmental activities. The lifestyle-oriented pro-environmental behaviour examined in this study has set a good platform which is consistent with the dimensions characterised by Carrington et al. (2010), specifically (i) that the behaviour is in close proximity with the individuals' daily activities, requiring a minimal learning curve (physical surrounding and antecedent states), (ii) that individuals are highly involved in and have embedded pro-environmental behaviours within their daily roles (social surrounding and task definition), (iii) that since behaviour is part of a daily routine, there is no time lapse and the behaviour is repeated frequently (temporal perspective), and (iv) that there is lower perceived risk and uncertainty with regards to the outcome of a behaviour that is related to stronger attitude and behaviour engagement.

From the regulatory and marketers' perspectives, this study puts forward the opinion that lifestyle-centric pro-environmental behaviour provides a psychological 'lubricant', where the behaviour-situation fits and is non-intrusive to the individual's existing daily routine. The lifestyle approach possibly fosters pro-environmental behaviour participation, and so it is a plausible mechanism that can facilitate the narrowing of any psychological distance. This is achieved through the practical information gained from the daily routines (Caruana et al., 2015; van Dam & Fischer, 2015; Carrington, Neville, & Whitwell, 2012; Leonidou & Leonidou, 2011; Miller et al., 2010; Powell & Colyvas, 2008) hence, it minimises the information asymmetry issue. Furthermore, lifestyle centric pro-environment engagements are *personalised*, i.e. the individuals are able to relate to, and appreciate the pro-environmental activities. In that regard, they can re-calibrate the pro-environmental activities that will fit well into their values and beliefs.

6. Conclusion and Recommendation for Future Study

It is evident that the self-efficacy mechanism has a significant influence on attitude. The mechanism enables individuals to orchestrate their capabilities in managing their daily activities and in coping with the dynamic environmental sustainability issues (Ajzen, 2002; Bandura, 1993; Vallacher & Wegner, 1989). Perceived self-efficacy will reaffirm the self-determinant aspects of the individuals who are in search of solutions and the execution of strategies in dealing with prospective conditions.

Perceived self-efficacy enables individuals to preserve their pro-environmental behaviours, particularly among individuals who are highly engaged in pro-environmental behaviours (Bandura, 1982). This implies that when individuals encounter a counterintuitive environment that can possibly impede their pro-environmental behaviours, their perceived self-efficacy will be activated and these individuals will be prompted to find an alternative solution within their own capabilities and capacities to accomplish their desired behaviours.

This study has demonstrated that perceived self-efficacy makes attitude 'healthier' and resistant because it provides individuals with the supporting information and arguments needed to perform an action. Perceived self-efficacy is evidently, a potent predictor to attitude; it fortifies attitude towards pro-environmental behaviours. The finding of this study suggests that future research should examine the antecedents of perceived self-efficacy so as to enable a deeper understanding of the factors that contribute to an individual's active coping strategy.

This study is limited by the absence of a rural community which has different environmental settings, both in the public and private sphere, when compared to the urban setting. In addition, the self-reported statements of this study were based on the respondents' ability to recall past experiences of pro-environmental behaviours and not based on recent behaviours. Therefore, the retrospection of behavioural incidences could have been over-reported or under-reported unintentionally.

This study also suggests the possible presence of an intervening variable in the relationship between perceived self-efficacy and pro-environmental behaviours. The cues of the effect of self-efficacy on different levels of pro-environmental behaviours have given rise to possible self-monitoring efforts which play an important role in managing the attitude-behaviour relationship. Therefore, future research should consider investigating the contributing factors that amplify the

state of perceived self-efficacy among lower pro-environmental behaviour adopters by integrating self-regulatory theory insights to enrich the body of knowledge.

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Appendix 1: Measurement Items

Constructs and Items	Source
<p><i>Attitude</i></p> <ol style="list-style-type: none"> 1. I am personally committed toward preventing environmental problems. 2. I am personally committed toward improving environmental problems. 3. Environmental problems are not as important as many other problems facing by the world today. 4. I am concerned about environmental problems because of the potential consequences on my wealth. 5. I am concerned about environmental problems because of the potential consequences on my lifestyle. 6. I am concerned about environmental problems because of the potential consequences on my health. 7. I am concerned about environmental problems because of the potential consequences on my community. 8. I am concerned about environmental problems because of the potential consequences on the world. 	<p>Boschetti et al. (2012)</p>
<p><i>Perceived Self-efficacy</i></p> <ol style="list-style-type: none"> 1. I can practice pro-environmental activities very easily. 2. I think that my ability to adopt pro-environmental lifestyle is greater than others. 3. I am able to understand the ways of sustaining the environment and apply it effectively. 4. I can solve difficult problems if I try hard enough. 5. If someone opposes me, I can find the means and ways to get what I want. 6. It is easy for me to stick to my aims and accomplish my goals. 7. I am confident that I could deal efficiently with unexpected events. 8. Thanks to my resourcefulness, I know how to handle unforeseen situations. 9. I can solve most problems if I invest the necessary effort. 10. I can remain calm when facing difficulties because I can rely on my coping abilities. 11. When I am confronted with a problem, I can usually find several solutions. 12. If I am in trouble, I can usually think of a solution. 13. I can usually handle whatever comes my way. 	<p>Jin (2013a, 2013b)</p> <p>Schwarzer & Jerusalem (1995)</p>

Appendix 1: (continued)

Constructs and Items	Source
<p><i>Pro-environmental Behaviour</i></p> <ol style="list-style-type: none"> 1. Reduce electricity consumption by turning off lights and using more energy efficiency appliances. 2. Make an effort to reduce water consumption. 3. Try to buy fruits, vegetables and other groceries that are labelled as organic products. 4. Consciously choose to reduce consumption. 5. Recycle plastics, glass, papers and other packaging materials. 6. Make use of recycling facilities. 7. Use recyclable shopping bag when going for shopping. 8. Store materials for recycling. 9. Separate and dispose all recyclable materials. 10. Reuse or amend items rather than throw them away. 11. Buy products in packages that can be refilled. 12. Look for ways to reuse things. 	<p>Memery et al. (2012); Rezai et al. (2012); Han et al., 2009; Welsch & Kühling (2009).</p>

Sustaining Employees through Co-worker and Supervisor Support: Evidence from Thailand

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ABSTRACT

Manuscript type: Research paper

Research aims: This study aims to examine the effects of perceived co-worker and supervisor support on employees' intention to quit in the food and beverage industry in Thailand.

Design/Methodology/Approach: A total of 322 entry-level employees were recruited from one of Thailand's largest food and beverage company as respondents for our survey. Data were then analysed using the OLS regression.

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Research findings: Our results highlight that workplace social support as indicated by existing literature were predominantly conducted in Western countries and these were found to be inapplicable in the Thai context. Our study also highlights some inconsistent results between the different age group of workers.

Theoretical contributions/Originality: Our study expands on previous literature by making empirical contributions from the perspective of Thailand. As a collectivistic and feminine society, Thailand carries results that are different from the West. Our study also makes contributions by providing evidence drawn from the different age group perspective.

Practitioner/Policy implications: Companies in Asian countries should reconsider their strategies in retaining workers. Our results offer strategies that are guided by the outcome generated from an Asian context which is highly different from the Western context.

Research limitation/Implications: Since this study only focused on employees from one company, the generalisability of our results may be restricted.

Keywords: Co-Worker Support, Supervisor Support, Intention to Quit, Employee Retention, Employment Sustainment

JEL Classification: M12, M54, M59

1. Introduction

Employee retention began to manifest itself in the early 1900s and today, it has become a critical workforce challenge for many companies. The sharp decline of the working population has further aggravated the employee retention issue. According to the World Population Prospects 2015 forecasted by the United Nations, the fraction of the working age population (defined as population aged 15-64) for several countries in Asia are projected to decline sharply between 2015-2050 (e.g. from 72.6 per cent to 59.7 per cent for China; 73.1 per cent to 53.2 per cent for South Korea; 72.8 per cent to 55.4 per cent for Singapore; 70.2 per cent to 61.6 per cent for Vietnam; 71.4 per cent to 58.0 per cent for Thailand). This issue is compounded by Thailand's fast transition from its ageing society (defined as a population with proportion of seniors 65+ years old over 7 per cent) to an aged society (defined as a population with proportion of seniors 65+ years old over 14 per cent). The time duration expected for Thailand is 20 years shorter than most developed countries which take 50 to 100 years, with the exception of Japan. To illustrate, it took 69 years for the US to transition from an ageing society to an aged society;

65 years for Canada and 73 years for Sweden (Arshad & Bhat, 2013). If this changing atmosphere is not given due attention, many organisations in Thailand may no longer be able to sustain themselves as the long-term health and success of any organisation depends on its ability to retain employees (Presbitero, Roxas, & Chadee, 2016). Employees are the most vital and dynamic resources of any organisation (Gabčianová, 2011) in today's environment, hence the retention of high-quality workers will be one of the top priorities for most organisations in Thailand. Further, it is important for organisations in Asia in general, and Thailand in particular, to develop more effective retention strategies and practices because of the current high turnover rates, especially among the Millennial cohort (Supeli & Creed, 2016).

To date, there are extensive research (e.g. Price, 2001; Barak, Nissly, & Levin, 2001; Chiaburu & Harrison, 2008; Felps et al., 2009; Scott, Zagenczyk, Schippers, Purvis, & Cruz, 2014; Chadwick & Collins, 2015) conducted to explore the influence of social support in the workplace from co-workers and supervisors on other employees' intention to quit. Many studies (e.g., Scott et al., 2014; Chadwick & Collins, 2015) also found evidence which confirmed that co-workers and supervisors can help to reduce other employees' intention to quit. Different researchers (Beehr, Jex, Stacy, & Murray, 2000; Semmer et al., 2008; Tews, Michel, & Ellingson, 2013) have classified such social support in the workplace into two major categories: emotional support (providing support to someone psychologically such as showing empathy or social inclusion) and instrumental support (providing support to someone physically such as physically helping someone to complete a task). Other studies (e.g. Malecki & Demaray, 2003; Cohen, 2004; Scott et al., 2014; Chadwick & Collins, 2015) classified such social support at a more refined level comprising empathy, social companionship, encouragement and expressive support, work-related tangible support, work-related informational support, and non-work-related support.

While these studies seem to offer some insights into the value of workplace support, they were mainly conducted in western countries.¹ Therefore, the findings extracted from these studies may not be generalised to an Asian country such as Thailand due to their cultural, social and economic differences. Unlike the US (where most studies

¹ A few exceptions are Newman, Thanacoody and Hui (2011) who examined the influence of supervisor support on the intention to quit of workers in the context of Chinese employees, and Glazer (2006) who examined the influence of social support across cultures.

were conducted), Thailand differs in three cultural dimensions: i) power distance, ii) individualism, and iii) masculinity (Hofstede, 2001). Hence, it is expected that the impact of co-worker and supervisor support in Thailand would be influenced accordingly by these cultural dimensions. While culture is not the primary focus of this study, it is useful to explore whether the social support is applicable and generalisable to a country with a more collectivist culture, such as Thailand. As a developing country, Thailand's social and economic development (e.g. social security system, unemployment benefits, etc.) has not reached the development level experienced by many western countries. It is deemed that this phenomenon could further influence how co-worker and supervisor support can impact on workers' intention to quit.

This paper examines the influence of co-worker and supervisor support on workers' intention to quit (working) in the food and beverage (F&B) industry in Thailand.² The reason for selecting this particular F&B company was because the F&B industry appears to be one of the most popular economic segments in Thailand, with an annual growth rate of 14.3 per cent. It will be contributing to a market volume of USD136 million by 2022 (National Food Institute, 2018). This study chooses to focus on co-worker and supervisor support because such workplace support has a high tendency to play an important role in retaining workers in the F&B service. This is mainly because employees working in a high social intensity environment have been described as those who would typically need social support in the workplace (Barak et al., 2001; Glomb & Tews, 2004; Chiaburu & Harrison, 2008; Tews et al., 2013). This paper examines the effect of co-worker and supervisor support through the age factor: i) workers aged 15-24 (referred to as "young workers") and ii) workers aged 25+ (referred to as "older workers").³ It is believed that different age groups may have different responsiveness and expectations of social support. Findings from this study will shed more light on how organisations in Thailand and other countries that share similar cultural values may develop retention strategies that comply with their respective cultural contexts so as to reduce workers' intention to quit.

The remainder of this paper is organised as follows. Section 2 presents the literature review, section 3 discusses the theoretical framework

² To preserve the confidentiality of the company being surveyed, we cannot reveal the name of this company. However, this company is a listed company in the stock exchange of Thailand with more than 20,000 employees.

³ We use the definition of young workers from the International Labour Organisation (2010).

and hypotheses development while section 4 highlights the research method. Section 5 reports on the findings and results and section 6 concludes by providing the research implications and conclusion.

2. Literature Review

2.1 Intention to Quit and Employees' Retention

The terms "intention to leave" and "intention to quit" are often used interchangeably in studies looking at employee turnover. Tett and Meyer (1993) defined intention to leave as a worker's conscious and deliberate willingness to leave the organisation. Sharing the same perception, Cho, Johanson and Guchait (2009) described an employee's intention to quit as his/her voluntary decision to leave the present organisation. Employees' turnover rate has been highlighted as one of the sustainability issues by Global Reporting Initiative (GRI) (GRI, 2002). In 2015, it was reported that organisations lost USD60 million in assets due to employees' turnover (Bureau of Labour Statistics, 2015). In general, turnover is an undesirable event for employers due to the high cost of recruitment, training and the loss of productivity, leading to unsustainable business practices. In comparison, organisations with low employee turnover are more productive and profitable. They could expand their organisations and increase employment opportunities as well as promote positive social change through individuals and community development (Steiner & Atterton, 2014), thereby leading to sustainability performance. In this context, there is a need for managers to understand the factors that lead to employees' retention as well as the means of effectively managing an organisation.

Many researchers have investigated the reasons causing employees' intention to quit. Sheridan (1992) asserted that job embeddedness, the collection of forces that effect employee retention, is a mediator of the relationship between human resource practices and employees' intention to quit. He explained that job embeddedness fully mediates compensation and growth opportunity whereas it somewhat mediates supervisor support. Nevertheless, it does not mediate training which is related to employees' intention to quit. In addition, reward and compensation are one of the key drivers for employees' intention to stay. However, older generations tend to stay in the same industry whereas Millennials have more interests in trying out new industries. Using 170 retail sales people as samples, Firth, Mellor, Moore, and Loquet (2004)

investigated the impact of job satisfaction, stress, supervisors' support, locus of control, self-esteem and perceived stressors on workers' intention to quit. Their findings revealed that job dissatisfaction, lack of commitment to the organisation and feelings of stress, essentially trigger workers' intention to quit jobs. However, the problem of job stressors such as work overload, job ambiguity and stress that lead to workers' intention to quit can be reduced through supervisors' support. The study further highlighted that employees' job satisfaction and commitment to the organisation can be increased if the management monitors the workload and the relationship between supervisors and their subordinates effectively. In a similar note, Alén, Banerjee and Gupta (2017) asserted that supportive managers or supervisors act as a driver to their subordinates in generating intrinsic motivation towards their work, which is expected to help reduce workers' intention to quit.

Besides the above studies that had investigated the relationship between the intention to quit and job embeddedness, other researchers (Mathieu, Fabi, Lacoursière, & Raymond, 2016; Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002) have attempted to investigate employees' retention. For instance, Hausknecht, Rodda and Howard (2009) proposed that job satisfaction, extrinsic rewards, constituent attachments, organisational commitment and organisational prestige are relevant reasons for employees' retention. The study further proposed that high performers and non-hourly workers valued career advancement opportunities and organisational prestige while extrinsic rewards were more important among low performers and hourly employees. Eisenberger et al. (2002) examined the relationship between employees' perception of supervisor support (PSS), perceived organisational support (POS) and employee turnover. They found that PSS had a higher impact on employee turnover as compared to POS. These findings were attributed to the fact that supervisors engaged more with most employees on a daily basis than the upper level managers. Therefore, they were able to convey positive valuations, care and support better. Being viewed favourably by a supervisor may in turn enhance the socio-emotional needs of the employee. In a more recent study, however, Mathieu et al. (2016) implied that a supervisor having a person-oriented behaviour can impact the workers' intention to quit more than his/her task-oriented leadership behaviour.

Other organisational factors have been proposed to explain older employees' retention and turnover. Shacklock and Brunetto (2011), for example, found that the importance of work and the effects of

management (e.g. access to flexible working arrangements, supervisor support) served as indicators of older employees' intention to continue working. Among older nurses, it was found that attachment to the work itself was a key driver of older nurses remaining at work. This was coupled by the relationships built with others at work. In another survey conducted of older employees, it was found that the attractiveness of working hours, financial needs, the job itself and job security/stability were significant to older employees' intention to continue working (Radford, Shacklock, & Bradley, 2012). Other studies (e.g. Kundu & Gahlawat, 2015) focused on the role of social responsibility practices of the human resource (HR) in reducing turnover rate.

Reviews of the literature show that the issue of employee retention is a perpetual problem. Unresolved, it may lead to companies' inability to sustain themselves. While various factors have been incorporated in previous research, this study is only focusing on the support obtained from co-workers and supervisors. As this study is concentrating on the entry-level position workers only, both the support from co-workers and supervisors are expected to play a vital role. Entry-level positions in the F&B industry are commonly filled by fresh school leavers or fresh graduates waiting to secure more permanent jobs. As newcomers to the workplace, they may not be familiar with the work processes. In that regard, they may not have had the experience of developing psychological defences to hedge against environmental workplace pressures and challenges (Kang, Gatling, & Kim, 2015). As such, co-worker's and supervisor's support is highly important in determining their retention.

2.2 Co-worker and Supervisor Support

Social support in the workplace can be considered as one of the important factors affecting workers in various aspects such as job satisfaction, productivity and well-being. Cobb (1976) defined social support as an individual's belief that he/she is valued, loved and that his/her well-being is cared for as a component of a social network of mutual obligation. Beehr and McGrath (1992) described co-worker's social support as co-worker's willingness to assist one another (e.g., caring, being friendly, having warm relations, empathy, cooperation, no gossiping and back stabbing, appreciation, respect and support) in carrying out their daily tasks and in reducing troublesome or threatening circumstances. This can help to create a pleasant environment in the workplace (Frone, Russell, & Cooper, 1997). Bateman (2009)

claimed that co-worker support is a dimension of social support in the workplace. It refers to assistance received from co-workers when a worker is requested to perform an individual activity, for example, knowledge sharing, encouragement and emotional support.

Among the numerous studies which looked at the relationship between co-worker support and job satisfaction, the study conducted by Babin and Boles (1996) focused on the effect of co-worker support on emotional wellbeing. The results showed that co-worker support decreases strain, role stress and role conflict, hence improves emotional hygiene. Subsequent to that, Ducharme, Knudsen and Roman (2007) classified co-worker support into four categories: affective support (or emotional support, e.g. showing acceptance and caring); informational support (e.g. giving advice or guidance); instrumental support (material assistance); and social companionship (social networking). Using a sample of full-time employees in the US, it was revealed that the impact of instrumental support was stronger than affective support in creating job satisfaction. Both types of support, however, significantly helped to increase overall job satisfaction, which is expected to lead to employee retention. These findings align with the study done by Beehr et al. (2000) who indicated co-worker support as a dimension that would weaken the impact of stress and strain on high social-supported people. In relation to this, Limpanitgul, Robson, Gould-Williams and Lertthairakul (2013) discovered that the provision of support from people who share the same work experiences is more effective in helping one to overcome work-related stress as compared to support received from persons in out-groups. In this regard, co-worker support is beneficial in offering emotional support which is also associated with employee retention. Similar findings were documented in more recent research done in Korea (Kwon, 2017) and India (Mutsuddi & Sinha, 2017). These studies emphasised on the role of closer relationships with co-workers in attracting and retaining human capital in organisations.

Apart from co-worker support, supervisor support is another major influencer of emotional exhaustion reduction and a personal accomplishment promoter. A supervisor is one who structures the work environment and provides information and feedback to employees, thus he/she has a strong impact on each of the team members. From the sociological perspective, Yoon and Thye (2000) posited that support from co-workers and the larger organisation leads to higher supervisor support. Employees with positive dispositions do not necessarily receive more supervisor support in the Korean context. Supervisors in Korea

viewed employee's positive disposition as a kind of tactical strategy, spurred on by feelings of inadequacy, rather than by employees' internal feature. Without a broader support from co-workers and top management, the positivity effect may lead to lower supervisor support. High support from supervisors can help team members to reduce their emotional exhaustion, depersonalisation while increasing their self-efficacy and personal accomplishments. In addition, high support from supervisors can also increase members' personal accomplishment when faced with high demands of work (Gibson, Grey, & Hasting, 2009). Supervisors also have an important role in promoting the creativity of team members through recognition, support and feedback. Kim, Hon and Lee (2010) found that the proactive behaviour of employees helped them to develop a better sense of creativity and this was found to be strongly enhanced by high supervisor support. At the organisational level, supervisor support was found to be a representative of organisational support (Eisenberger et al., 2002). Employees perceived supervisors as an organisational agent, especially those who were favoured by the organisations. This then leads to lower turnover rate. Organisational support becomes less important to turnover rate when supervisor support is high (Maertz Jr, Griffeth, Campbell, & Allen, 2007). Similar findings were reported by DeConinck and Johnson (2009) who found that supervisor support can be an indirect predictor of turnover intention. Better supervisor support not only produces a higher perceived organisational support but also leads to employees' higher performance. Combining these two factors can lower employees' intention to quit. Supervisor's support received by employees can cause the employees to have a sense of obligation to their supervisors, thereby increasing their intention to stay with, rather than leave, that organisation (Kalemci Tuzun & Arzu Kalemci, 2012).

3. Theoretical Framework and Hypotheses Development

Based on previous literature, this study defines co-worker support and supervisor support as the perception of an employee that he/she is loved, cared for, valued, and admired by the other co-workers and their supervisors. In line with Beehr et al. (2000), Semmer et al. (2008), and Tews et al. (2013), this study classifies co-worker support and supervisor support into two different constructs – emotional and instrumental.

Emotional support refers to the availability of a person to listen sympathetically when an employee is having problems; it also refers to

the person demonstrating a sense of caring and acceptance. Emotional support comprises: i) empathy, ii) social companionship, iii) encouragement, and iv) expressive support (Östberg & Lennartsson, 2007; Scott et al., 2014; Chadwick & Collins, 2015). First, empathy refers to the emotional expression that a co-worker or a supervisor shows his/her understanding of or sharing the same feeling with an employee. Second, social companionship refers to the emotion shown by a co-worker or supervisor in illustrating his/her love, trust and care for an employee. Social companionship also refers to a co-worker or supervisor's willingness in socialising with an employee. Third, encouragement refers to the emotional expression which a co-worker or supervisor admires and recognises as the value of other employees. Fourth, expressive support refers to the emotional expression which a co-worker or supervisor feels affection for other employees. Literature (Kang et al., 2015; Avci, 2017) has documented numerous cases where emotional support provided by either a co-worker or supervisor could cushion the stress effect experienced by an employee. Workers who are confronted with multiple work demands that can strain their coping capabilities were found to draw their emotional support from co-workers or supervisors as a way of preventing themselves from being overwhelmed by feelings of helplessness and the loss of self-esteem. They may seek counselling or they may vent their feelings to co-workers and supervisors. Based on these arguments, it is thus postulated that:

- H₁: Co-worker's empathy support is negatively related to the intention to quit.
- H₂: Co-worker's social companionship support is negatively related to the intention to quit.
- H₃: Co-worker's encouragement support is negatively related to the intention to quit.
- H₄: Co-worker's expressive support is negatively related to the intention to quit.
- H₅: Supervisor's empathy support is negatively related to the intention to quit.
- H₆: Supervisor's social companionship support is negatively related to the intention to quit.
- H₇: Supervisor's encouragement support is negatively related to the intention to quit.
- H₈: Supervisor's expressive support is negatively related to the intention to quit.

The second construct, instrumental support, refers to the material assistance provided either by co-workers or supervisors in response to the specific needs of an employee, where necessary. Such assistance could be in terms of transportation, childcare or other tangible aids. Consistent with studies (Östberg & Lennartsson, 2007; Scott et al., 2014; Chadwick & Collins, 2015), instrumental support is further divided into three variables: work-related tangible support, work-related informational support and non-work-related support. The term, work-related tangible support, is defined as the actual action that a co-worker or a supervisor takes in assisting other employees in performing their work-related activities. Work-related informational support is defined as the provision of knowledge that is useful for solving work-related problems such as guidance on the alternative course of action. Lastly, non-work-related support refers to the assistance provided by a co-worker or a supervisor in helping other employees on matters that are not related to work such as providing childcare services. There is a considerable amount of empirical evidence supporting the relationship between instrumental support and intention to quit (Knani, Fournier, & Biron, 2018; Skaalvik & Skaalvik, 2017). These studies revealed that instrumental support can potentially reduce ambiguity and on the job demands as well as emotional exhaustion resulting from the competing demands of work and family commitments. Employees reporting higher levels of instrumental support were found to perceive higher levels of job satisfaction, which indirectly, led to lower levels of intention to quit. Based on these empirical works, it is hereby postulated that:

- H₉: Co-worker's work-related tangible support is negatively related to intention to quit.
- H₁₀: Co-worker's work-related informational support is negatively related to intention to quit.
- H₁₁: Co-worker's non-work-related support is negatively related to intention to quit.
- H₁₂: Supervisor's work-related tangible support is negatively related to intention to quit.
- H₁₃: Supervisor's work-related informational support is negatively related to intention to quit.
- H₁₄: Supervisor's non-work-related support is negatively related to intention to quit.

The variables and their relationships are depicted in Figure 1.

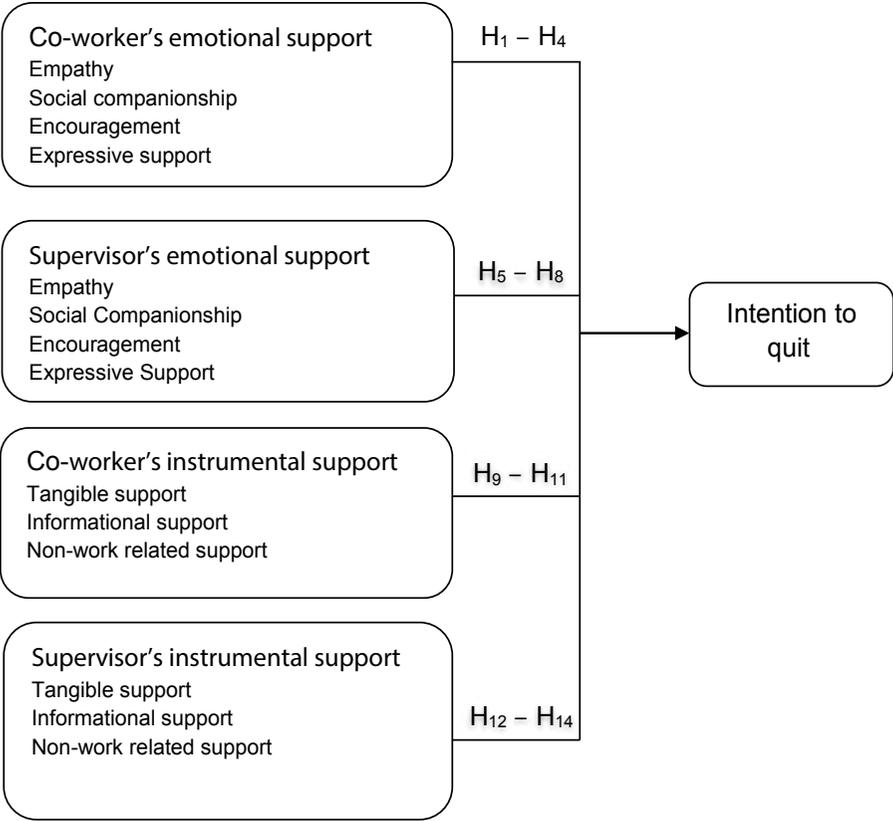


Figure 1: Research Framework

4. Research Methodology

The constructs used in this study were taken from literature and then adapted to suit the context of this study. The items used to measure the constructs are depicted in the Appendix. This study employed a quantitative method. A questionnaire was designed to collect data from the target population which comprised employees working at the entry-level position in one of the biggest Food and Beverage (F&B) business operators in Bangkok (it accounted for 50 per cent of the market share). The company was first identified and then contacted through a telephone call. An invitation letter and a copy of the questionnaire were emailed to the human resource manager to secure permission

and support for conducting the survey in the organisation. The human resource manager of the participating organisation then requested its 600 entry-level employees to complete the survey, through supervisors and section heads. A cover letter to the questionnaire made it clear that the survey was voluntary and confidential and that no individual results would be made available to the organisation. To ensure confidentiality, all questionnaires were returned to the first author in a sealed envelope. The employees received an envelope containing the questionnaire, information about the study, instruction for questionnaire completion, and an assurance of confidentiality. Of the 600 questionnaires distributed, a total of 348 questionnaires were retrieved with 322 that were complete and usable for analysis (representing a response rate of 57.3 per cent).

Table 1 presents the descriptive statistics which highlight that majority or 68.4 per cent were females and 31.6 per cent were males. This is acceptable as evidently, there were more females than males working as entry-level employees (e.g. a waitress is more common than a waiter)

Table 1: Respondents' Characteristics

Characteristic	Frequency	Percentage
<i>Gender</i>		
Male	102	31.6
Female	220	68.4
<i>Age</i>		
15-24	204	63.3
25-45	113	35.1
Above 46	5	1.5
<i>Marital status</i>		
Single	262	81.4
Married or living as married	60	18.6
<i>Education</i>		
Primary School	13	4.1
Secondary School	157	48.7
Vocational Degree	94	29.3
Bachelor Degree	57	17.7
Master Degree and above	1	0.3
<i>Years of Service</i>		
Less than 1 year	177	55.0
1 to 3 years	91	28.3
More than 3 years	54	16.7

in the food and beverage organisations. More than half or 63.3 per cent of the respondents were younger than 24 years old while about half or 55.0 per cent were almost new workers, with less than one year with the company. Majority of the respondents had completed their secondary school or possess a vocational degree (78.0 per cent). Given this, the samples were broadly representative of the entry-level employees of a typical food and beverage company in Thailand.

5. Results and Discussion

Regression analysis was performed using the OLS regression to examine the impact of the emotional and instrumental support of co-workers and supervisors. As this study aims to determine whether the impact differs according to the age factor, the samples were divided into two age groups based on the respondents' age. Group 1 comprises those between 15 to 24 years old and they are deemed as young workers. Group 2 comprises those aged above 25 years old and they are considered as older workers.

5.1 *Co-worker's Support on Intention to Quit*

Table 2 presents the OLS regressions of the intention to quit for each component of the co-worker's support which include empathy, social companionship, encouragement and expressive support, tangible support, informational support, and non-work-related support. In this analysis, emotional support and instrumental support of supervisors as well as other demographic variables were controlled (by constructing the average of all components of each support).

Emotional effects, as indicated in Table 2, illustrate that only empathy appears to have a significant impact on the intention to quit, for both young and older workers. Hence, H_2 , H_3 and H_4 are rejected. While empathy was found to reduce older workers' intention to quit, empathy increased younger workers' likelihood to quit. This result suggests an acceptance of H_1 only for older workers. These findings appear to contradict earlier studies (Scott et al., 2014; Chadwick & Collins, 2015) which could be attributed to the fact that young workers in Thailand possess less empathic ability when compared to older workers. This is also evidenced by several studies such as Richter and Kunzmann (2011) who established that young people generally expressed less sympathy and were poorer in sharing the emotion of others. Van der Graaff et al.

Table 2: OLS Regressions of Co-worker's Support on Intention to Quit

Independent variables	Intention to quit		
	All samples	Age 15-24	Age above 25
<i>Co-worker's emotional support</i>			
Empathy	(0.026) 0.49	(0.134) 1.96**	(0.161) -1.97**
Social companionship	(0.034) 0.92	(0.066) 1.21	(0.015) 0.22
Encouragement	(0.020) -0.41	(0.028) -0.48	(0.036) 0.37
Expressive support	(0.038) 0.76	(0.034) 0.58	(0.030) -0.28
<i>Co-worker's instrumental support</i>			
Tangible support	(0.035) -0.75	(0.092) -1.72*	(0.150) 1.41
Informational support	(0.022) 0.43	(0.033) 0.52	(0.130) -1.29
Non-work-related support	(0.084) -1.96**	(0.114) -2.32**	(0.030) -0.32
<i>Control variables</i>			
Supervisor's emotional support	(0.138) -2.14**	(0.182) -2.50**	(0.082) -0.57
Supervisor's instrumental support	(0.070) -1.00	(0.004) 0.05	(0.128) -1.08
Age	(0.007) -1.40	(0.019) -0.74	(0.004) -0.54
Gender	(0.038) -0.59	(0.031) -0.39	(0.047) 0.43
Marital status	(0.068) 1.26	(0.130) 1.17	(0.053) 0.77
Education	(0.020) 0.65	(0.053) 1.16	(0.003) 0.07
Years of service	(0.0002) 0.22	(0.0014) 0.57	(0.002) 1.60
R-square	0.13	0.12	0.26
Number of observations	322	197	96

Note: All regressions use White heteroskedasticity-consistent standard errors. ***, ** and * indicate 99, 95 and 90 per cent of confidence level. Standard errors in parentheses.

(2014) also detected that teenagers were still at the stage of developing their empathic ability while O'Brien, Konrath, Grünh and Hagen (2013) reported an inverted-U-shape relationship between age and empathic concern (an emotional component of empathy) and perspective taking (a cognitive component of empathy). Based on this, it is deduced that young workers have less empathic ability (both giving and receiving) and so they could misinterpret the empathic concern of their co-workers as an insult, inadvertently increasing their intention to quit. It is also surprising to note that other emotional supports (social companionship, encouragement and expressive support) from co-workers did not help to reduce young workers' intention to quit even though they came from a collectivist and feminine country. It is possible that these young workers,

being in the developmental stage of their emotional and social skills, were still not used to others' concerns. This outcome has been linked to extensive evidence which showed that young workers may possess less empathic abilities when compared to older workers. The same might be said for emotional and social skills which include empathic concerns.

With regard to co-worker's instrumental support, this study found that only work-related tangible support and non-work-related support of co-workers have a statistically significant effect in reducing employees' intention to quit but it was only significant among young workers. Therefore, H_9 and H_{11} are supported for the young workers only. With exception to the empathy support, this study has also demonstrated that co-worker's support does not have a significant impact on older workers' intention to quit. This phenomenon could be related to cultural factors. In a culture of high power-distance such as Thailand, senior people are supposed to be respected by the juniors and they are supposed to be the ones providing advice and support to the younger people and not vice versa. In this situation, older workers may have felt "intimidated" or "insulted" when receiving various kinds of support from their co-workers (all co-worker support except empathy has no impact on reducing the intention to quit of older workers) because most of their co-workers were younger (63 per cent of our respondents were aged between 15 to 24 years). To the older employees, accepting support from co-workers who were younger, may depict their incompetence and their lack of ability or independence (Ng & Sorensen, 2008). Among the younger workers in this study, many tend to perceive their current jobs as temporary ones. This seems inevitable because young workers, those below 25 years old, have a high tendency to go back to school or to look for better job prospects in the near future (Lu, Lu, Gursoy & Neale, 2016). For these young workers, the current job is only a temporary source of income to help them with their daily expenses or educational expenses. Since the current job is perceived to be a temporary one, they were thus less motivated into paying full attention in advancing their current job (i.e. no motivation to be promoted from a waitress to a supervisor). Under this circumstance, they need not care much about work-related informational support provided by co-workers. It is deduced that this could be the reason why the co-workers' support did not influence the young workers' intention to quit. Moreover, non-work related support was more about building pleasant relationships with co-workers (who might become their friends or life partners after they leave the company) and not about advancing

their current job. Thus, it is further deduced that this could be the cause why non-work related support did not help to reduce young workers' intention to quit in this study.

5.2 Supervisor's Support on Intention to Quit

Table 3 depicts the results of the OLS regressions of the supervisor's support on the intention to quit. In this analysis, the emotional and instrumental supports of the co-workers as well as other demographic variables were controlled (by constructing the average of all components of each support).

Table 3: OLS Regressions of Supervisor's Support on Intention to Quit

Independent variables	Intention to quit		
	All samples	Age 15-24	Age above 25
<i>Supervisor's emotional support</i>			
Empathy	(0.031) -0.57	(0.019) 0.32	(0.056) -0.56
Social companionship	(0.031) -0.93	(0.078) -1.77*	(0.040) 0.63
Encouragement	(0.132) -2.11**	(0.150) -2.11**	(0.196) -1.78*
Expressive support	(0.056) 0.99	(0.054) 0.88	(0.071) 0.71
<i>Supervisor's instrumental support</i>			
Tangible support	(0.064) -1.13	(0.032) 0.46	(0.260) -2.54**
Informational support	(0.071) 1.48	(0.013) 0.19	(0.270) 2.90**
Non-work-related support	(0.079) -1.95*	(0.075) -1.52	(0.061) -0.64
<i>Control variables</i>			
Co-worker's emotional support	(0.083) 1.55	(0.212) 3.46***	(0.112) -1.07
Co-worker's instrumental support	(0.107) -2.03**	(0.179) -3.17**	(0.050) -0.58
Age	(0.008) -1.55	(0.009) -0.37	(0.002) -0.35
Gender	(0.046) -0.71	(0.008) -0.10	(0.011) 0.05
Marital status	(0.075) 1.43	(0.123) 1.28	(0.099) 1.45
Education	(0.020) 0.66	(0.076) 1.26	(0.004) 0.08
Years of service	(0.000) 0.21	(0.002) 0.59	(0.001) 0.82
R-square	0.13	0.12	0.32
Number of observations	322	197	96

Note: All regressions use White heteroskedasticity-consistent standard errors. ***, ** and * indicate 99, 95 and 90 per cent of confidence level. Standard errors in parentheses.

As depicted in the table, only encouragement under supervisor's emotional support carries a statistically significant effect on the intention to quit, thereby supporting H₇. This finding is in line with Östberg and Lennartsson (2007). Based on characteristics of the femininity culture, workers should be supportive, kind and generous but at the same time, in a power distance culture such as Thailand, supervisors are expected to "keep their distance" from other employees. In the Thai culture, good supervisors are leaders (Phornprapha, & Chansrichawla, 2007) and workers may perceive their supervisors as big brothers or sisters but not "friends" of equal status. There is always some distance between supervisors and subordinates. Therefore, when supervisors try to be friendly with subordinates, their action may cause discomfort among their subordinates or even threaten them. This could explain why only encouragement, but not others, seems to have a strong effect in reducing workers' intention to quit.

Thus, this study has uncovered that supervisor's instrumental support, in terms of tangible and informational support, only influenced older workers' intention to quit. While supervisor's tangible work-related support has a negative impact on workers' intention to quit, supervisor's informational support positively influenced workers' intention to quit. This finding supports H₁₂ in the context of the older workers who may be facing work-family conflict more, as compared to young workers. In that regard, they valued the supervisor's tangible support in diminishing stress such as flexitime and compressed workweeks (Ng & Sorensen, 2008). Similarly, as the respondents of this study consist of entry-level workers, the younger workers may not see the supervisor's instrumental support as important factors for them to stay in the company. As young workers who also belonged to the Millennial group, they were more likely to consider the entry-level position as a short-term job and not a career which they can achieve self-accomplishment. Due to this, they were expected to exhibit a lesser level of work engagement and work commitment. Hence, they may not value the supervisor's support as much as the older workers. The conflicting findings may also be attributed to the fact that older workers were relatively similar in age with their supervisors. Therefore, receiving informational support could be interpreted as an "insult" as it could be perceived as supervisors thinking that older workers do not know how to do their job. This may therefore, cause a higher intention to quit among older workers.

6. Implications and Conclusion

Finding ways to retain young workers will be even more important for Thailand in the near future as the number of workers will be dropping sharply due to rapid demographic transitions. Taking this crucial issue into consideration, this paper has examined the influence of co-worker's and supervisor's support on young workers' intention to quit in the food and beverage (F&B) business in Thailand. While extensive literature has examined the influence of co-worker's and supervisor's support on employees' intention to quit, most had focused on the western context. However, due to cultural differences, the effects between the West and Asia may be different. The findings of this study have demonstrated that different contexts and environments may be the reason causing the deviation in results. Based on a sample of 322 employees who worked in a large F&B company in Thailand, our results had indicated that the support noted by western countries as effective instruments in reducing employees' intention to quit were ineffective in our study which noted that none of the components of the co-worker emotional support, except empathy, affected all the workers' intention to quit. In the case of the co-worker's instrumental support, only the non-work-related support reduced workers' intention to quit and this effect only occurred among the young workers. In the case of the supervisor's support, our study has revealed that only encouragement reduced workers' intention to quit while supervisors' tangible work-related support reduced only the older workers' intention to quit. Furthermore, some of these supports even carried an opposite effect on the workers' intention to quit. For instance, our study found that empathy from co-workers increased the young workers' intention to quit while supervisor's informational support increased the older workers' intention to quit. Besides the cultural effects, the generational factor gathered from this study also offers a new perspective of the intention to quit. Future studies can focus more on the effect of demographic differences so as to gain more insights into this area of research.

The empirical evidence drawn from this study also adds to the managerial contributions. First, companies in the F&B industry need to be aware that age plays an important role in employees' perception of co-worker and supervisor support in Thailand. Not all individuals will actively seek support. Some individuals may even find social support intervention to be counterproductive. Therefore, it is proposed that the support needs to be adjusted so as to ensure its suitability across

organisations, particularly among different age groups. Companies also need to provide multiple types of support for different kinds of workers by ensuring that these workers have access to voluntary support since this can curb unintended negative consequences. With this information, organisations should adjust their corporate culture, communication strategy, including their human resource management strategies in order to make their company policies more efficient, thereby bettering employee satisfaction and reducing turnover rates. The findings of this study also specifically suggest that managers need to focus on enhancing the non-work-related support of co-workers and to increase encouragement from supervisors in order to retain young workers who require less or no empathy support from their co-workers. As for the older workers, managers of organisations need to focus on increasing empathy among co-workers such that supervisors provide encouragement and tangible support to the team members since this may be considered as decreasing supervisors' informational support. Alternatively, supervisors could adjust their approach in providing information by accommodating to the cultural contexts involved. The findings of this study also suggest that there is an opportunity for organisations to impact large numbers of employees through different types of social supports provided by co-workers and supervisors.

As discussed earlier, cultural values (high power distance, collectivism and femininity) assume important roles in influencing the perception and needs of both young and older workers who require emotional and instrumental supports that can impact their intention to quit. The relationship between co-worker and supervisor support and young workers' intention to quit is not a linear relationship. In fact, it is a complex relationship determined by cultural values and job characteristics. Organisations should therefore make careful considerations before implementing co-worker and supervisor support. This can be accomplished by taking into account their age, their perception of the job, and cultural values such as high-power distance, collectivism and femininity. In the Thai culture, collectivism and femininity may generally influence workers in organisations to value good relationship with co-workers and supervisors by seeking their support. Nevertheless, organisations should also try to understand whether these young workers perceived their job as a permanent or temporary one. If they intend to work on a temporary basis, then organisations should not provide co-worker and supervisor support as these do not help to retain them. Conversely, organisations should craft other strategies which has

a likelihood of changing their employees' attitudes. This is particularly important for the F&B industry in Thailand which has been confronted with a high turnover rate of young employees at the entry level in the past few years. The F&B industry needs to learn how to create a work environment and human resource practices that can inspire and retain employees of different age groups appropriately.

Although this study only focused on the F&B company located in Thailand, it is believed that our findings can also be applied and utilised across different industries with similar settings and/or different countries with similar cultures, especially ASEAN countries. Moreover, workers' perceptions toward cultural values, job characteristics, and the influence of co-worker and supervisor support on the intention to quit may vary, as shown in this study, but that is the nature of this kind of research. In addition, the questionnaire administered in this study was not designed to match or identify any supervisors with their subordinates and vice versa. Therefore, future studies could focus on these gaps so as to shed more light with more comprehensive evidences.

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Appendix

Constructs	Variables	Measurement using a five-point Likert-type scale	References
Emotional support	Empathy	<ol style="list-style-type: none"> 1) My co-workers/supervisor made an extra effort to understand my problems 2) My co-workers/supervisor understand my problems 3) My co-workers/supervisor took a personal interest in me 	Settoon and Mossholder (2002); Tew et al. (2013)
	Social companionship	<ol style="list-style-type: none"> 1) My co-workers/supervisor threw a birthday party for me 2) My co-workers/supervisor invited me to do things (e.g. going out for lunch or playing sports) with them 	Cohen and Hoberman (1983)
	Encouragement	<ol style="list-style-type: none"> 1) My co-workers/supervisor took pride in my accomplishments 2) My co-workers/supervisor tried to cheer me up when I'm having a bad day 	Cohen and Hoberman (1983); Tew et al. (2013)
	Expressive support	<ol style="list-style-type: none"> 1) My co-workers/supervisor listened to my problems in juggling work and non-work life 2) My co-workers/supervisor listened to me when I had to get something off my chest 3) My co-workers/supervisor took time to listen to my problems and worries 	Settoon and Mossholder (2002); Hammer, Kossek, Yragui, Bodner and Hanson (2009)
Instrumental support	Tangible support	<ol style="list-style-type: none"> 1) My co-workers/supervisor helped me with difficult assignments, even when assistance is not directly requested 2) My co-workers/supervisor assisted me with heavy workloads even though it is not part of job 	Settoon and Mossholder (2002); Tew et al. (2013)

Constructs	Variables	Measurement using a five-point Likert-type scale	References
		3) My co-workers/supervisor helped me when I am running behind my work	
	Informational support	1) My co-workers/supervisor took time to explain regulations or procedures to me when I have questions 2) My co-workers/supervisor gave me information to help me understand a situation 3) My co-workers/supervisor always shared work-related knowledge to me when I need it to perform my job	Sherbourne and Stewart (1991); Settoon and Mossholder (2002)
	Non-work-related support	1) My co-workers/supervisor helped me with work when I have been absent 2) If I needed an emergency loan of THB1,000 (about \$30), I could get it from my co-workers/supervisor 3) My co-workers/supervisor took me to doctor when I was sick	Cohen and Hoberman (1983); Settoon and Mossholder (2002)

Experimental Examination of the Relationship between Relative Performance Information, Goal Setting and Performance

Theodorus Radja Ludji

ABSTRACT

Manuscript type: Research paper.

Research aims: This study experimentally examines the relationship between relative performance information (RPI), goal setting and performance. Hypotheses are developed based on social comparison theory, goal setting theory and relevant prior studies.

Design/Methodology/Approach: This study deploys multiple sessions of experiments with 110 undergraduate students as the participants. The two manipulated variables are the provision of RPI and the level of goal difficulty.

Research findings: Results from the experiment indicate that the presence of RPI is positively associated with performance, and an attainable goal is associated with high goal commitment and eventually, higher performance. More importantly, this study finds an interaction between RPI and goal commitment, where the positive effect of RPI on performance is more pronounced in a condition where individual's goal commitment is high.

Theoretical contributions/Originality: This study contributes to the accounting literature by providing empirical evidence that the

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positive effect of RPI on performance can be enhanced to a greater degree by individual's high commitment towards the assigned goal.

Practitioner/Policy implications: This study has a practical implication by providing empirical evidence on how RPI and goal setting can be used strategically by firms to escalate employee's performance.

Research limitations/Implications: Limitations related to the types of RPI, goal levels and experiment task applied. Future studies may address these limitations and use a different type of task that is more closely associated with the current workplace situation.

Keywords: Relative Performance Information, Goal Setting, Performance, Experimental Examination

JEL Classification: M41

1. Introduction

In the contemporary workplace setting, firms typically use different forms of control systems to achieve their strategic objectives (Luft, 2016a; Mohamed, Wee, Abdul Rahman, & Abdul Aziz, 2014). In this context, both the relative performance information (RPI) and goal setting elements are typical examples of the strategic control system (Frederickson, 1992; Locke & Latham, 2006). Therefore, it becomes crucial for firms to decide whether or not to provide the RPI. The reason is because it may in turn affect employee's effort, motivation and eventually performance (Hannan, McPhee, Newman, & Tafkov, 2013; Newman & Tafkov, 2014). In addition, the level of goals assigned by firms to their employees is also regarded as an important factor that needs to be considered strategically, as it may motivate or demotivate employees (Kelly, Webb, & Vance, 2015).

This study examines the relationship between RPI, goal setting and performance, emphasising on how the interaction between feedback element - manifested by RPI - and goal setting may affect individual's performance. Regarding the feedback-goal relationship, prior studies (Mahlendorf, Kleinschmit, & Perego, 2014; Murthy & Schafer, 2011) suggest that the presence of feedback may not necessarily have an effective influence toward performance if individuals are uncertain about the assigned goal. However, since the presence of RPI encourage individuals to demonstrate an outstanding level of performance in a publicly-observed situation to maintain their self-image (Frederickson, 1992; Tafkov, 2013), thus it is arguable that this encouragement may be perceived differently among individuals based on their commitment

toward the assigned goal. For individuals with high commitment toward the goal, it is predicted the presence of RPI will in turn bring an additional incentive for them to demonstrate a substantial level of performance since the goal is considered attainable from their perspective (Locke & Latham, 2002).

Multiple sessions of experiments with two manipulated variables were conducted to test the hypotheses in this study. The first manipulated variable, RPI provision, was manipulated as either present or absent. Meanwhile, goal difficulty as the second manipulated variable was operationalised as either attainable or unattainable. This difference in terms of goal difficulty will in turn determine the goal commitment perceived by individuals, where it is shown that attainable goal will lead to high goal commitment perceived by the individual; and conversely, unattainable goal results in low goal commitment. Specifically, this study investigates whether the presence of RPI and different levels of goal commitment perceived by individuals will in turn bring an influence toward performance. The results of the first and second hypothesis in this study indicate that the presence of RPI brings a positive influence toward individual's performance, and that an attainable (unattainable) assigned goal leads to higher (lower) goal commitment perceived by individuals and eventually higher (lower) performance.

More essentially, results from the third hypothesis in this study indicate an interaction between RPI and goal commitment on performance, where the positive effect of RPI on performance is enhanced to a greater degree in a condition where individual's goal commitment is high. This result is consistent with the concept of social comparison theory, which assumes that individuals tend to put more effort to maintain positive self-image in a publicly-observed situation (Tafkov, 2013; Webster, Duvall, Gaines, & Smith, 2003); and goal setting theory, which posits that attainable goal will keep individual's effort at the level that is in line with the goal achievement (Locke, 1996). It is argued that the presence of RPI creates an incentive and motivation for individuals with high goal commitment to outperform others in a publicly-observed setting since the presence of RPI has been shown to motivate individuals to exert more effort (Kramer, Maas, & Rinsum, 2016; McFarland & Miller, 1994), and that a high level of goal commitment itself reflects the individual's unwillingness to neglect the current goal attainment process (Hollenbeck & Klein, 1987).

By examining the effect of RPI and goal setting elements on performance, this study contributes to the behavioural management

accounting literature, particularly related to the stream of research investigating the feedback provision, goal setting and individual performance. Although the outcome of RPI provision has been extensively examined in previous studies (Frederickson, 1992; Hannan et al., 2013; Tafkov, 2013) there are still limited evidences that could be drawn regarding the relationship between RPI, goal-setting elements and individual's performance. As one of the purposes of an organisation's control system is to ensure that employee's actions are in line with the organisation's best interests (Luft, 2016a; 2016b), this study contributes to the stream of accounting literature by demonstrating an experimental evidence on how the interaction between feedback - represented by the RPI - and goal-setting elements - manifested by goal difficulty and goal commitment - could eventually affect employee's performance.

Furthermore, this study also provides a practical contribution that can be considered by decision makers in terms of which control system that needs to be selected to motivate employees and to achieve the organisation's objective. The findings of this study indicate that by implementing RPI and maintaining a high goal commitment level perceived by the individual, the organisation can get an additional benefit as the interaction between RPI and high goal commitment level will positively affect performance as a result of the attainable goal. As firms frequently disinclined to provide RPI due to its possibly detrimental outcome (Hannan et al., 2013), this study therefore provides empirical evidence from which the presence of RPI can be used strategically by a firm alongside goal setting elements to escalate employee's performance.

The remainder of this study is structured as follows. Section 2 provides a literature review and hypotheses development, section 3 outlines the research method, section 4 presents the results and section 5 provides the discussion and implications. Finally, section 6 discusses the future research and limitations.

2. Literature Review and Hypotheses Development

2.1 Relative Performance Information (RPI) and Performance

Since the workplace situation has changed substantially such that cooperation and competition among employees - with its potential benefits and drawbacks - are almost inevitable in the contemporary workplace setting (Luft, 2016a), organisations thus need to react accordingly by implementing relevant control systems (Hilton & Platt,

2011; Luft, 2016a). One of the control systems that can be applied by the management is the relative performance information (RPI). In general, RPI can be regarded as information about relative performance of individuals or groups in a specific condition that can be used for evaluation purpose (Luft, 2016a; Mahlendorf et al., 2014). Social comparison theory (Festinger, 1954) highlighted the importance of the presence of RPI, as it is posited that individuals tend to compare their ability and performance with their colleagues that are identically comparable in relations to the characteristics or conditions. The result of this comparison is essential, as it may affect individual's own self-image (Festinger, 1954; McFarland & Miller, 1994). Thus, whether or not to provide RPI to employees will be an important issue to be considered by firms, since there are potential benefits and drawbacks associated with the RPI itself (Luft, 2016a). In this regard, Tafkov's (2013) study demonstrated that the provision of RPI can positively affect performance, as the presence of RPI would encourage individuals to "prove themselves" that they are capable of demonstrating a substantial degree of performance in front of their colleagues. However, as noted by Hannan et al. (2013), when there is a competing demand and discretion in effort allocation, the provision of RPI may in turn encourage people to switch their effort allocation to maintain their own self-image even if such action is against the firm's best interest.

Based on these arguments, the first hypothesis in this study is concerned with the effect of RPI on performance. In this case, it is posited that a social comparison element will be manifested by the presence of RPI as it facilitates people to compare their performance with peers in a publicly observed setting (Kramer et al., 2016; Newman & Tafkov, 2014). Furthermore, it is argued that the presence of RPI can result in either positive or negative self-image perceived by individuals. Positive self-image resulting from outstanding public performance in a situation when RPI is present may create favourable conditions, such as positive feeling and pride (Webster et al., 2003), while a negative self-image resulting from low performance in the RPI present situation may result in an unfavourable feeling such as shame (Coffey & Maloney, 2010; Tafkov, 2013). The presence of RPI therefore would motivate individuals to exert more effort to maintain their own self-image in a publicly comparable situation (Hannan, Krishnan, & Newman, 2008). It is therefore expected that individuals' performance will be higher when RPI is present than when it is absent. The hypothesis is therefore stated as follows:

H₁: Individual's performance will be higher in a condition when the RPI is present than when the RPI is absent.

2.2 Goal Difficulty, Goal Commitment, and Performance

Goal is an important element of an organisation's control and performance measurement system (Klein, 1991). In this regard, one of the main factors that is frequently applied as an evaluation point regarding employees' performance is whether they can attain a specific goal assigned by the organisation (Latham & Locke, 1991). Goal setting theory (Locke, 1996) posits that a goal would be effective if it is explicitly stated, challenging and considered to be attainable. If a goal is explicit, challenging but considered to be unattainable from an individual's viewpoint, then the goal may not be effective as the individual perceive that the goal is out of reach (Kelly et al., 2015; Lee, Keil, & Wong, 2015). Furthermore, from the perspective of goal setting theory it is also outlined that individuals are concerned with the outcome of their effort in the goal attainment process, since it would in turn determine their commitment to achieve the goal (Locke & Latham, 2002; 2006). If the assigned goal is regarded to be unreachable, then this would lead to a downward adjustment of the individual's goal commitment, and ultimately result in a decrease in performance (Klein, 1991; Klein & Wright, 1994). For this reason, the second hypothesis in this study will be focussed on examining the effect of goal difficulty on goal commitment perceived by individuals. In line with the goal setting theory (Locke, 1996), it is essential to examine the relationship between goal difficulty and goal commitment, as prior studies (Hollenbeck & Klein, 1987; Hollenbeck, Williams, & Klein, 1989) argued that individuals' performance will be affected by their commitment towards the assigned goal, and this commitment was initially determined by the level of the goal assigned by the organisation.

In terms of the difference between attainable and unattainable goal, prior studies (Bonner & Sprinkle, 2002; Lee, Locke, & Phan, 1997) typically indicated that a goal is attainable if it can be attained by at least fifty per cent of individuals in a specific goal attainment condition. On the other hand, an unattainable goal generally referred to a goal that is set at a point that is not attainable by a majority of individuals (Fatseas & Hirst, 1992; Wright, 1992). In terms of the relationship between goal difficulty and commitment, Locke (1996) argued that higher commitment toward the assigned goal can be achieved if the individual is convinced that the goal is still attainable at the first place. If a goal is

unattainable; even though it is explicit and challenging; it may still decrease an individual's commitment toward the assigned goal (Klein & Wright, 1994; Wright, 1992). This study therefore predicts that an attainable assigned goal will result in a higher goal commitment, and an unattainable goal will lead to a lower goal commitment. Thus, the hypothesis is stated as follows:

H_{2a}: An attainable goal will result in higher goal commitment and an unattainable goal will result in lower goal commitment.

In a context when an assigned goal is applied, it is essential to examine the effect of an employee's commitment toward the goal, as it has been indicated by prior studies (Locke & Latham, 2002; Presslee, Vance, & Webb, 2013) that individual's performance would be affected by his/her commitment toward the assigned goal. In line with the goal setting theory (Locke, 1996), an individual's goal commitment therefore becomes an essential factor that initiate motivation and effort, which will subsequently affect performance. It is documented by prior studies (Hollenbeck & Klein, 1987; Klein & Wright, 1994) that individuals with higher goal commitment will be more persistent when it comes to the goal attainment process than individuals with lower goal commitment since commitment towards a goal may encourage individual to exert more effort to attain the assigned goal. Thus, it is predicted that individuals with higher goal commitment – resulting from an attainable goal – would perceive that the goal is still within their capacity, which would lead them to become more persistent for the goal attainment process, thus eventually resulting in higher performance. On the other hand, it is expected that individuals with lower goal commitment – with an unattainable assigned goal – will be more reluctant to exert a substantial level of effort required to attain the goal as it is regarded to be out of reach, and it would lead to a lower performance. Thus, it is predicted that individuals with higher goal commitment will have higher performance than individuals with lower goal commitment. The hypothesis is therefore stated as follows:

H_{2b}: Performance will be higher for individuals with high goal commitment than for individuals with low goal commitment.

2.3 Interaction between RPI and Goal Commitment on Performance

Prior studies indicated that the effect of RPI on performance can be examined through both economic (Frederickson, 1992; Holmstrom, 1982)

and behavioural perspectives (Hannan et al., 2013; Tafkov, 2013). From the economic perspective, it is posited by Holmstrom (1982) that the presence of RPI will enable principal to capture agent's unobservable actions by filtering out common uncertainty. Nonetheless, economic perspective underpins that employees exert their effort merely for monetary purposes, such as to obtain compensation or performance-related bonuses (Kramer et al., 2016; Newman & Tafkov, 2014). Thus, it is argued that if individuals are not rewarded based on their relative performance, then the presence of RPI may not affect one's performance as there is no incentive for an individual to outperform others, under such condition (Tafkov, 2013).

Nevertheless, from the behavioural perspective, it is argued that individuals also exert their effort for non-monetary purposes such as pride-seeking and desire to establish a positive self-image among colleagues (Greenberg, Ashton-James, & Ashkanasy, 2007), even though they would not be rewarded based on their relative performance (Wood, 1996). Social comparison theory (Festinger, 1954) posits that individuals tend to compare their ability and performance with peers that are similar in terms of characteristics (e.g. the same level in the company) or condition (e.g. assigned the same task). It is also posited that individuals tend to compare themselves with peers or with objective benchmarks – such as performance standard – for self-evaluation purpose (Brown, Harris, Feller, & Keeping, 2007; Nordstrom, Lorenzi, & Hall, 1991). Therefore, an individual's tendency to utilise more effort in a publicly-observed situation, even if the compensation was not based on relative performance, is an example of a situation when the presence of RPI creates a "behavioural effect" that affect individual's behaviour (Hannan et al., 2013; Wood, 1996).

For the feedback-goal setting relationship, prior studies (Mahlen-dorf et al., 2014; Murthy & Schafer, 2011) showed that the behavioural effect of the relative performance feedback may effectively influence one's behaviour. This occurs when the individuals are aware about what they need to achieve, whether these can be achieved, and if so, how they can be achieved (Murthy & Schafer, 2011). The relative feedback itself may not work effectively in a situation when an objective – or something that needs to be aimed for – was deemed to be uncertain (Hannan et al., 2008; Murthy & Schafer, 2011). Hence, it is argued that the presence of feedback, manifested by the RPI with its behavioural element, would influence performance more effectively with the inclusion of goal setting elements.

Therefore, it is predicted that the presence of feedback, which is reflected by the provision of RPI, and the goal setting element as manifested by goal commitment would interact and ultimately affect performance. As the presence of RPI as a relative feedback will provide information about the individual's relative performance in a publicly-observed setting, this would facilitate self-awareness and self-evaluation for individuals, since the presence of RPI will allow individuals to observe both their relative standing against the assigned goal and their comparable position among peers (Kramer et al., 2016; Tafkov, 2013). Given that the monetary incentive is not provided based on individual's absolute or relative performance, thus the behavioural effect of RPI will be decidedly manifested in such a condition (Hannan et al., 2013). The extent to which the RPI will influence individuals with an assigned goal would depend on the individual's goal commitment level. For individuals with high goal commitment, the presence of RPI will more likely bring a greater motivational influence regarding the feedback-goal relationship, compared to individuals with low goal commitment. Since attainable goals are more likely to lead to high goal commitment, it is therefore expected that highly committed individuals will be more motivated to achieve or even surpass the assigned goal when the RPI is present (McFarland & Miller, 1994).

Previously, it is expected that highly committed individuals are more certain in achieving the assigned goal than their counterparts since the goal level is different. Thus, it is expected that the presence of RPI will in turn provide a behavioural-related incentive, in the form of a positive self-image, for highly committed individuals in such condition. This would happen if an outstanding level of performance can be demonstrated by highly committed individuals in a publicly-observed situation when the RPI is present. Since an attainable goal would lead to higher goal commitment than an unattainable goal, it is argued that a higher performance in a situation when the RPI is present will more likely be derived from individuals with high, rather than low, goal commitment. This is because the goal is attainable and the presence of RPI would encourage individuals to demonstrate a substantial level of performance to maintain their self-image.

It is previously predicted in H_1 and H_{2b} that both the RPI and individual's goal commitment will separately bring an influence on performance. Thus, the third hypothesis in this study will in turn predict an interaction effect between RPI and goal commitment toward

individual's performance. Recall that H_1 expects that the presence of RPI will positively affect performance. Meanwhile, it is predicted by H_{2b} that higher goal commitment will lead to higher performance and vice versa, where the commitment was initially determined by the level of difficulty of goal assigned. It is therefore expected in H_3 that when RPI is present, performance will be higher for individuals with high, rather than low, goal commitment. Here, the positive effect of RPI on performance that previously exists will be enhanced to a greater degree when individual's commitment toward the assigned goal is high. The hypothesis is formally stated as follows:

H_3 : The positive effect of RPI on performance will be more pronounced among individuals with high goal commitment than those with low goal commitment.

Figure 1 summarises the hypotheses proposed in this study.

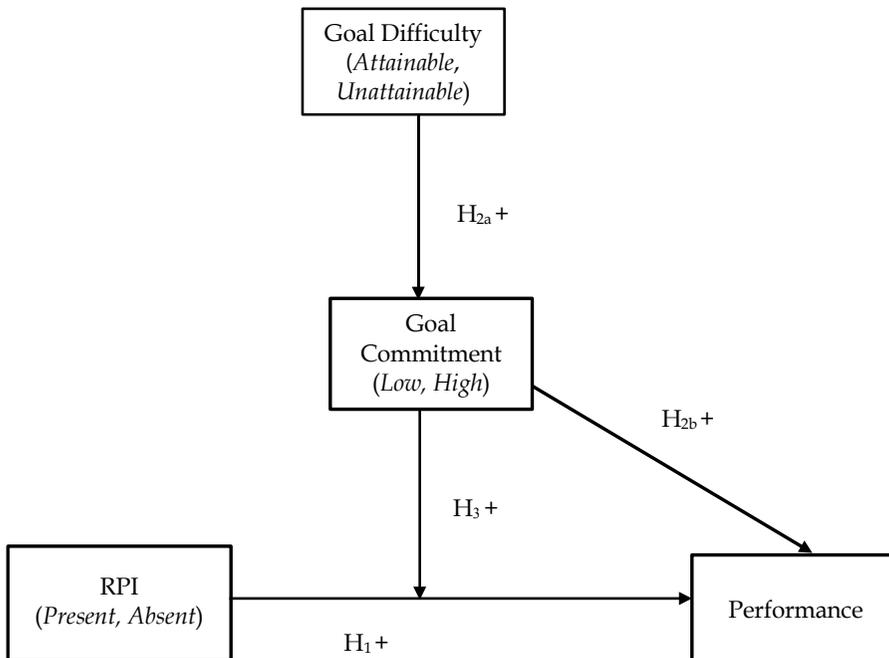


Figure 1: Summary of Hypotheses

3. Method

3.1 *Experiment Design*

A 2x2 between-subject experiment design is applied to test the hypotheses. In this setting, the presence of RPI (present and absent) and the level of goal difficulty assigned to the participants (attainable and unattainable) are varied across four different conditions: (1) RPI Present-Attainable Goal; (2) RPI Present-Unattainable Goal, (3) RPI Absent-Attainable Goal; and (4) RPI Absent-Unattainable Goal. The treatment provided in these four experimental conditions are different from each other. For instance, in the first condition (RPI Present-Attainable Goal) participants will be provided with the RPI and an attainable assigned goal. In the fourth condition (RPI Absent-Unattainable Goal) participants will not receive any RPI and the goal assigned to the participants will be set at an unattainable level. The instrument used in this experiment was adapted from Tafkov's (2013) study, with adjustments related to the task instruction and experimental session overview.

There are five rounds conducted in each session, thus every round is a within-subject element. This is in line with Tafkov's (2013) study, where the number of rounds applied were constantly held for all participants across all conditions. Although there were four different between-subject conditions as specified above, where participants allocated in one condition will be given a different treatment from the others, all participants were required to solve the same set of multiplication problems (A, B, C, D and E) within five rounds applied in each experiment condition, similar with Tafkov's (2013) study. The multiplication problems given in each round is different, for instance, in round 1 participants will be provided with set A of multiplication problems, while set B of multiplication problems will be given in round 2, and so on. Table 1 displays the four experiment conditions applied in this study.

Similar with Tafkov's (2013) study, the dependent variable in this study is the individual's performance which was determined by the average number of multiplication problems correctly solved by participants in each round. Participants were provided with a fixed amount of participation fee of AUD6 for their participation in one experiment session that generally lasted for about 45 minutes. The compensation was held constant, regardless of the participant's performance, across all conditions. This to ensure that the hypotheses formulated in this study can be more precisely examined. Additionally,

Table 1: Experiment Conditions

Cell 1: <i>Condition 1: RPI Present-Attainable Goal</i> <i>Task: Solving a set of multiplication problems (A-E) from Round 1-5</i>	Cell 2: <i>Condition 2: RPI Present-Unattainable Goal</i> <i>Task: Solving a set of multiplication problems (A-E) from Round 1-5</i>
Cell 3: <i>Condition 3: RPI Absent-Attainable Goal</i> <i>Task: Solving a set of multiplication problems (A-E) from Rounds 1-5</i>	Cell 4: <i>Condition 4: RPI Absent-Unattainable Goal</i> <i>Task: Solving a set of multiplication problems (A-E) from Rounds 1-5</i>

participants were required to complete a set of post-experimental surveys upon the completion of the last experiment round. The purpose of this survey was to collect participants' responses relating to a set of questions for goal commitment, RPI, task-related questions and demographic questions, since participants' responses are essential for the results analysis.

3.2 Experiment Task

During the experiment, participants are required to solve a set of "paper-and-pencil" multiplication problems. There are 30 multiplication problems for each round. As each session consists of five rounds, therefore it yields a total of five sets of problem (A, B, C, D and E) for five experimental sessions. To answer the problems, participants were told that they cannot select more than one answer for each problem. They are not allowed to write anything else on the answer sheet, except a sign (such as a circle or a cross) that indicate their answers. Participants were also required to answer those problems without the usage of any calculation devices and scratch papers. Each problem consists of a "two digits-by-two digits" multiplication problem, such as "29 x 66" as displayed in Figure 2.

$29 \times 66 =$ A) 1914 B) 1799 C) 1844 D) 2107 E) 2054
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Figure 2: Example of Multiplication Problem

Since participants were recruited from the undergraduate level of study, the implementation of “two digits-by-two digits” multiplication problems with “paper-and-pencil” approach was deemed to be suitable, as it does not require specific prior knowledge to be possessed by participants (Bonner, Hastie, Sprinkle, & Young, 2000). In line with Tafkov’s (2013) study, it is expected that the task applied in this study will satisfy the three requirements for a relationship between social comparison and competitive behaviour. The first requirement is the comparison task similarity, where the task must be similar for each participant to be comparable (Tafkov, 2013). This was ensured by applying the same multiplication problems with the same order (A, B, C, D and E) that need to be solved by participants across all sessions.

The second requirement is the comparison target similarity, where participants need to be recruited from the same source or study level to establish the awareness of social comparison factor in the RPI (Hannan et al., 2013; Tafkov, 2013). In this study, participants were recruited from the same undergraduate unit subject from a large public university in Australia to ensure comparison target similarity. The third requirement is the importance of comparison’s domain (Tafkov, 2013). Since multiplication task requires problem-solving ability from individual without the usage of any calculation devices within a specific length of time, it is therefore expected that any differences related to participant’s performance shall be attributed to the difference in their ability (Hannan et al., 2013; Tafkov, 2013).

3.3 Research Variables

The first independent variable in this study is the RPI, which was manipulated as either present or absent. The RPI present condition is applied based on “public-type RPI” in Tafkov’s (2013) study where participants are provided with their relative performance rank, consisting of both their own performance and the performance of other participants in the same session. The RPI absent condition was conducted based on “no-RPI” condition (see Tafkov, 2013) where no performance-related information is provided to the participants. In the RPI present condition, participants were informed that their relative performance will be displayed on a public screen at the end of rounds 2 and 4. The public screen itself is a large-sized projected screen that is used to display the slides that comprise participants’

Relative feedback for round 1 and 2			
	Rank	Problems solved correctly	
		Round 1	Round 2
Participant in Seat 1	Rank 4	9	10
Participant in Seat 2	Rank 1	20	19
Participant in Seat 3	Rank 2	18	15
Participant in Seat 4	Rank 5	8	7
Participant in Seat 5	Rank 3	16	11

Figure 3: Example of a Slide for RPI Provision

relative performance. This can be viewed by all participants involved in that session. Figure 3 shows an example of RPI provision in the RPI present condition.

The provision of RPI at the end of round 2 displayed participants' performance for rounds 1 and 2, while the provision of RPI at the end of round 4 displayed the participants' performance in rounds 3 and 4. As indicated in Tafkov's (2013) study, this arrangement would enable the RPI to capture a substantial range of participant's performance. When the RPI was presented, it was projected through a large public screen that can be viewed by all participants in that session. This will allow all participants to observe both their own performance and the performance of the other four participants. The RPI however, was not displayed based on rank order, as a previous study (Kramer et al., 2016) indicated that whether or not in a rank order, there was no difference in the participants' perception towards the provision of RPI. As in previous RPI-related studies (Hannan et al., 2013; Tafkov, 2013), this study also involves five participants for each session in the RPI present condition. This helps to establish the social comparison awareness among the participants. Previous studies (Hannan et al., 2013; Tafkov, 2013) indicated that the salience of the social comparison element in RPI provision will be more perceived by individuals when they are placed in a small-group setting.

The second manipulated variable is the goal difficulty that is manipulated at either attainable or unattainable. The goal is related to the number of problems that needs to be solved correctly by the participants. A total of 30 problems are developed for each round. Based on the pilot tests conducted with 27 participants prior to the experiment, attainable goal is set at nine (9) correct answers which equals the 50th percentile of pilot tests result. Unattainable goal is set at 25 correct answers, where no participant in the pilot tests could attain. The reference point of these difficulty levels is based on prior literature (Bonner & Sprinkle, 2002; Fatseas & Hirst, 1992; Lee et al., 1997), where an attainable goal is typically set at a point that can be achieved by at least fifty per cent of participants, and an unattainable goal is set at a point that cannot be achieved by all participants. However, as discussed previously, participants were told that their pay will not be affected by attaining or not attaining the goal.

Following the end of the experiment session, participants are required to complete a short survey related to their goal commitment. A set of questions adapted from Presslee et al. (2013) is used to measure participant's goal commitment. Here, participants are required to indicate their perception relating to the commitment toward a specific goal that has been explicitly assigned to them. The goal itself is set either at an attainable level (9 correct answers) or at an unattainable level (25 correct answers) depending on a randomly-allocated experiment session that they participated in. The set of questions itself comprises a five-point scale, ranging from "strongly disagree" (1) to "strongly agree" (5) with higher average score indicating higher goal commitment and vice versa.

The dependent variable in this study is the individual's performance that is determined by the number of multiplication problems correctly solved by the participant in each round. There are 30 multiplication problems in total for each round, or 150 problems available in total for all five rounds in one experiment session. Maximum number of problems that can be answered correctly by one participant in each round is 30 and the minimum is 0 (zero). The problems need to be solved by participants without any calculation devices.

3.4 Experiment Participants

Participants were recruited from an undergraduate commerce-business major at a large public university in Australia. At the initial stage, 140 undergraduate students participated in this study. Since the participants

randomly allocated themselves into the opening slots for each session, thus it appeared that four sessions – two from RPI Present condition and two from RPI Absent condition that involved 20 participants in total – were conducted with the same treatment. In this regard, 20 participants were excluded to prevent any sequential effects. Meanwhile, the RPI present condition required five participants for each session. However, in several schedules there are some participants that did not attend the experiment session. As a result, the experimenter had to change the schedule immediately from RPI present condition to RPI absent condition, so that the remaining participants (typically either three or four) can still participate in the session. One procedure that was subsequently implemented to anticipate this situation is to open the extra time slots for six participants. This was meant to accommodate the participants who were absent on the day when the experiment was conducted. In this case, if all six participants are present, then five participants would be allocated to the RPI present condition, while one participant will be allocated to the RPI absent condition.

To precisely analyse the results in this study, a median split is conducted to categorise participants to either low or high goal commitment level, based on their median score. Since the median score of goal commitment is 3.4, thus the average scores below the median (<3.4) are categorised as “low goal commitment” (coded as “1”) and scores above the median (>3.4) are classified as “high goal commitment” (coded as “2”). Participants with goal commitment score equal to the median ($n=10$) are excluded. This yielded 59 participants in the category of low goal commitment, 51 participants for high goal commitment, and a total of 110 participants taken for the results analysis. Table 2 displays a summary of the sessions and participants’ information.

The average age of participants in this study is 20.6 years and 65.5 per cent of them are female. Further analysis (not tabulated) indicate that there is no significant difference in age and gender across all four conditions in this study, and that the variety of age and gender across all experiment conditions do not bring any significant influence on performance and goal commitment scores (all $p>0.18$, two-tailed), indicating that the randomisation process has been effectively implemented.

Participants are provided with written instructions at the beginning of the experiment, and the instructions are explained by the experimenter. As in Tafkov’s (2013) study, participants are required to answer a set of questions prior to the start of the experiment to ensure that they clearly understand the instructions. There is no reduction

Table 2: Sessions and Participants' Information

Category	Sessions	Participants
Sessions conducted with complete participants in RPI Present condition (5 participants for each session)	14	70
Sessions conducted with complete participants in the RPI Absent condition (5 participants for each session)	9	45
Sessions conducted with 4 participants (RPI Absent condition)	5	20
Sessions conducted with 3 participants (RPI Absent condition)	1	3
Session conducted with 1 participant (RPI Absent condition)*	2	2
Participants at the initial stage	31	140
Less: Participants in sessions that were conducted with the same treatment in a row (5 participants for each session)	(4)	(20)
Usable sessions and participants	27	120
Less: Participants with goal commitment score equal to the median		(10)
Number of participants taken for the results analysis		110

Note: * Resulting from the difference between 6 participants showing up minus 5 participants allocated to the RPI Present condition.

in terms of the number of participants at this stage, since any question that has been incorrectly answered are subsequently discussed by the experimenter with the participants. This is to ensure that there is no misperception, and to ensure that the participants are aware about what they need to perform before proceeding to the main rounds. Upon the completion of the questions, participants in the RPI present condition are required to introduce themselves to the other four participants in their session by standing up and giving their name, major and their seat number. In line with prior RPI-related studies (Hannan et al., 2013; Tafkov, 2013), this is done to eliminate anonymity among participants, since the relative performance rank will be provided in their session.

Participants in all four conditions in this study are required to complete five main experimental rounds with each round lasting 5 minutes. As in Tafkov's (2013) study, to avoid the "end game strategy",

participants are not told in which round the experiment will be finished. Before the start of round 1, the experimenter sets a certain goal for all participants in the session based on their experiment condition (attainable or unattainable goal). The goal was either nine (9) for attainable condition or 25 for unattainable condition. These goals will be the same for all the five rounds of experiment. After the completion of round 5, participants were informed that the experiment is finished. Participants then complete a set of post-experimental survey. Finally, each participant's compensation of AUD6 were provided after they have completed the survey and the experiment session is finished.

4. Results

4.1 Descriptive Statistics

As mentioned earlier, to precisely analyse the results, a median split is conducted to categorise participants to either low or high goal commitment level, based on their goal commitment average score which will be compared to the median of 3.4. Average scores below the median (<3.4) were categorised as "low goal commitment" (coded as "1") and average scores above the median (>3.4) were classified as "high goal commitment" (coded as "2"). Participants with goal commitment scores that are equal to the median ($n=10$) were excluded. In total, this yielded 110 participants for the result analysis. Table 3 displays the descriptive statistics.

Table 3 Panel A shows that the average performance is higher in RPI Present (13.73) than in RPI Absent condition (11.00). Meanwhile, Panel B shows that the average goal commitment scores under attainable goal (3.47) are higher than the unattainable goal condition (3.04). Although still insufficient to draw any conclusions, it is argued that these patterns are in line with the predictions stated in H_1 and H_{2a} .

Figure 4 shows participants' average performance from rounds 1 to 5 in both RPI Present and RPI Absent conditions. It is shown that when RPI is present, the average performance gradually increased from round 1 (12.58) to round 2 (12.80) and from round 3 (13.92) to round 4 (14.74). Since RPI is provided at the end of rounds 2 and 4, these positive trends are in line with the timing when RPI is provided. These patterns indicate that participants tend to perform better in rounds where RPI is present (rounds 2 and 4) as a means of compensating the lower performance shown in previous rounds before RPI is presented (rounds

Table 3: Descriptive Statistics (Mean and Standard Deviation)

Conditions	RPI Present	RPI Absent	Row Average
<i>Panel A: Performance</i>			
Attainable goal	13.99 (5.71) <i>n</i> =27	10.89 (3.17) <i>n</i> =27	12.44 (4.83) <i>n</i> =54
Unattainable goal	13.49 (4.84) <i>n</i> =28	11.10 (4.27) <i>n</i> =28	12.29 (4.68) <i>n</i> =56
Column average	13.73 (5.25) <i>n</i> =55	11.00 (3.74) <i>n</i> =55	12.36 (4.74) <i>n</i> =110
<i>Panel B: Goal Commitment</i>			
Attainable goal	3.47 (0.57) <i>n</i> =27	3.47 (0.53) <i>n</i> =27	3.47 (0.54) <i>n</i> =54
Unattainable goal	3.05 (0.69) <i>n</i> =28	3.03 (0.87) <i>n</i> =28	3.04 (0.78) <i>n</i> =56
Column average	3.25 (0.66) <i>n</i> =55	3.25 (0.75) <i>n</i> =55	3.25 (0.71) <i>n</i> =110

Notes: There are four conditions in the experiment: Cell 1: RPI Present-Attainable goal, Cell 2: RPI Present-Unattainable goal, Cell 3: RPI Absent-Attainable goal, and Cell 4: RPI Absent-Unattainable goal. RPI was manipulated in two conditions. In RPI Present condition, participants are provided with information about both their own performance and performance of other participants in the same condition. In RPI Absent condition however, there is no performance information provided, both for personal and relative category of performance. Goal difficulty is manipulated in two conditions. In the Attainable Goal condition, participants are provided with a goal of 9 out of 30 multiplication problems for each round. In the Unattainable Goal condition, participants are provided with a goal of 25 out of 30 multiplication problems. Performance refers to the average number of multiplication problems that can be answered correctly by participants in each experimental session. Maximum number of problems that can be answered correctly in each round is 30 and the minimum is 0 (zero). Goal commitment score reflects the average scores of participants' answers to a set of five-point scaled questions about goal commitment adapted from Presslee et al.'s (2013) study. There are five questions in total. Participants' answers are ranged from "strongly disagree" (1) to "strongly agree" (5). Questions 1, 2 and 4 are reverse-coded as in Presslee et al.'s (2013) study.

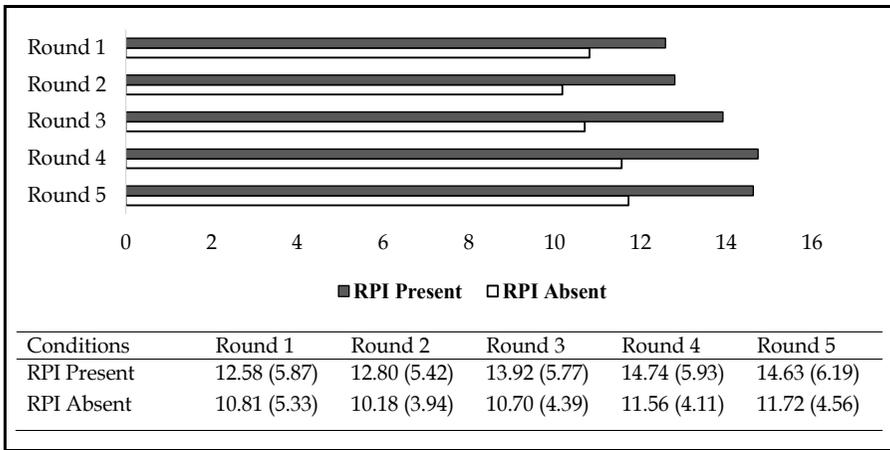


Figure 4: Performance Trends by Rounds (Mean and Standard Deviations)

1 and 3). As in Tafkov's (2013) study, it is argued that the presence of RPI and its social comparison element in this study has been anticipated by individuals, in accordance with the purpose of maintaining self-image among colleagues in a publicly-observed setting.

Similar with Tafkov's (2013) study, there are three requirements related to the relationship between social comparison and competitive behaviour that needs to be established regarding the presence of RPI. From the design of the experiment, the first and second requirements of the relationship between social comparison and competitive behaviour have been fulfilled. The first requirement (comparison task similarity) has been satisfied through the implementation of the same multiplication problems across all experimental conditions. The second requirement (comparison target similarity) has also been fulfilled as participants are recruited from the same undergraduate unit subject at a large public university in Australia.

The third requirement (the importance of comparison's domain) will be examined through the results of post-experimental questions displayed in Table 4. The post-experimental survey consists of a set of questions with a five-point scale adapted from Tafkov's (2013) study, ranging from 1 to 5. In the RPI Present condition (Cells 1 and 2), participants' mean response regarding the question about the importance of general problem-solving ability, ranged from 1 (definitely yes) to 5 (definitely not), is 1.74. This mean score is significantly different from the mid-point of 3 ($t=-11.372$, $p<0.01$, two-tailed), indicating that a

Table 4: Responses to Post-Experimental Questions (Mean and Standard Deviation)

RPI	RPI Present			RPI Absent		
	Attainable Goal (Cell 1)	Unattainable Goal (Cell 2)	Total	Attainable Goal (Cell 3)	Unattainable Goal (Cell 4)	Total
Task difficulty	3.18 (1.07)	3.78 (0.68)	3.49 (0.94)	3.62 (0.68)	4.21 (0.78)	3.92 (0.79)
Task attractiveness	2.40 (1.18)	2.96 (1.23)	2.69 (1.23)	2.74 (0.98)	3.07 (1.41)	2.90 (1.22)
General problem-solving ability	1.59 (0.69)	1.89 (0.91)	1.74 (0.82)	1.96 (1.01)	1.78 (0.78)	1.87 (0.90)
Perception toward RPI	2.51 (0.97)	2.64 (0.98)	2.58 (0.97)	-	-	-
Attention to RPI	2.85 (0.94)	2.82 (0.77)	2.83 (0.85)	-	-	-
RPI and strategy	2.55 (1.08)	2.82 (1.18)	2.69 (1.13)	-	-	-
RPI and feelings	3.03 (1.19)	3.03 (0.99)	3.03 (1.08)	-	-	-

Notes: *Task difficulty* represents participants' perception about how difficult the multiplication problems were. It is measured through a five-point scale, ranging from "very easy" (1) to "extremely difficult" (5). *Task attractiveness* represents participants' perception whether the multiplication problems were deemed to be interesting from their perspective. It is measured by a five-point scale, ranging from "very interesting" (1) to "not interesting at all" (5). *General problem-solving ability* reflects participants' assessment of whether a general problem-solving ability is regarded to be an important ability that needs to be possessed to succeed in career. It is measured by a five-point scale, ranging from "definitely yes" (1) to "definitely not" (5). *Perception toward RPI (RPI Present condition only)* reflects participants' assessment on how often that they thought about their own performance compared to other participants during the session. It is measured using a five-point scale, ranging from "never" (1) to "always" (5). *Attention to RPI (RPI Present condition only)* represents participants' response about how much attention they paid to the information about their relative performance ranking during the session. It is measured by a five-point scale, ranging from "none at all" (1) to "a great deal" (5). *RPI and strategy (RPI Present condition only)* reflects participants' perception on whether the relative performance ranking affects their strategy. It is measured through a five-point scale, ranging from "definitely yes" (1) to "definitely not" (5). *RPI and feelings (RPI Present condition only)* represents participants' perception about how they feel about their own performance relative to other participants. It is measured by a five-point scale, ranging from "very ashamed" (1) to "very proud" (5).

majority of participants in RPI Present condition perceived that general problem-solving ability is important.

Furthermore, participants' mean response for the question about the perception toward RPI (2.58) is significantly different from the mid-point of 3 ($t=-3.179$, $p<0.01$, two-tailed), indicating that a majority of participants think considerably about their relative performance when RPI is present. The mean response for the question regarding RPI and strategy (2.69) is significantly different from the mid-point of 3 ($t=-2.017$, $p=0.049$, two-tailed), indicating that the presence of RPI poses an influence toward participants' strategy. The mean responses for questions regarding the attention to RPI (2.83), and RPI and feelings (3.03) are not significantly different from the midpoint score (all $p>0.1$, two-tailed), yet further analysis (not tabulated) shows that a majority of responses for the question relating to attention to RPI is "a moderate amount" (47.3 per cent) indicating that a majority of participants paid a moderate amount of attention toward RPI when it is present.

In addition, the majority answers for the RPI and feelings question was "neither ashamed nor proud" (43.6 per cent), thereby showing that in general, participants are neither satisfied nor dissatisfied about their relative performance. It is therefore arguable that the requirement of the importance of comparison's domain has been satisfactorily represented through the presence of RPI, since the average responses for questions related to perception toward RPI and RPI and strategy are significantly different from the midpoint, and that the average responses for questions related to attention to RPI and RPI and feeling are regarded to be moderate and supported by the percentage of majority responses that indicated the moderate level of attention and feeling towards the RPI. Thus, it is expected that the presence of RPI would in turn, provide an incentive for participants to maintain their self-image by exerting more effort in condition when the RPI is present (Kramer et al., 2016; Tafkov, 2013).

4.2 Hypotheses Testing

H_1 predicts that individual performance will be higher in a condition when RPI is present compared to a condition when RPI is absent. Table 5 displays the mean difference of performance for RPI present and absent conditions.

Table 5 shows that the average performance is higher in a condition when RPI is present (13.73) than in a condition when RPI is absent

Table 5: Hypotheses Testing (H_1)

RPI	Performance	t-statistics	Mean Difference	p-value
RPI Present	13.73 (5.25)	3.150	2.73	<0.01*
RPI Absent	11.00 (3.74)			

Note: * The p-value is reported in one-tailed due to the directional prediction.

(11.00). The difference between average performances in these two conditions is significant ($p < 0.01$, one-tailed), indicating that the presence of RPI has positively affected the individual's performance. H_1 is therefore supported.

H_{2a} predicts that an attainable goal will lead to higher goal commitment and conversely, an unattainable goal will result in lower goal commitment. Prior to the hypotheses testing, the measurements used to assess goal commitment are factor analysed. Table 6 displays the factor loadings and Cronbach's alpha indicator for these goal commitment-related questions. All the items loaded significantly, with values above 0.6. Cronbach's alpha value is also found to be acceptable (> 0.6). As in Presslee et al.'s (2013) study, questions 1, 2 and 4 are reverse coded.

Table 6: Goal Commitment Questions

Cronbach's Alpha	0.765
Questions	Factors Loading
1. It was hard to take the assigned goal seriously.*	0.721
2. Quite frankly, I did not care if I achieved the assigned goal or not.*	0.662
3. I was strongly committed to pursuing the assigned goal.	0.717
4. It did not take much for me to abandon the goal.*	0.762
5. I think the assigned goal was good to aim for.	0.744

Note: * Reverse-coded as in Presslee et al.'s (2013) study.

Furthermore, Table 7 displays the mean difference of goal commitment scores in the attainable and unattainable goal conditions. The table indicates that the average goal commitment score is higher under attainable goal condition (3.47) than under unattainable goal condition

Table 7: Hypothesis Testing (H_{2a})

Goal difficulty	Goal Commitment Score	t-statistics	Mean Difference	p-value
Attainable goal	3.47 (0.54)	3.326	0.43	<0.01*
Unattainable goal	3.04 (0.78)			

Note: * The p-value is reported in one-tailed due to the directional prediction.

(3.04). The difference between average score of goal commitment in these two conditions is significant ($p < 0.01$, one-tailed) thereby indicating that attainable goal leads to higher goal commitment and conversely, an unattainable goal leads to lower goal commitment. H_{2a} is therefore supported.

H_{2b} predicts that goal commitment will have a positive effect on performance, where individuals with high goal commitment will have higher performance than individuals with low goal commitment. Table 8 presents the result of the hypothesis.

Table 8: Hypothesis Testing (H_{2b})

Goal difficulty	Goal Commitment Score	t-statistics	Mean Difference	p-value
Low	11.03 (3.58)	-3.319	2.87	<0.01*
High	13.91 (5.43)			

Note: * The p-value is reported in one-tailed due to the directional prediction.

The results indicate that average performance was different between individuals with low goal commitment (11.03) and high goal commitment (13.91). The difference between these two conditions was significant ($p < 0.01$, one-tailed) indicating that goal commitment positively affect performance, where individuals with high goal commitment eventually perform better than individuals with low goal commitment. This result supports H_{2b} .

H_3 predicts an interaction effect that when the RPI is present, performance will be higher among individuals with high, rather than low, goal commitment. Table 9 Panel A displays the ANOVA result and Panel B shows the test of mean differences.

Table 9: Hypothesis Testing (H_3)*Panel A: ANOVA Result*

Source of Variation	df	Mean Square	F	p-value
RPI	1	269.758	15.110	<0.01
Goal Commitment	1	274.206	15.359	<0.01
RPI*Goal Commitment	1	82.034	4.595	0.034
Error	106	17.853		

R-Squared = 0.228 (Adjusted R-Squared = 0.206)

Panel B: Test of Mean Differences

Category	RPI Present	RPI Absent	Mean Difference between Rows
Low Goal Commitment	11.68 (3.95)	10.26 (2.97)	1.41 (0.92) $p=0.132$
High Goal Commitment	16.60 (5.55)	11.70 (4.29)	4.89 (1.37) $p<0.01$
Mean Difference between Columns	4.91 (1.28) $p<0.01$	1.44 (0.99) $p=0.155$	Column-row Average 12.36 (4.74)

Panel C: Planned Contrast Analysis

Contrast	Value of Contrast	SE	t	df	p-value
Model Contrast	15.370	6.234	2.465	106	0.015

Note: RPI was manipulated in two conditions: *RPI Present* and *RPI Absent*. *Goal Commitment* score reflects the average scores of participants regarding their answers to a set of five-point scaled questions about goal commitment adapted from Presslee et al.'s (2013) study, ranging from "strongly disagree" (1) to "strongly agree" (5). Questions 1, 2 and 4 were reverse-coded as in Presslee et al. (2013). *RPI*Goal Commitment* refers to the interaction between RPI and Goal Commitment. Participants were categorised as *Low Goal Commitment* if their average score of goal commitment were below the median score of 3.4. Participants were categorised as *High Goal Commitment* if their average score of goal commitment were above the median score of 3.4. The contrast coefficients to test H_3 are: +6 for performance in RPI Present-High Goal Commitment condition, -1 for performance in RPI Present-Low Goal Commitment condition, -2 for performance in RPI Absent-High Goal Commitment condition, and -3 for performance in RPI Absent-Low Goal Commitment condition.

Table 9 Panel A shows that the interaction effect between RPI and goal commitment on performance is significant ($F=4.595$, $p=0.034$, two-tailed). Meanwhile, Panel B displays the average performance based on RPI and goal commitment. In RPI Present condition, individuals with high goal commitment shows higher performance (16.60) than individuals with low goal commitment (11.68) and the difference is significant ($p<0.01$, two-tailed). On the other hand, the difference in performance for individuals with high (11.70) and low (10.26) goal commitments in RPI absent condition is not significant ($p=0.155$, two-tailed). Furthermore, Panel B shows that in a condition of high goal commitment, performance is significantly higher when RPI is present (16.60) than when RPI is absent (11.70), and that the difference is significant ($p<0.01$, two-tailed). However, in a condition of low goal commitment, the difference in terms of performance when RPI is present (11.68) and absent (10.26) is not significant ($p=0.132$, two-tailed). These results resemble an exact pattern with the prediction stated in H_3 .

Additionally, a planned contrast analysis is also performed to precisely examine H_3 . As in Tafkov (2013), each session is treated as one independent observation, where the contrast coefficients to test H_3 are: +6 for performance in RPI Present-High Goal Commitment condition, -1 for performance in RPI Present-Low Goal Commitment condition, -2 for performance in RPI Absent-High Goal Commitment condition, and -3 for performance in RPI Absent-Low Goal Commitment condition. As shown in Panel C of Table 9, the result of planned contrast analysis displays a significant result ($t=2.465$, significance=0.015, two-tailed), which indicates that performance shown in the condition of RPI Present-High Goal Commitment is significantly different from the performances shown in the other three conditions. This pattern is consistent with the prediction stated in H_3 .

Finally, Figure 5 illustrates the results as displayed in Panels A, B and C of Table 9. The figure shows that when RPI is present, individuals with high goal commitment have a significantly higher performance than individuals with low goal commitment. However, when RPI is absent, the difference between individuals' performance in both high and low goal commitment is not significant. Taken together the result of this analysis alongside previous H_3 -related analyses discussed above; it can be stated that the positive effect of RPI on performance becomes greater in a condition when individual's goal commitment is high. It can also be concluded that the interaction between the presence of

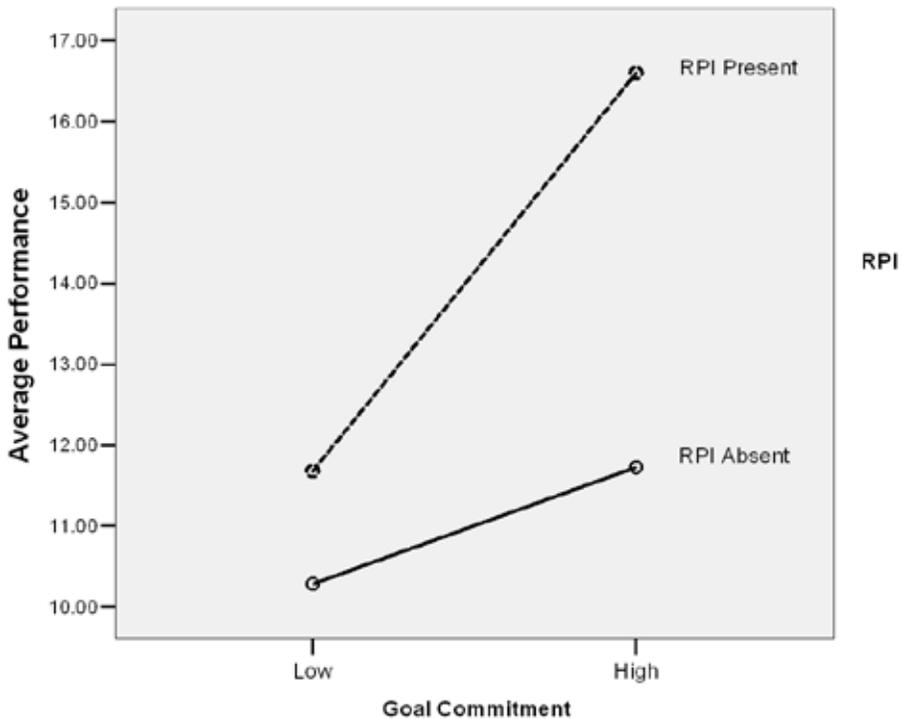


Figure 5: Hypothesis 3, Performance by RPI and Goal Commitment

RPI and high goal commitment perceived by individuals will in turn escalate individuals' performance to a higher level. This result provides support for H₃.

5. Discussion

This study examines the relationship among RPI, goal setting and performance, focusing on how RPI and goal setting elements may affect performance. It is posited by social comparison theory (Festinger, 1954), that individuals tend to compare and evaluate their performance with comparable peers. As the social comparison element is manifested through the provision of RPI, prior studies (Kramer et al., 2016; Tafkov, 2013) showed that the presence of RPI may bring a behavioural effect by encouraging individuals to exert more effort in a publicly-observed situation. Furthermore, goal setting theory (Locke, 1996) assumes that the goal must be explicit, challenging and attainable to be effective.

It is also posited that a different level of assigned goal may result in different levels of goal commitment (Wright, 1992; Lee et al., 2015). For the feedback-goal relationship, prior studies (Hannan et al., 2008; Mahlendorf et al., 2014) showed that the provision of relative feedback may not be effective when the objective that needs to be achieved by employees was perceived to be uncertain.

Results from this study indicate that performance is higher in a condition where the RPI is present than when it is absent. This is consistent with the concept of social comparison, where it is proposed that the behavioural effect of RPI will initiate such behaviour to happen for the purpose of maintaining self-image (Brown et al., 2007; Festinger, 1954). Furthermore, this study also finds that an attainable goal results in higher goal commitment and eventually higher performance. This is in line with the goal setting theory (Locke, 1996) where it was shown that firms may need to consider the level of goal assigned to employees since this can lead to different levels of goal commitment and eventually performance.

More importantly, this study finds an interaction between RPI and goal commitment on performance, where the positive effect of RPI on performance was enhanced to a greater degree among individuals with high - rather than low - goal commitment. This is displayed by the result of the third hypothesis where the highest level of performance has been shown in a condition when RPI is present among individuals with high goal commitment. This is essential, since it demonstrates that both the presence of RPI and individual's commitment toward the assigned goal will in turn interact and bring a significant influence towards performance. It is therefore argued that the interaction between RPI and high goal commitment perceived by individuals can escalate individual's performance to a higher level.

The plausible explanation for this result can be derived through both social comparison and goal setting perspectives. As the social comparison element is manifested through RPI, thus it will create a behavioural-related incentive for an individual to outperform others (Hannan et al., 2013; Webster et al., 2003) and such incentive will be pronounced to a greater degree among individuals with high goal commitment (McFarland & Miller, 1994). This will happen as the goal is attainable from the perspective of highly committed individuals and that different levels of goal commitment will result in different levels of performance. An attainable goal leads to high goal commitment, thus the positive effect of RPI toward performance is enhanced by the

individual's high commitment toward the assigned goal that exists because the goal is attainable (Locke & Latham, 2002). The interaction between these two factors will in turn affect performance, as individuals with high goal commitment will be encouraged not only to "meet" the goal, but also to "beat" the goal in the RPI present condition.

This study contributes to the behavioural management accounting literature - particularly in the field of RPI, feedback and goal setting - by showing that the positive effect of RPI on performance is enhanced to a greater degree by an individual's high goal commitment. Although the relationship among these factors are considered important to be examined, there is still limited evidence regarding how the RPI - as a relative form of feedback - can be used strategically alongside goal setting elements to enhance an individual's performance in a condition when the monetary incentive is constantly held (Luft, 2016a; 2016b). In terms of the feedback-goal relationship, Renn (2003) used data from a field study to explain the moderating effect of goal commitment on the relationship between perceived feedback and work performance. This study complements the findings discussed in Renn's (2003) study by providing experimental evidence related to the relationship among feedback - manifested by RPI, goal setting - represented by goal difficulty and goal commitment, and performance.

Finally, this study also contributes to the current organisational practice by providing an empirical evidence on how RPI and goal setting elements can be used strategically by an organisation to enhance employees' performance. Given that the interaction between RPI and goal setting significantly influence performance, organisations may reap benefits if these factors can be implemented strategically in accordance with organisational needs and objectives. Since firms may often be reluctant to provide RPI because of its potential detrimental effect (Hannan et al., 2013; Luft, 2016a), this study provides evidence that RPI can be beneficial to the organisation. Also, the findings of this study indicate the importance of ensuring that RPI is provided among employees with high goal commitment - resulting from an attainable assigned goal - to ensure that the provision of RPI can bring benefit to the organisation. An example of this mechanism is the provision of periodical performance results of employees in one sub-unit or department. In this case, a firm needs to consider the degree of employees' goal commitment before deciding to provide the RPI, so that the positive effect of RPI would be enhanced to a greater degree and eventually is beneficial for the organisation.

6. Future Research and Limitations

There are several limitations of this study. Firstly, this study only considers the provision of two RPI-related conditions, RPI present condition manifested by a public-type RPI where all participants can observe both their own performance and performance of other participants in their session, and the RPI absent condition where no information was given. Future research may consider implementing the “private-type” of RPI (Tafkov, 2013) where participants receive only their own performance without receiving any relative information regarding performance of other participants. Secondly, this study only applies goal commitment through two different levels of goal difficulty (attainable and unattainable). Future research may also look at multiple levels of goal difficulty (e.g. low, medium and high) and examine how these goal difficulty levels may affect individual’s goal commitment.

Lastly, this study also has a limitation related to experiment task. To establish a task that resembles Tafkov’s (2013) research, this study uses a similar type of task (30 multiplication problems) with a fixed amount of period (five rounds). This may not represent the current condition in a contemporary workplace setting where individuals typically engage in different types of tasks over time (Bonner et al., 2000). Therefore, future research may consider implementing a different type of task for each period, or same task with different dimensions over the periods, so that it can resemble the current workplace condition in a more precise way.

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A Glimpse into the Virtual Community of Practice (CoP): Knowledge Sharing in the Wikipedia Community

Berto Usman* and Yennita

ABSTRACT

Manuscript type: Research paper

Research aims: This paper aims to revisit the concept of the virtual community of practice among undergraduates in Italy and Indonesia.

Design/Methodology/Approach: This study employs a quantitative approach to retrieve data from a questionnaire survey. Data are collected from undergraduate students of the business faculty from the University of Padua, Italy and the University of Bengkulu, Indonesia. Based on a systematic sampling method, the questionnaires are distributed through several social media platforms such as WhatsApp, e-mail, Messenger and Facebook. Analysis is conducted via Structural Equation Modeling (SEM).

Research findings: The findings highlight that Wikipedia characteristics and member promotion, community trust and community identification are found to be positively related to knowledge sharing intention. There is insubstantial evidence to demonstrate the significant effect of community participation on knowledge sharing intention.

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Theoretical contribution/Originality: This study expands on existing literature on virtual community of practice by offering a comparative analysis of two different samples from Italy and Indonesia.

Practitioner/Policy implications: The findings of this study suggest that virtual communities of practice are important vehicles of knowledge sharing in universities. However, many approaches need to be taken in order to ensure that the distribution and circulation of knowledge is properly conducted among members so as to sustain the dynamics of knowledge sharing in the community of practice.

Research limitation: Future research needs to emphasise on collecting data from diverse respondents in different geographical settings so as to increase the generalisability of the findings.

Keywords: Wikipedia, Community of Practice, Virtual Community Outcomes, Knowledge Sharing

JEL Classification: O30, O32, O35

1. Introduction

The amount of knowledge produced in today's academic environment is increasing profoundly. Such knowledge is significantly different from the information and knowledge that had been produced decades ago. As noted by Barker (2015), this phenomenon is triggered by the remarkable evolution and progress of Information Communication and Technology (ICT), where the Internet communication (Web 2.0) and technology (computer and gadgets) has given users a broad opportunity to acquire news and information easily. It also acts as support in terms of the simplification of process knowledge sharing. This phenomenon also reflects that the time, focus, scope and scale of academic knowledge production and sharing, have changed dramatically (Black, 2008). Academics, practitioners, and both public and private institutions working on the area of technological development, are beginning to connect collective resources and knowledge through the Internet platform and various other ICTs. The rapid development of the ICTs has been supporting the many interactions happening in cyberspace for community formation. This has led to the development of virtual communities which have helped to accelerate the growth of human beings, acting as bridges linking the digital gaps and addressing sustainable development goals.

In the community of practice, knowledge sharing is deemed to be one of the fundamental factors of the interaction. As long as the

distribution and circulation of knowledge is properly conducted among members, the dynamics of knowledge sharing in the community of practice will be sustained (Jensen, Johnson, Lorenz, & Lundvall, 2007). Currently, the community of practice is not only manifested in the physical form and the routine meetings of members (Schwen & Hara, 2003; Md. Rasli & Wan Mohd, 2007; Wenger & Trayner-Wenger, 2015) but also through many other virtual community of practices (CoP) that allow members to interact in cyberspace media. Wikipedia, STATALIST (the Stata forum), Linux programmer platform, online distance learning, chat rooms, the virtual world and so forth are new modes for knowledge sharing activities; they are unrestrained by time and space, and they focus on immediate responses and interactions (Gray, 2004; Jansen, Sobel, & Cook, 2011; Kim, Sohn, & Choi, 2011).

The significant increase noted in the number of users and contributors of Wikipedia illustrates that this platform is taking on the role as an intelligent entity in the virtual community setting (Trkman & Trkman, 2009). In this regard, people are inclined towards producing and consuming information that is preserved in and accessed from various sources (Black, 2008; Johnson, 2001). It was also observed that the existence of the same joint enterprises, mutual engagement and shared repertoire among users and contributors enabled them to enjoy the same interest through different platforms of knowledge sharing activities (online and non-online) (Wenger, 2003). Given the important role played by the virtual community in today's knowledge sharing practices, many studies have thus been conducted to examine this phenomenon. Among them, Wang and Wei (2011) reported that the Wiki application has a direct and positive effect on the virtual community's outcomes (community participation, promotion, trust and identification). The Wiki application is related to the Wiki members' willingness to share knowledge and how they behave. In an earlier study, Korfiatis, Poulos and Bokos (2006) evaluated the authoritative source of the social network by focusing on Wikipedia as the knowledge circulation platform. They noted that as Wikipedia advances to become a virtual community of practice, it was also barraged by the critical issue of credibility as an authoritative reference source. This issue challenged the contributors as members to keep maintaining and sustaining the reliability of the contents in knowledge value creation and circulation.

In another study, Chiu, Wang, Shih and Fan (2011) examined how individuals could be encouraged to participate and share knowledge in a virtual community of practice. They suggested that playfulness

can be a critical factor in encouraging the continuance intention of virtual community knowledge sharing. Recently, there have been exploratory studies which surveyed how individuals used the virtual community of practice. Hafeez, Alghatas, Foroudi, Nguyen and Gupta (2018), for example, examined how entrepreneurs engaged in a virtual community of practice to share their knowledge. They observed that entrepreneurs used short and medium messages to contribute to the discussions in the virtual community of practice. They also noted that the engaged topics usually enhance the discussions, thereby promoting the discussion threads. In one longitudinal study, Gray and Gabriel (2018) noticed that self-employed and unemployed managers used the virtual community of practice to share their knowledge and experiences in start-up businesses. They noted that the presence of diversity within the community provided rich professional insights as well as tensions for the members. Hence, it was proposed that such a virtual community of practice would require a moderator who is able to coordinate contributions and to respect cultural differences, simultaneously. Current literature indicates that very few studies are able to explain the use of Wikipedia as a virtual community. Of those that do, they seemed to rely entirely on exploratory data coupled by limited examples drawn from developing country settings.

Motivated by the limitation of existing literature, this study hence aims to address several key areas in terms of knowledge sharing in the virtual community of practice. First, it strives to look at the Wikipedia as a community of practice platform by showing members' involvement in using the virtual community of practice and their outcomes. Second, this study attempts to compare how two different groups of Wikipedia users from Italy and Indonesia, engage in the Wikipedia as a virtual platform. In that regard, the outcome offers empirical evidence to support the findings hence contributing to literature. Following the steps of Wang and Wei's (2011) focus of investigation, this study thus comprehensively investigates the current phenomenon of the Wikipedia as a virtual community of practice by addressing the following research questions: 1) what is the current condition of the virtual community of practice among the Wikipedia members and users in the context of Italy and Indonesia? 2) What is the common demographical profile of the Wikipedia members and users in the context of Italy and Indonesia? 3) Are there any differences in the users' perception with regards to their knowledge intention while using the Wikipedia platform? 4) What is the relationship between the Wikipedia characteristics, the

virtual community outcomes and the knowledge sharing intention among the users?

In this study, Italy and Indonesia were determined as the targeted context due to their high involvement as the TOP 20 Internet countries with the highest number of Internet users within Europe and Asia (Stats, 2018). As of September 2018, the number of Wikipedia contributors in Italy has grown to 58,636 contributors while the number from Indonesia was reported to be 12,636. Both countries are listed among the higher contributors to Wikipedia, according to the Wikipedia statistics database (WMF Analytics, 2018). In this context, we conjecture that the high number of Internet users may be integrated with the Internet usage. Thus, we focus on Wikipedia as a virtual-based community of practice for one developed country (European Union) and one developing country (ASEAN). We also speculate some possible and significant differences in the practice and routines of using the Wikipedia as a sharing platform in the virtual community outcome, as a result of differences in cultural values and behaviour.

The remainder of this paper is structured as follows: Section 2 highlights the literature review by explaining the major theoretical foundations of the current trend of community of practices. Section 3 presents the method of data collection. Section 4 reports and discusses the findings, and Section 5 concludes with the implications of this study.

2. Literature Review

2.1 Wikipedia Characteristics

The online Wikipedia was launched in 2001. Its aim was to serve as a free encyclopedia in multiple languages (Black, 2008). The Wikipedia allows users to contribute to the subject matter with resources enabling them to edit, add and remove the contents freely. Different from other virtual CoP platforms, there is no specific information about the entries' contributors although in some cases member registration is needed before they could proceed to the content contribution (Rector, 2008). Given these characteristics, the Wikipedia appears to be a medium that stimulates quick discovery; it is also a useful learning tool that fosters knowledge sharing activities among the online community members (Ebner, Kickmeier-Rust, & Holzinger, 2008). Common knowledge among members is characterised as the fundamental capability for members to interactively and collaboratively engage with the computer-

mediated communication such as the Wikipedia (Parker & Chao, 2007). The characteristics of such a relationship were eventually considered as the triggering factor, particularly in boosting opportunities which create plausible interactions among users and members (Bruns & Humphreys, 2005; Ebner et al., 2008).

Due to the huge amount of data and notes contributed and shared by users, the Wikipedia has finally enlarged its coverage to turn into a webpage that corresponds to the storing and modifying of information activities. More specifically, the Wikipedia has continued to grow in terms of the number of articles being published on the Wiki¹ pages. The number of scripts and articles added to the Wikipedia through the Wiki pages mode, has grown significantly since the past subsequent years (Trkman & Trkman, 2009). Currently, the number of articles written in English in the first quarter of 2017 was noted to be 5,416,803 articles with the total Wiki pages noted to be 42,234,457 pages. As of the first quarter of 2017, the number of contributors and users had reached 1,259 and 31,072,435, respectively (Wikipedia, 2017).

2.2 *Virtual Community Outcomes*

The concept of a virtual community is defined by Balasubramanian and Mahajan (2001) as an entity that displays several major characteristics comprising: (i) the aggregation of people within the group, (ii) rational utility-maximiser among members, (iii) interpersonal interactions in terms of cyberspace that is not followed by the physical co-location, (iv) the social-exchange process found in the interaction and (v) the presence of a shared property or identity, objective and or interest among members. With regards to the virtual community and its relation to knowledge sharing, it is believed that the degree of knowledge sharing takes an important role in expanding the use of the virtual community

¹ As noted in the paper by Ebner et al. (2008), the first pilot project of wikis was introduced by Bo Leuf and Ward Cunningham in 1995 (Leuf & Cunningham, 2001). The term wiki itself was derived from "*wikiwiki*", which in Hawaiian, denotes as "*quick*" (basic word of fast). In the wiki system, every user and member is not only able to create his/her own articles but also to remove, edit, revise, extend, or link the existing article with other existing and relevant links in the same tag category. Also, the original aim of the wiki establishment was to develop an easy-to-use knowledge management system which enables effective and efficient online collaboration among members in the online-based virtual community of network. Therefore, the wiki system provides a mark-up language feature. This system is based on the simplification of the HTML element which reduces the very basic tags in the online content (Elrufaie & Turner, 2005; Wang & Turner, 2004).

(Zhang, Fang, Wei, & Chen, 2010). It was highlighted by Wasko and Faraj (2000) that productive knowledge sharing is more likely to be the determining factor of an effective virtual community. This is important since the satisfaction of members is influenced by the level of knowledge sharing among members within the group.

Due to the remarkable progress of technology which has shifted the manual community of practice to one that is digital, many researchers (Ardichvili, Page, & Wentling, 2003; Johnson, 2001; Koh & Kim, 2004; Liao, To, & Hsu, 2013) have been striving to understand how the latter works as a valuable and effective system in facilitating the process and activity of knowledge sharing. Due to this transformation, the virtual community has been regarded as resembling the real-life community where the virtual or online-based community, has to also support and provide information among members, thereby allowing the members or participants to increase their involvement and interaction. In this regard, the usage of the virtual community of practice can be perceived as containing a variety of professional and non-professional purposes. Di Maria and Finotto (2008) noted that the online entity somehow relied on user communities; it requires structured and focused marketing strategies which is in line with the characteristics of the virtual community. They act as key elements to maintaining the sustainability of the entity depending on brands, communication and interactions.

Several studies (e.g. Romm, Pliskin, & Clarke, 1997; Wang & Wei, 2011; Liao et al., 2013) have shed light on the online-based community of practice by looking at virtual community outcome factors. The importance of the virtual community outcomes correspond to the success of the knowledge sharing activity. The characteristics and member interaction are themselves not enough if these factors are not followed by the active participation, promotion, interpersonal trust and identification within groups. Many researchers have pointed out the essence of the virtual community in fostering the process of knowledge sharing intention in online-based community of practice. Table 1 illustrates.

2.3 Knowledge Sharing

The process of knowledge sharing can only be fulfilled by at least two parties (knowledge owners and knowledge receivers) who are involved in the sharing activities. According to Hendriks (1999), knowledge sharing carries four primary perspectives. First, there is communication between at least two parties. Second, there is a procedure and a

Table 1: Prior Studies on the Online-Based Community of Practice

Virtual Community Outcomes	Author(s)	Findings
Community Participation (CPA)	Romm et al. (1997), Wang and Wei (2011), Shaw and Hargittai (2018)	Due to the existence of the same interest and needs among the members, voluntary activities are found to be strong among virtual community members.
Community Promotion (CPR)	Koh and Kim (2004), Liao et al. (2013), Pee (2018)	The success of the virtual community depends on the users' interest, willingness to promote and provide the knowledge in their community.
Community Trust (CT)	Casimir, Lee and Loon (2012), Ebner et al. (2008), Wang and Wei (2011)	It is sometimes difficult to define the trust among the contents of knowledge provided by online-based platform systems. However, the willingness of a community to act based on a set of beliefs and norms can increase the trust of members in the knowledge sharing activities.
Community Identification (CI)	Chiu, Hsu and Wang (2006), Wang and Wei (2011)	The sense of belonging among users and members can only be built if they perceive the same set of beliefs, norms and also similar long-term interests in online-based community of practice.

perceived learning activity. Third, the availability of the market is clear and fourth, there is interaction among the members.

Referring to the modes of knowledge sharing as proposed by Nonaka, (1994) (Figure 1), it can be seen that the third mode of the SECI (socialisation, externalisation, combination and internalisation) model is a "combination" involving the use of the social process to combine different bodies of explicit knowledge held by individuals. On a similar note, some scholars believe that the act of knowledge sharing is based on the social exchange theory since the outcome of the exchange process leads to a behaviour change. According to the social exchange theory, an individual would commonly weigh the potential benefits and risks

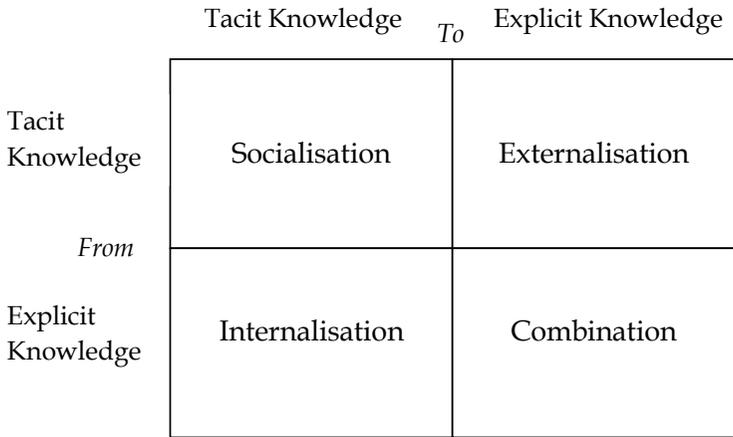


Figure 1: Modes of Knowledge Creation

Source: Nonaka, 1994.

of the social relationship prior to interaction. In the context of the virtual CoP, the likelihood of individuals sharing the information is higher when they are able to maximise the benefits obtained from sharing the knowledge (Bettiol, Di Maria, & Grandinetti, 2012; Molm, 1997). According to Nonaka (1994), the individual exchange and the combined knowledge can be done through exchange mechanisms such as meetings or telephone conversations. Presently, the model of communication has been progressively upgraded by more sophisticated technologies and knowledge management repository approaches (Massingham, 2014). The explosive Internet diffusion, for instance, has boosted the proliferation of virtual communities (Liao et al., 2013). The combination of people and technology platforms is today prolific, in the form of online-based platform communities such as the Wikipedia (Shaw & Hargittai, 2018). The reconfiguration of existing information as seen in current technological platforms, enable the members to maintain the virtual community either by adding, re-categorising or re-contextualising the data and information more easily. Figure 1 demonstrates.

2.4 Research Model and Hypothesis Development

The model used to illustrate the relationship between Wikipedia application, the virtual community outcomes and the behaviour in knowledge sharing is displayed in Figure 2. It is adopted from Wang and Wei (2011). This model is composed of seven factors which are

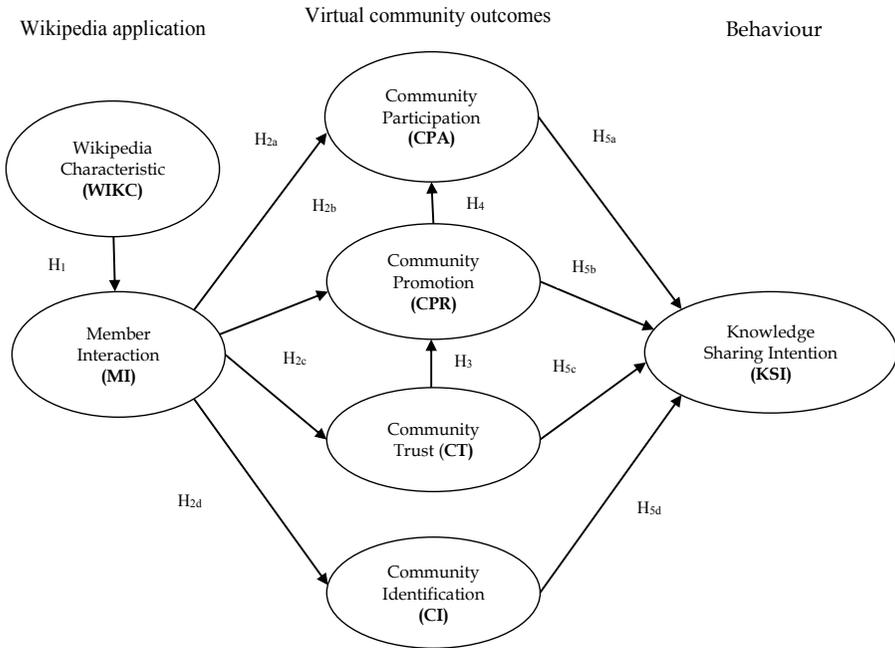


Figure 2: The Proposed Model of Virtual Community Outcomes

Source: Wang & Wei, 2011.

expected to show the relationship between the dimensions of the Wikipedia application, the virtual community outcomes and the behaviour in knowledge sharing. It can be seen that the Wikipedia application has two factors: Wiki characteristics (WIKC) and member interaction (MI). The virtual community outcomes at the manifestation of the community of practice in the online-based community have four factors: community participation (CPA), community promotion (CPR), community trust (CT) and community identification (CI). The last of this, the behaviour is depicted by the usage of knowledge sharing intention (KSI) among the members.

2.4.1 *The Association between Wikipedia Characteristic, Member Interaction, and Community of Outcomes*

Hansen, Berente and Lyytinen (2009) had explored the Wikipedia as a platform for rational discourse and as a manifestation of communicative actions. It was noted that in more developed discussions, interactions

among users and members in the virtual community of practice such as the Wikipedia can be classified as a combination of between people-to-people interaction and as a codification of from people-to-document (see Nonaka's (1994) modes of knowledge creation). Moreover, the procedure of knowledge circulation among members is conducted through the mechanism of many-to-many people. The related information is easily and timely distributed among members. Therefore, the characteristic of the virtual CoP such as Wikipedia creates a huge impact in stimulating high level participation and interaction among members. Besides the interaction itself, interpersonal connection in terms of many-to-many relationship, is conjectured to be positive if members carefully recognise the importance and legitimacy of online-based community practices (Wasko & Faraj, 2000). This will eventually lead to virtual community outcomes that drive the variation in the behaviour of the members. Also, the perceived ease of use of the application is considered as the determinant factor of member interaction (Romm et al., 1997). The interpersonal relationship among members is expected to increase community participation, community promotion, community trust and community identification among the members. Based on the *a priori* explanation of the relationship between the Wikipedia characteristics and member interaction and virtual community outcomes, this study thus postulates that:

- H₁: Wikipedia characteristics (WIKC) among the members are positively related to member interaction (MI).
- H_{2a}: Member interaction (MI) in the Wikipedia community is positively related to community participation (CPA).
- H_{2b}: Member interaction (MI) in the Wikipedia community is positively related to community promotion (CPR).
- H_{2c}: Member interaction (MI) in the Wikipedia community is positively related to community trust (CT).
- H_{2d}: Member interaction (MI) in the Wikipedia community is positively related to community identification (CI).

2.4.2 *The Association between Virtual Community Outcomes and Knowledge Sharing Intention*

The interaction among members and users can increase due to the presence of trust among members of the virtual community (Massingham, 2014). In the absence of the teacher-student role that commonly

takes place in physical learning and knowledge sharing environments, trust is important for maintaining and sustaining the virtual CoP. In the virtual environment, there is no guarantee that the information or knowledge shared is valid and genuine. Therefore, trust is necessarily important for the group where the existence of trust will eventually increase member promotion. When there is a strong level of trust, members are more likely to promote the virtual community or to invite new potential knowledge contributors (Kim et al., 2011). With more proactive and aggressive members promoting the virtual community to new knowledge contributors, an increase in community participation is likely to happen. Intensive postings, for example, would help in promoting the virtual community. With more members and new contributors viewing the postings, ideas and knowledge are disseminated quickly. This too increases community participation. The more people participate as contributors, the more the knowledge is shared among the community. Based on the above arguments, this study postulates that:

- H₃: Community trust (CT) in the Wikipedia community is positively related to community promotion (CPR) of the virtual community.
- H₄: Community promotion (CPR) in the Wikipedia community is positively related to community participation (CPA) of the virtual community.
- H_{5a}: Community participation (CPA) in the Wikipedia community is positively related to the knowledge sharing intention (KSI) of the virtual community.
- H_{5b}: Community promotion (CPR) in the Wikipedia community is positively related to the knowledge sharing intention of the virtual community.
- H_{5c}: Community trust (CT) in the Wikipedia community is positively related to the knowledge sharing intention (KSI) of the virtual community.

Community identification is a form of social attachment observed in virtual community groups (Lee, Ahn, & Han, 2007). The members of the virtual community develop a sense of identification to the extent that the virtual community can meet their needs and desires (Qu & Lee, 2011). Highly attached members tend to be more interested in the shared topics of conversation and this leads to the development of relationships with other members. They are more willing to contribute to the virtual community by giving more frequent information, opinions and sharing

experiences with other members (Arnett, German, & Hunt, 2003). Based on these arguments, this study postulates that:

H_{5d}: Community identification (CI) in the Wikipedia community is positively related to the knowledge sharing intention (KSI).

3. Research Methodology

This study employs a quantitative technique using the questionnaire survey as a data collection approach. To test the research framework of the questionnaire, items were adopted from previous literature (Koh & Kim, 2004; Wang & Wei, 2011). The five-point Likert scale is used to measure the variables. The operationalisation of these variables is depicted in Table 2.

Table 2: Variable Measurements

Variables	Items	Source	
Wikipedia Characteristic	WIKC1	The Wikipedia applications of my virtual community allow me to collaborate with other community members to develop or edit the content published in my virtual community.	Wang and Wei (2011)
	WIKC2	The content published in the pages of my virtual community is generated through group interactions of our members.	
	WIKC3	The Wikipedia versioning capability of my virtual community permits rollbacks in the event that document modifications need to be undone.	
	WIKC4	The pages in my virtual community are well-organized based on the topics and versions of the content presented, which allows me to read or edit the content easily.	
	WIKC5	The Wikipedia applications used in my virtual community can organize the content published based on a logical flow of ideas, which allows me to easily acquire knowledge related to a specific area.	
	WIKC6	I can easily access and use the Wikipedia applications of my virtual community anytime I want.	

Table 2: (continued)

Variables		Items	Source
Member Interaction	MI1	The design of the collaborative tools of our virtual community enables me to make a more realistic judgment of the information acquired.	Wang and Wei (2011)
	MI2	The virtual interaction enabled by our community can promote superior relationships among community members.	
	MI3	The design of the collaborative tools of our virtual community enables me to get an understanding of the topics of interest.	
	MI4	The functions of our virtual community can provide me with more freedom for interactions.	
Community Participation	CPA1	I often provide useful information/content for our virtual community members.	Wang and Wei (2011)
	CPA2	I eagerly reply to postings by the help-seeker of our virtual community.	
	CPA3	I take care of our virtual community members.	
	CPA4	I often help our virtual community members who seek support from other members.	
Community Promotion	CPR1	I invite my close acquaintances to join our virtual community.	Koh and Kim (2004)
	CPR2	I often talk to people about the benefits of our virtual community.	
	CPR3	I often introduce my peers or friends to our virtual community.	
	CPR4	I say positive things about this community to others.	
	CPR5	I recommend this community to anyone who seeks my advice.	
Community Trust	CT1	By joining this online community, I will save time in getting information	Wang and Wei (2011)
	CT2	By joining this online community, I will save money in getting information	
	CT3	I can get specific information from this online community	

Table 2: (continued)

Variables	Items	Source	
Community Identification	CT4	The information I get from this online community will help me improve my abilities.	Wang and Wei (2011)
	CI1	I feel a sense of belonging to my virtual community.	
	CI2	I am glad that I joined my virtual community for knowledge sharing purposes.	
	CI3	I have a strong positive feeling toward my virtual community.	
	CI4	I believe that this is my favourite virtual community.	
Knowledge Sharing Intention	CI5	I am proud to be a member of my virtual community.	Wang and Wei (2011)
	KSI1	I frequently participate in knowledge sharing activities in this online community.	
	KSI2	I usually spend a lot of time conducting knowledge sharing activities in this online community.	
	KSI3	When participating in this online community, I usually actively share my knowledge with others.	
	KSI4	I usually involve myself in discussions of various topics rather than specific topics.	

The target population of this study were students who use the Wikipedia. Our sampling frame comprises undergraduate management students attached to the Dipartimento di Scienze Economiche e Aziendali (DSEA), "Marco Fanno", the University of Padua - (UNIPD, Italy), and the Departemen Manajemen, Fakultas Ekonomi dan Bisnis (FEB), the University of Bengkulu (UNIB, Indonesia). Currently, the University of Padua in Italy has 38,495 undergraduate students while the University of Bengkulu has around 7,927 undergraduate students. More precisely, we report the total number of students that is 600 active undergraduate students in the management studies at the University of Padua and 400 active undergraduate students at the University of

Bengkulu. To systematically collect the samples, we pick every third student who was registered in the faculty's student database. The reason for using the students as the targeted respondents are as follows: First, university students are more easily available and accessible. Second, it is less expensive when engaging university students whilst seeking research respondents from outside the university will be more difficult in terms of time and finances. Third, the undergraduate students are predominantly familiar with using the Internet and one of the most accessed web pages they use to collect information is the Wikipedia page.

A total of 333 students were then approached through the email. Upon obtaining their consent for participation, 220 questionnaires were distributed through several social media such as WhatsApp's, email, Messenger and Facebook, depending on the preference of the respondents. The respondents were then equally distributed into two groups - Italians and Indonesians. Table 3 depicts the demographic profiles of the respondents.

Table 3: Demographic Profiles of Respondents in Two Countries

Demographic Characteristics		Italy		Indonesia	
		Frequency	Percentage	Frequency	Percentage
Gender	Male	64	58.18	76	69.09
	Female	46	41.82	34	30.91
Age	<18 years old	18	16.36	8	7.27
	19-21	42	38.18	30	27.27
	22-25	35	31.82	48	43.64
	26-29	15	13.64	24	21.82
Internet Experience	<1 year	-	-	-	-
	1-3	20	18.18	24	21.82
	4-6	36	32.73	28	25.45
	>6 years	54	49.09	58	52.73

As can be noticed, a majority of the respondents were males for both groups. In terms of age, most of the respondents from Italy were between 19 to 21 years old while most of the respondents from Indonesia were in the range of 22 to 25 years old. For both samples, a majority of the respondents appear to have more than six years of Internet experience.

4. Results and Discussion

The structural equation modelling (SEM), using AMOS and a two-stage model estimation was applied, in line with Anderson & Gerbing (1988). The confirmatory factor analysis was conducted, followed by the structural model analysis.

4.1 Measurement Model Analysis

A measurement model encompassing all the variables of interest was evaluated. Two psychometric tests, the convergent validity and discriminant validity, were performed. The convergent validity was conducted to ensure that multiple items used to measure the variables are in agreement. In line with Hair, Hult, Ringle and Sarstedt (2016), the convergent validity was assessed based on factor loadings, composite reliability and average variance extracted (AVE). As indicated in Table 4, all the items' loading have significant values and are between the range of 0.513 and 0.838. This fulfils the requirement of this study (Bagozzi, Yi, & Singh, 1991). The composite reliability values ranged from 0.774 to 0.866 which exceeded the recommended values of 0.7 (Hair et al., 2016). Additionally, the AVE values of all the variables are in the range of 0.502 to 0.611 which exceeded the recommended value of 0.5 (Hair et al., 2016).

Following the convergent validity, Fornell and Larcker's (1981) approach is used to assess the discriminant validity. All the scales appeared to have a substantially higher square root of the AVE values, in comparison to their correlation with other variables. This substantiates the discriminant validity, as displayed in Table 5. Based on this, it is deduced that the variables and items used in the measurement model are suitable to be used to test the structural model and the associated hypotheses.

4.2 Structural Model Analysis

Assuming that the hypothesised measurement model satisfy the validity and reliability assessment, we then proceed with the structural model analysis. The data fitted the model well $\chi^2(453) = 309.116$, $p = .68$ which implies that the data fitted the model sufficiently. Furthermore, both the incremental (AGFI = .93, TLI = .98 and CFI = .93) and absolute index (RMSEA = .00 and GFI = .99) have achieved their cut-off values (Schumacker & Lomax, 2010). Following this, the significance of the

Table 4: Convergent Validity

Variables	Items	Factor Loading	Average Variance Extracted	Composite Reliability
Wikipedia Characteristics	WIKC1	0.700***	0.588	0.849
	WIKC2	0.837***		
	WIKC3	0.764***		
	WIKC4	0.644***		
	WIKC5	0.637***		
	WIKC6	0.578***		
Member Interaction	MI1	0.716***	0.574	0.843
	MI2	0.766***		
	MI3	0.721***		
	MI4	0.823***		
Community Participation	CPA1	0.838***	0.610	0.861
	CPA2	0.853***		
	CPA3	0.757***		
	CPA4	0.663***		
Community Promotion	CPR1	0.644***	0.527	0.846
	CPR2	0.630***		
	CPR3	0.768***		
	CPR4	0.812***		
	CPR5	0.758***		
Community Trust	CT1	0.838***	0.609	0.860
	CT2	0.857***		
	CT3	0.750***		
	CT4	0.663***		
Community Identification	CI1	0.611***	0.597	0.831
	CI2	0.692***		
	CI3	0.762***		
	CI4	0.690***		
	CI5	0.762***		
Knowledge Sharing Intention	KSI1	0.727***	0.568	0.774
	KSI2	0.802***		
	KSI3	0.661***		
	KSI4	0.513***		

Note: *** The estimate is significant at the 0.01 level.

Table 5: Discriminant Validity

Variables	WIKC	MI	CPA	CPR	CT	CI	KSI
WIKC	0.766						
MI	0.619	0.757					
CPA	0.588	0.752	0.781				
CPR	0.645	0.626	0.601	0.725			
CT	0.678	0.736	0.637	0.650	0.780		
CI	0.600	0.732	0.645	0.680	0.660	0.772	
KSI	0.539	0.685	0.654	0.557	0.648	0.677	0.753

Note: WIKC = Wikipedia Characteristics, MI = Member Interaction, CPA = Community Participation, CPR = Community Promotion, CT = Community Trust, CI = Community Identification, KSI = Knowledge Sharing Intention.

Table 6: Path Estimate among Variables in the Structural Equation Modeling

Hypotheses	Structural Path Estimate	β	S.E.	t-value	p-value	Accepted/Rejected
H ₁	MI ← WIKC	0.550	0.065	8.417	***	Accepted
H _{2a}	CPA ← MI	1.027	0.130	7.882	***	Accepted
H _{2b}	CPR ← MI	0.202	0.099	2.026	**	Accepted
H _{2c}	CT ← MI	0.736	0.097	7.597	***	Accepted
H _{2d}	CI ← MI	0.703	0.102	6.859	***	Accepted
H ₃	CPR ← CT	0.787	0.120	6.538	***	Accepted
H ₄	CPA ← CPR	-0.066	0.082	-0.807	0.419	Rejected
H _{5a}	KSI ← CPA	-0.084	0.069	-1.219	0.223	Rejected
H _{5b}	KSI ← CPR	0.054	0.113	0.482	0.630	Rejected
H _{5c}	KSI ← CT	0.356	0.135	2.633	**	Accepted
H _{5d}	KSI ← CI	0.619	0.079	7.807	***	Accepted

Note: *** The estimate is significant at the 0.01 level; ** the estimate is significant at the 0.05 level; * the estimate is significant at the 0.10 level.

direct effects, as specified by the research model, is further evaluated. Table 6 illustrates.

The results revealed that the effects of the Wikipedia characteristics ($\beta = 0.55$, $p < 0.001$) on member interaction is positive and significant, thereby supporting H₁. This is consistent with previous findings (Wasko & Faraj, 2000). The Wikipedia characteristics served as a knowledge

platform which enabled the respective individuals to exhibit their expertise and capabilities. This is accomplished through knowledge sharing in the respective entries, thereby providing a good prospect for members to interact. Since members using Wikipedia have a choice of using a virtual account or to remain anonymous when they contribute to the contents, there is a possibility that there would be higher member interactions (Yang & Lai, 2011) in the Wikipedia platform. The reason is because these members would have higher levels of confidence in displaying their competencies and to communicate.

The effects of member interaction on community participation ($\beta = 1.03$, $p < 0.001$), community promotion ($\beta = 0.20$, $p < 0.05$), community trust ($\beta = 0.74$, $p < 0.001$), and community identification ($\beta = 0.70$, $p < 0.001$) are all positive and significant, thereby supporting H_{2a} , H_{2b} , H_{2c} and H_{2d} . In addition, community trust is found to have a significant positive relationship on community promotion, thereby supporting H_3 . These findings are expected and they are also in line with the results reported by Qu and Lee (2011). This outcome indicates that highly interactive members who are attached to Wikipedia are more likely to participate and to promote the virtual community to others (Feng & Morrison, 2007). They perceive themselves as members as a result of their sense of belonging to the community.

In contrast, the effect of community promotion on community participation ($\beta = -0.066$, $p = 0.42$); and the effect of community participation ($\beta = -0.084$, $p = 0.22$) and community promotion ($\beta = 0.054$, $p = 0.63$) on knowledge sharing intention is not significant, hence providing insubstantial evidence to support H_{4r} , H_{5a} and H_{5b} . Several plausible reasons could be the cause of the insignificant relationship. First, while member interaction may lead to community participation and community promotion, social interaction in Wikipedia, unlike other general virtual communities, is infrequent. Individuals who joined Wikipedia may not join the same community. Moreover, the contents shared tend to focus on specific technical issues which may not be of interest to others (Yang & Lai, 2011). Therefore, even though there is substantial community promotion, it may not necessarily lead to community participation and individual willingness to share knowledge.

In line with Liao et al. (2013), this study also provides a positive significant effect of community trust ($\beta = 0.36$, $p < 0.05$) and community identification ($\beta = 0.62$, $p < 0.001$) on knowledge sharing intention, thereby supporting H_{5c} and H_{5d} . This is expected as members who

appear to trust the contents of the entries in Wikipedia may also exhibit a higher level of willingness to share the knowledge even though Wikipedia has no expert review mechanism. In most cases, individuals revise the entries when they believe that the original entries are inaccurate (Yang & Lai, 2011). It is further speculated that members' overall trust towards the Wikipedia entries may be related to their individual experience and expertise. A user of the Wikipedia with increased community identification is more prone towards showing positive behaviours; he is more likely to have frequent exchanges of information and experiences with others.

4.3 Differences between Italian and Indonesian Samples

Following the structural model analysis of the two groups of samples, a multi-group analysis is performed to analyse the differences between the Italian and Indonesian samples. As indicated in Figure 3, there are significant differences between the two groups with regards to the relationship between member interaction and community promotion, and community participation and knowledge sharing. Within the Italian context, member interaction is found not to influence community promotion while community participation do not eventually lead to knowledge sharing. In contrast, the Indonesian samples are more likely to promote the virtual community platform when there is greater interaction between the members; participation in the virtual community will lead to higher intention to share knowledge.

These findings indicate that while there is high member interaction within the Wikipedia community, Italian students are not willing to promote the online community and share the knowledge. The inconsistent findings drawn from this study could be due to the cultural variations of the two groups of samples. Originating from a Western country, Italian students are characterised by their individualistic culture (Hofstede, 1998; Lin & Ho, 2018). In an individualistic environment, members tend to consider personal interests and goals to be more important than the interests and goals shared by a group. Naturally, this outcome contradicted the Indonesian values which were characterised by a collectivistic society where the feelings, beliefs and behavioural intentions of the members very much depend on shared values, collaboration and coordination (Lin, 2014). In a highly collectivistic environment, members are willing to tolerate with low usability if the

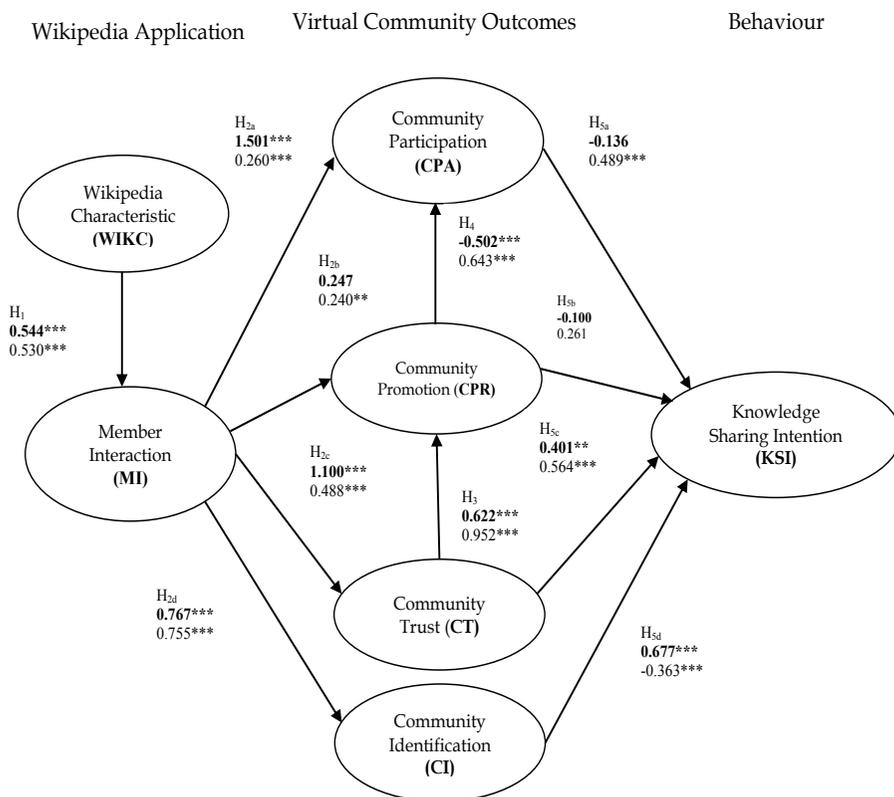


Figure 3: Path Analysis Output of Virtual Community Outcomes for Both Sample Groups (Italian and Indonesian Groups)

Note: The bold number is the path estimate for Italian group of sample and the non-bold is for Indonesian.

tool helps to achieve a shared goal of the society. Due to these reasons, individuals of the collectivistic society such as Indonesia are, thus, more incline to participate and share the knowledge through the virtual community even if the information posted may not benefit them. In comparison, being in a high uncertainty avoidance culture, people in Italy may prefer stability, predictability and resistance. Therefore, they would feel discomfort when they feel that their future is uncertain. In this regard, they tend not to circulate any knowledge and information if they themselves are not confident and certain about the credibility and quality of the information shared through Wikipedia. Figure 3 illustrates.

5. Conclusion and Implications

The purpose of this study is to investigate the relationship between Wikipedia characteristics, member interaction, virtual community outcomes and knowledge sharing intention. Results generated from this study suggest that virtual community outcomes depend on the Wikipedia characteristics and member interaction. Increased interaction and Wikipedia characteristics brought about a strong identity within the community and further enhanced promotion, trust and participation. Nevertheless, since the Wikipedia has less or infrequent member interactions as compared to other general virtual community platforms, its promotion may not lead to participation nor the willingness of members to share knowledge substantially. The findings generated from this study show a variation between the Italian and Indonesian samples which could be attributed to their difference in cultural values and behaviours. Unlike the Indonesian students, the Italian students are only willing to promote the Wikipedia community if they feel that the quality of the information posted is relevant and if they have a good relationship with Wikipedia. Originating from a Western country, the Italian respondents may expect to see a more comprehensive and complete answer in the Wikipedia platform. Therefore, they would perceive any incomplete answers or contents as incapable of being considered for discussions, unlike their Indonesian contemporaries.

The findings of this study may offer some practical implications for the way online socialisation supports knowledge sharing within the university context. In this regard, the positive impact of member interaction and virtual community outcomes necessitate a proactive focus. To foster a sense of community identification, the virtual community platform such as Wikipedia, should provide tools that can make members feel connected with other members. The notification of response and the detailed profiles of members are among the characteristics that could be relied on to promote community identification. Additional tools to increase member interaction can be achieved through formal discussion featuring experts. This would enable members to communicate more directly within their interest, thereby promoting a greater level of trust. This would eventually lead to greater community promotion and community participation. It would also help to address some of the issues concerning the quality of the contents written for Wikipedia, which have suffered many criticisms. Featuring more experts and detailed profiles of members may instil a higher confidence

on the entries made by contributors. This can ensure information completeness and accuracy through “collective wisdom”. The credibility of the Wikipedia entries may involve an individual’s trust towards the Wikipedia contents which may be related to the contributors’ experience, thoughts and expertise.

While this study has offered an insight into the use of the Wikipedia platform as a knowledge sharing medium, several limitations were detected. The first of these is the generalisability of the results due to the use of only two groups of samples from two countries. Future research needs to consider collecting data from several other countries and from more diverse respondents with different educational backgrounds. Doing so will be able to shed light on whether users of the online-based (virtual) community of practice from different geographical locations share a similar propensity on knowledge sharing intentions. The second limitation is that the survey is confined to undergraduate students in two universities in Italy and Indonesia only. Future research should be extended to evaluate the perspective of other users and members since they too are important and relevant parties in the development of the online community of practice such as the Wikipedia. Future research may consider measuring and evaluating the different behaviors of users and members while using the online community of practice as alternative platforms of the physical community of practice.

Overall, this study also poses a challenge for future researchers to create more sophisticated assessment tools to measure how and why the perception of users and members may determine the sustainability of online-based community of practice. We believe that by delineating the effect of online-based community of practice, the behaviour of users and members, in terms of knowledge sharing intention, and by displaying the mediating role of online-based community of practice and knowledge sharing intention, future studies will be able to elaborate through more systematic procedures how the pattern of online-based community of practice can be developed.

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Grey Markets in Customer-to-Customer Transaction and Social Networking – The Case of Vietnam

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ABSTRACT

Manuscript type: Research paper

Research aims: This study aims to examine the Facebook-based grey market transactions of female customers in Vietnam. Specifically, this study investigates why (the reasons) and how (the ways) Vietnamese customers purchase grey (unofficial parallel imported) products on Facebook.

Design/Methodology/Approach: Semi-structured interviews were conducted with thirteen female customers who had purchased grey products bought in Japan. Content analysis was applied and findings were discussed.

Research findings: The Vietnamese unofficial parallel imported products (UPIP) or grey market has transformed itself into an online customer-to-customer (C2C) market with all the characteristics of an e-commerce market, thanks to the development of social media platforms such as Facebook. This market is expanding because it can fulfil the diverse needs of Vietnamese consumers whose incomes are expanding but whose needs are not satisfied. Buyers enter the market after carefully consulting their own experiences and those of their acquaintances. However, due to their lack of experience in

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buying and using the products in the country of origin, consumers may over-trust the sellers and be taken advantage of.

Theoretical contribution/Originality: The grey market of Vietnam has partly merged with the C2C market and the e-commerce market. Grey market customers are better supported by the development of social networking sites (e.g., Facebook) which serve as powerful tools for customer reviews. The grey market, therefore, has been turned into an open one. However, due to the lack of a strong and effective legal framework, it is still unofficial. In addition, since social media platforms have already been transformed into real shopping venues, customers can presently enjoy a personalised service with many of their niche needs met satisfactorily.

Practitioner/Policy implications: Legal brand owners should consider opening official stores in Vietnam to exploit the promise of a market whose spending power is the best in the Southeast Asian region. However, before any official entry initiatives are undertaken, a careful market research and a trial basis is necessary. In addition, the Vietnamese government should implement a non-tax policy for social-media-based grey traders as a measure to control the import of illegal or harmful products. The government should also facilitate the introduction of an e-commerce law.

Research limitations: This study only captured the opinions of female customers from one urban area of buying UPIPs on Facebook. Those of the male and rural consumers were not investigated. In addition, the current study focused on the buyers' side of the UPIP transaction and had excluded the sellers' perspective. Moreover, this study only focused on Vietnam. The activities of the Facebook-based UPIP markets in other countries were overlooked.

Keywords: C2C, Facebook, Grey Market, Social Media, Vietnam

JEL Classification: M00

1. Introduction

A grey market (i.e., a parallel or diverted imports/goods market) is a market of genuine trademarked products sold by unauthorised distributors (Antia, Bergen, Dutta, & Fisher, 2006). Born as a secretive entity (Malueg & Schwartz, 1994), grey markets have now been legalised in many countries and territories such as America, Australia, China, Japan, New Zealand, Singapore, Taiwan and the European Union (Gallini & Hollis, 1999; Hwang, Peng, & Shih, 2014). The grey market has also manifested itself on the online environment. In Vietnam, at least 300,000 people are estimated to be selling products on Facebook (Tomiya-

2016). Many of these products (i.e., “hàng xách tay” in Vietnamese) are said to be those (legally) bought from abroad (e.g., America, Australia, France, Japan, Korea and Thailand), carried to Vietnam through the means of air passenger luggage and then sold to domestic Vietnamese users (without agreements from the legal producers and/or distributors and without the official control of Vietnamese customs and market management organisations). These products are, undoubtedly, grey products and the Facebook-based market is indeed a grey market.

However, investigations of the grey market issues have mainly focused on the activities of grey importers and legal stakeholders, and the interactions between them (Altug & Sahin, 2018; Simba, Smith, & Dube, 2018). Research on customer-related issues is less significant (Huang, Lee, & Ho, 2004; Liu, Chang, & Lin, 2012). In addition, previous studies had not accounted for the significant development of technology (e.g., mobile devices and social media networks) and the growing power that present day customers have due to such technological developments (Kim & Johnson, 2016; Lamberton & Stephen, 2016). Although there is research, few have relatively attempted to look at the grey market in Vietnam (Kuanpoth, 2007). Consequently, existing literature have overlooked the new development of the market as well as other potential participants in the market.

A grey market generally emerges from two perspectives (Richardson, 2002). From the supplier’s perspective, there are benefits for grey importers since they do not have to invest in building a reputation and providing extra services (Knoll, 1961). From the customer’s perspective, there are demands for cheaper products which are imported without an authorised agreement (Malueg & Schwartz, 1994). However, where there is no demand then there is no need for suppliers. This is especially true with products in the pre-entry and/or exit stages of their lifecycles (Klepper, 1996). Therefore, understanding customers’ reasons for buying (why) and their ways of buying (how) is the very first step towards getting a better insight into the market.

The popularity of the grey market in Vietnam began in the 1980s when Vietnamese living in the Soviet republics sent home foreign goods to be resold. The grey market can be considered a special form of customer-to-customer (C2C) transaction which is “the active or passive interaction between two or more customers inside or outside the service setting” (Johnson & Grier, 2013, p. 306). Different from the business-to-business (B2B), business-to-customer (B2C) and customer-to-business (C2B) models, the C2C facilitates the transaction of products and/or

services between customers (Hom, 2013). Some famous C2C platforms include auction sites such as eBay and Taobao (Li, Li, & Lin, 2008) and multipurpose portals such as Craigslist and Facebook (Santus, 2015). Nonetheless, unlike the C2C transactions in other countries, Facebook-based C2C buying and selling activities in Vietnam are not (or cannot be) controlled strictly by the government (e.g., an e-commerce law has not been passed yet). Vietnamese Facebook merchandisers do not have to report their activities and their incomes; they are also not required to pay taxes to the government, until very recently (2018). In addition, buyers are frequently cheated and unprotected. Thus, if not controlled, foreign retailers and brand owners who are and will be entering the Vietnamese retail market may be affected by the current grey market activities. Unfortunately, this aspect of research focusing on grey markets has not been explored by existing literature.

Grounded on these understandings, the current study aims to examine the Facebook-based grey market in Vietnam with a focus on customer behaviour. Specifically, this study investigates why Vietnamese users buy grey products and how they buy these products on Facebook.

This study will contribute to the literature on grey market by providing a new context (Vietnam), a new location (online) and a new era (the late 2010s) of findings. In addition, this study provides government agencies with practical implications for the management of the market, especially the creation of a legal framework and the operation of managerial activities. It also adds more recent insights into the control of entry activities of legal providers in the near future. The remainder of this paper is organised into seven sections. Section 2 reviews the relevant literature. Section 3 describes the data and methodology while section 4 reports the results. Section 5 and section 6 discusses the results and implications of the findings. Finally, section 7 concludes the paper.

2. Theoretical Framework

2.1 Social Media Usage

Social media “is a group of Internet-based applications that build on the ideological and technological foundations of web 2.0 which allow the creation and exchange of user generated content” (Kaplan & Haenlein, 2010, p. 61). Social media helps to facilitate the development of online social networks through social networking activities. Thus social media

is also regarded as a social networking platform, for example, Facebook, Flickr, Instagram, Pinterest, Twitter and YouTube.

In recent years, research on social media (e.g., business marketing, public relations, communication and behaviours) has been increasing (Khang, Ki, & Ye, 2012; Ngai, Tao, & Moon, 2015). In the marketing sector, for instance, research has attempted to understand the effects of induced and organic marketing efforts (advertisement and word-of-mouth), brand management, customer relationship management, and customer perception and behaviour, among others (Alalwan, Rana, Dwivedi, & Algharabat, 2017). In practice, businesses have adopted social media into their electronic commerce activities and created what has been termed as social commerce channels since the late 2000s (Turban, King, Lee, Liang, & Turban, 2015). Companies run their own Facebook or Twitter pages to interact with their customers (Dijkmans, Kerkhof, & Beukeboom, 2015; Michaelidou, Siamagka, & Christodoulides, 2011). This allows customers to participate actively in the discussion and purchase of products and services on the networking sites of their favourite brands (Cox & Park, 2014; Zhang, Omran, & Cobanoglu, 2017). Some influential customers also run their own pages and/or channels on social networking sites to provide their audience with a regular review of certain products and services (Hoyle, 2017). Consequently, customer-generated media has become an important source of reference for potential users (Aye, 2015).

Customers' use of the social media is affected by many factors. In their study, Kwon and Wen (2010) found that perceived ease of use, usefulness and encouragement are significant antecedents of the actual use of social networking sites in Korea. Focusing on Taiwan, Lin and Lu (2011) noted that perceived enjoyment is a significant predictor of future use intention. When looking at users' motivation in using social media, Young, Len-Ríos and Young (2017) observed that there were five dimensions: romantic, social belongingness, surveillance, information and entertainment. Similarly, Kim, Sohn and Choi's (2011) analysis found that users were motivated by five factors: seeking friends, seeking convenience, seeking social support, seeking information and seeking entertainment. This shows that motivation to use social media is diverse.

Social media may offer many benefits to its users, for example, social capital enhancement, new environment adaptation, life satisfaction, social trust and civic participation (DeAndrea, Ellison, LaRose, Steinfield, & Fiore, 2012; Ellison, Steinfield, & Lampe, 2007; Valenzuela,

Park, & Kee, 2009). Despite this, social networking sites may also contain several threats. One of the most serious concerns about social networking is privacy (e.g., the information about an individual and his/her acquaintances may be collected and used for grey and/or dark purposes) (Ellison, Vitak, Steinfield, Grey, & Lampe, 2011). Other concerns include addiction, being affected by others, being asocial, cyberbullying and online harassment, depression, distraction, obligation, and a waste of time, among others (O’Keeffe & Clarke-Pearson, 2011; Vural, 2015).

In line with its worldwide development, social media has been adopted by Vietnamese users since the late 2000s. It is estimated that approximately 38 and 44 million Vietnamese citizens are owners of social networking accounts in 2018 and 2020, respectively (Statista, 2018). These figures make up approximately 69 per cent and 73 per cent of the total Internet users in the country. However, research on Internet-related issues in Vietnam has mainly focused on the good and bad of adopting Internet into their social lives and business activities (Lin, Wu, & Tran, 2015; Zhang, M.W.-B. et al., 2017). Studies focusing on the use of social media, unfortunately, are scarce. In a rare attempt, Nguyen, Nguyen and Phung (2016) examined users’ perception of the usefulness of Facebook-based information. Based on their findings, the researchers recommended that businesses use Facebook as an additional channel to communicate with their customers. Other than this, research looking at other aspects of the use of social media in the context of Vietnam, has largely, been overlooked.

2.2 C2C Business on Social Media

The C2C business on social media is one dimension of electronic commerce. It refers to the electronic transaction occurring between or amongst individuals on social networking platforms (Turban et al., 2015). The most prevalent example of a social-media-based (SMB) C2C electronic commerce is online auctions such as eBay.

Researchers such as Stern, Royne, Stafford and Bienstock (2008) have studied the mechanism of consumer attitude toward online auction sites. They applied a model of technology acceptance to examine consumer intention. Their analysis revealed that respondents’ intention toward online auction sites was affected by their perceived usefulness, perceived ease of use and also the impulsiveness of the shoppers’ activities. Yeh, Hsiao and Yang (2012) added that another factor that could

influence consumer intention was perceived uncertainty. Additionally, Yen and Lu (2008) found that satisfaction with both auctioneers and sellers was the antecedent of customers' repurchase intention.

Other researchers examined online auction activities from the suppliers' perspective. Becherer and Halstead (2004), for example, found that eBay sellers may choose between the two orientations of differentiation and cost leadership to guide their activities. However, orientations may change and auction platforms may also be switched. In the context of Taiwan, Lin, Cheng, Wang and Chang (2012) found that sellers' switching intention was affected by many important factors such as switching costs, fees and website qualities.

Electronic commerce C2C in general and SMB C2C in particular helps to reduce administrative and commission costs for both the sellers and buyers (Turban et al., 2015). It also helps to eliminate the geographical limitations of traditional transactions and allows the flexibility of all transactions (Ariely & Simonson, 2003). However, like any other electronic activities, the SMB C2C may pose several risk concerns, for example, privacy, fraud, inconveniences of assessment and shipment, and product quality, among others (Esper, Jensen, Turnipseed, & Burton, 2003; Forsythe & Shi, 2003; Miyazaki & Fernandez, 2001; Wu, Li, & Kuo, 2011). To overcome such issues and to reach a purchase decision, buyers rely on ratings and/or reviews or comments on sellers and their products (Amblee & Bui, 2012; Phang, Zhang, & Sutanto, 2013). In this sense, trust is an important element of any electronic transaction (Kim & Peterson, 2017). Sellers, on the other hand, try to create and provide an interactive and reliable shopping environment as a means to attract and persuade customers to buy their products (Carter, Tams, & Grover, 2017; de Vries, Gensler, & Leeflang, 2012; Shen & Bissell, 2013). This bidirectional or two-way feedback mechanism offered by the social networking platform (i.e., sellers and buyers review and rate each other) facilitates and guarantees such SMB C2C transactions (Weinberg & Davis, 2005). To offset risks and to make financial transactions more convenient, online escrow services (e.g., PayPal) are adopted by both the sellers and buyers (Antony, Lin, & Xu, 2006).

In the context of Vietnam, some research (Tran, Zhang, Sun, & Huang, 2014; Han, Nguyen, & Nguyen, 2016) had been conducted to investigate issues related to electronic commerce and mobile commerce. Nonetheless, studies focusing on C2C in general and SMB C2C in particular are still lacking. Existing studies (Che, Cheung, & Thadani, 2017; Chen, Su, & Widjaja, 2016) have mainly focused on the potential

of social media as a shopping venue while actual C2C transactions have been neglected.

2.3 Parallel Market in Asian Countries

Products and goods are materials manufactured for consumption. In cases where domestic markets are unable to manufacture such goods or where it is cheaper to buy them from other countries, imports are transacted (The Levin Institute, 2015). With developing countries, imported products, especially those from developed countries, have special appeals (Batra, Ramaswamy, Alden, Steenkamp, & Ramachander, 2000; Hooper, 2000; Kaynak, Kucukemiroglu, & Hyder, 2000; Opoku & Akorli, 2009; Zhou & Hui, 2003). The first reason is because foreign products usually have better quality when compared to domestic ones. The second reason is that products imported from abroad carry several symbolic values which domestic products do not have (e.g., luxury, prosperity, status and western style).

However, due to the small market size, the population's weak purchasing power, uncertain demands and a lack of adequate legal system (Ahmadi, Irvani, & Mamani, 2015; Chang, 1993; Chow, 2011), many foreign companies may resort to setting up authorised distribution channels for their products to be sold in developing countries. This condition thus gives rise to grey or parallel imports. Nevertheless, with the strong support from the public, original trademark owners thus become "free riders" of all the efforts imposed by parallel importers (Chang, 1993). Specifically, original trademark owners' image and reputation are projected even before they make any official attempt to enter such markets. This is especially true if consumers are satisfied with the parallel products. Otherwise, future businesses of the rightful owners may be affected by the current uncontrolled negative incidents caused by unsafe or damaged products, no-service and warranty contracts, and inadequate manuals, among many others (Mathur, 1995).

In the Asian context, several research on parallel imports have been conducted in Taiwan and China. It was found that Taiwanese consumers are well-informed about parallel imports (Chang, 1993). Price-sensitive consumers chose parallel goods because their prices are cheaper when compared to those of non-parallel goods. However, variety-seeking consumers went to such markets to find something different and interesting while quality-sensitive consumers chose such markets to purchase expensive and high-quality products. In particular,

Taiwanese customers' awareness of price-quality relationship and risks was found to significantly and negatively affect their attitude towards parallel imports (Huang, et al., 2004). In the context of China, it was observed that the Chinese consumers' perception of product quality had significantly influenced their intention to buy both the grey and legally authorised products. However, impact on grey goods was stronger (Liu et al., 2012). Generally, those who wanted to buy foreign products were highly loyal to brands. They were conscious of quality and fashion, and they also shopped on a monthly basis. Otherwise, those who preferred domestic goods were found to be price conscious and also overwhelmed by choice (Wang, Siu, & Hui, 2004).

Similar to other developing countries, the parallel import and grey market in Vietnam is a prevailing issue. There are licensed parallel import activities such as pharmaceuticals besides grey parallel importations of high-tech products (Kuanpoth, 2007; Tuoi Tre News, 2014b). Although Vietnam is a member of the World Trade Organisation and it has signed many bilateral and multilateral trade agreements with other countries, grey parallel imports seem to be out of the official hold of the country (Harris, 2015). Foreign companies have noticed that the size of the grey market in Vietnam is several times larger than that of the official market. Thus, they are trying to deal with the issue by restructuring their activities in Vietnam (Vietnam Investment Review, 2012). Vietnamese consumers, on the other hand, are happy with the arrival of foreign brands (Ito, 2016). The great consumer demand has fuelled the booming of the grey market which may not carry protection for consumers.

3. Research Methodology

3.1 Interview Questions

Given the exploratory nature of this study, a qualitative method was adopted and a semi-structured interview (Richardson, Dohrenwend, & Klein, 1965; Rubin & Rubin, 1995) was conducted to gather data so as to fulfil the aim of the study. The interview questions (see Appendix) were prepared specifically for this study. They were based on the three theoretical frameworks encompassing social media usage, C2C business and parallel imports (Decrop, 1999). Each major research issue was simultaneously asked from three different perspectives. By doing so, the interview questions were centred around the focus of the study. In other

words, only relevant questions were asked so as to minimise interview time. The responses were cross-validated with the interviewees during the interview so as to ensure data reliability.

Prior to the interview, the questions were assessed and evaluated by an independent Vietnamese researcher who majors in marketing. Based on the feedback, minor adjustments were made to the questions to clarify the concepts used. This approach reflects a researcher-based triangulation method (Decrop, 1999).

3.2 Sampling Procedure

In the context of Vietnam, grey or parallel imported products come mainly from America, Australia, France, Japan, Korea and Thailand. Among these countries, Japan is one of the nearest to Vietnam (approximately 5 hours on direct flights) and it is also one of the main migration destinations of Vietnamese people (Ministry of Foreign Affairs of Vietnam, 2012). The Vietnamese make-up a remarkable proportion of the foreigner population of this country (Nippon Communications Foundation, 2016). In line with this, Japanese retailers (e.g., Aeon, Takashimaya and Seven Eleven) have been implementing more plans and undertakings to enter the Vietnamese market as compared to their counterparts from other countries (Nguyen & Yui, 2016). Taking such factors into consideration, Japan was thus selected to be the original market of the parallel goods in this study.

The sampling procedure then began with the selection of a gatekeeper, or a Facebook-based grey or parallel products provider. The procedure was carried out with the help of the Facebook search engine, and “hàng xách tay Nhật” (unofficial parallel imported products from Japan) was used as the keyword. The provider that had the biggest number of “likes” (more than 50,000 as of mid-2016) was then contacted. As a result, the researcher was allowed to approach the customers of this provider. Following this, the researcher sent the interview questions to the provider for approval. The two parties also discussed the method, time and place of the interviews. Accordingly, direct interviews (semi-structured individual interviews) were initiated in the last week of December 2016 (when a promotion campaign was scheduled) at a showroom of the provider in Hanoi, the capital city of Vietnam.

Since this study is theory-based, the sample size can be predetermined. Following Francis et al. (2010), and Guest, Bunce and Johnson (2006), a sample of 13 was considered appropriate. However, to reach

the point of data saturation (i.e., no new information can be generated) at the 13th interview (Saumure & Given, 2008), several requirements need to be fulfilled. For instance, it was requested that: (1) the domain of the inquiry is concentrated, (2) the quality of the data is high, and (3) the sample is not too heterogeneous (Guest, et al., 2006). Due to its design, the first requirement of this study has been fulfilled (i.e., the interview questions). To satisfy the second requirement, the researcher trained himself to be familiar with the qualitative research method and to obtain relevant background knowledge in psychology. The third requirement could be fulfilled by targeting a relatively homogeneous sample of married females who were between the age of 20 and 40. This population, according to the statistics provided by Facebook for Business (2015), forms the majority of Facebook users in Vietnam. However, when looking at their profile as illustrated in Table 1, the actual sample can also be considered as relatively diverse.

Table 1. Profile of the Participants

Participant	Age	Field of Occupation	Marital Status
1	29	Freelance	Married
2	29	Accounting	Married
3	33	Pharmacy	Married
4	36	Bank + Supermarket	Married
5	25	Bank	Unmarried
6	28	Business	Unmarried
7	35	Police	Married
8	40	Army	Married
9	36	Housewife	Married
10	32	Office	Married
11	24	Business	Unmarried
12	28	Foreign embassy	Unmarried
13	36	Pharmacy	Married

A semi-structured interview was then conducted during the last week of December 2016 and the first week of January 2017 at the showroom of the abovementioned gatekeeper. Specifically, the researcher visited the showroom at a random hour on a given day within the given period. All the guests who came to the showroom during the time when the researcher was present were considered as targets of the interview (minimum = 0; maximum = 5). The recruitment was then conducted

with the help of the showroom staff. After the transaction with a certain female customer was completed, the staff introduced the research to the customer who was then asked if she would like to participate in the interview. If the customer agreed, she was directed to the researcher to hear more details and to provide the necessary information. This procedure was repeatedly undertaken until the thirteenth and final interview was concluded (quota sampling) (Robinson, 2014). The participation of all the interviewees was on a voluntary basis. However, each participant was given a small gift (approximately 10 US dollars) as part of the promotion campaign of the showroom.

3.3 Data Collection and Analysis

All the interviews were conducted in Vietnamese and recorded using a voice recorder. Each interview lasted for approximately 12.35 minutes. This length of interview was not too short when two elements were taken into account. First, the questions concentrated on the research. Second, Vietnamese is a monosyllabic language (Andersen, 1995). Observations were also conducted for each of the participants (from when the participant entered the showroom and began her talk with the showroom staff to when the staff introduced the research to her). Prior to the interview, a warm-up session was conducted so as to ease the interaction between the researcher and the participant. All the significant pre-interview observations were documented into a journal and these were later cross-checked with the interview responses for validation purposes. This approach is regarded as data triangulation (Decrop, 1999) and it helped to improve the quality and validity of the interviews (Guest, et al., 2006).

The contents of the interviews were later transcribed on a Word file and they were then content analysed (Elo & Kyngäs, 2008). Since there was no predetermined coding scheme, the analysis was inductive. However, the purpose of the analysis was to extract responses that could fulfil the aim of the current study. Thus, the analysis had some deductive aspect.

The contents of the interview were manually analysed following several steps. First, the researcher read the interview transcriptions and took note of the responses for the research questions in each interview session (i.e., why they buy and how they make their purchases). This procedure was undertaken twice to ensure intra-coder reliability (Given, 2008). An Excel file was employed to manage the coding contents.

Second, the interview transcriptions were sent to a second independent Vietnamese researcher who majors in service marketing to be cross-analysed using the same analysis method (Elo & Kyngäs, 2008). The independent analyst also worked on the data twice. After that, the two analysts compared their results and identified the differences. The differences which occurred due to the miscounting or misinterpretation of either analyst were addressed through direct discussion until a final agreement was reached. The consent between the two analysts served as the inter-coder reliability of the analysis (Given, 2008).

Third, the two analysts worked together to identify the themes (categories) and the subcategories hidden among the responses. Each subcategory houses similar explicit opinions about a theme or category (Braun & Clarke, 2006). The agreement between the two analysts served as the criterion of inter-coder reliability (Given, 2008). As a result of this undertaking, the responses indicating why customers buy were grouped into three categories: utilitarian, hedonic and symbolic values of the products and/or purchase process. However, since there was only one hedonism-oriented reason (enjoyment) for buying, which was an induced product of a utility-oriented one (ease and convenience), it was included under the utilitarian category. Responses catering to the second aim of how customers made their purchases were then placed into four categories: information searching, selection of products, selection of sellers and the buying process. An additional independent category, concerns and risks, was also noted and this was related to both why and how customers make their purchases.

Finally, all the responses and quotations made in Vietnamese were translated into English by the researcher. The process was supervised by a third independent researcher who is fluent in both languages so as to ensure the correctness of the translations.

4. Findings

4.1 *The Reasons for Buying “hàng xách tay”*

Analysis of the responses related to their reasons for buying unofficial parallel imported products (UPIPs) of Vietnamese consumers are detailed in Table 2. Specifically, the UPIPs helped to satisfy Vietnamese customers’ needs of quality and trendy products that the domestic market cannot provide (Chang, 1993; Hooper, 2000; Kaynak, et al., 2000; Opoku & Akorli, 2009). This reflects the utilitarian value of the UPIPs

Table 2: Reasons for Buying UPIP

Reasons	Participant													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	
<i>Reasons Related to Utilitarian and Hedonic Values</i>														
1. Better quality	x	x		x	x		x	x	x	x	x	x	x	11
2. Affordable price	x	x	x	x	x		x		x	x			x	9
3. Convenience and ease		x				x	x	x	x	x	x	x	x	9
4. Authenticity and originality	x	x			x			x	x			x		6
5. Unavailability	x					x				x			x	4
6. Local products		x		x							x	x		4
7. Beautiful and updated products			x					x					x	3
8. Don't know about official imported products												x		1
9. Good shape and form		x												1
10. Satisfaction			x											1
<i>Reasons Related to Symbolic Values</i>														
11. Brand names					x						x			2
12. Confidence				x										1
13. "Been to the original country" feeling	x													1

(Koo, Kim, & Lee, 2008). In addition, with the support of Facebook and other social media platforms, the purchase of the UPIPs has become enjoyable since the process is convenient and easy (Heinonen, 2011; Kim, et al., 2011; Kwon & Wen, 2010; Lin & Lu, 2011; Yeh, et al., 2012). This implies the hedonic value of their buying behaviour (Koo, et al., 2008). Moreover, it appears that using imported products makes Vietnamese consumers feel more confident due to their brand names. Further, by buying these UPIPs, Vietnamese consumers have a sense of having been to the country of origin. These reasons indicate the symbolic values of the UPIPs (Zhou & Hui, 2003).

More specifically, 84.6 per cent (eleven out of thirteen participants) stated that the quality of imported products is better than that of domestic products. The participants buy these UPIPs because they were unable to find similar products in the domestic market, or they were not aware of the official distributors. Further, Vietnamese consumers regard the products obtained through this channel as authentic, original and affordable. They also have a sense of possessing the latest products (e.g., fashion) almost at the same time as consumers in the country of origin. They would not be able to enjoy this sense of possession if they had to go through the official importers.

Vietnamese consumers were especially aware of the true origin of the products purchased with 30.8 per cent (four out of thirteen participants) stating that they bought the UPIPs because these products were made by the country of origin for the local market. For example, Japanese cosmetics might be made in Japan and/or in a third country (e.g., X) and Vietnamese consumers preferred the made-in-Japan products to those made-in-X. Despite the fact that these products were made by the same company using the same technology and/or formulas, Vietnamese consumers believed more widely that the former was better. This belief not only applies to cosmetics made in Japan but also to other products such as Thai electronic goods (Voice of Vietnam, 2016). Some examples of their interviews are extracted for illustrations.

UPIPs are better in quality compared to products sold in the local market. If the UPIPs are authentic, their usability is better. (Participant 8; utilitarian-oriented reason)

Shopping on Facebook is very convenient... Information [on Facebook] is abundant and updated. It is ... very entertaining. (Participant 6; hedonism-oriented reason)

I am not crazy about foreign products, but if I have to spend a lot of money, I will definitely choose the brand-name products. Otherwise, I will buy made-in-Vietnam products to use for daily purposes. (Participant 5; symbolism-oriented reason)

4.2 The Process of Buying “hàng xách tay” on Facebook

4.2.1 Information Searching

Vietnamese consumers tend to use different approaches to make their online purchases (Table 3). On the one hand, they used word-of-mouth from friends and acquaintances as their major source of information for

Table 3: Information Sources

Information Sources		Participants													Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	
Organic	Friends			x					x	x		x			4
	Social media networks	x						x				x			3
	Reviews and comments	x						x							2
Induced	Direct talks and consultation with sellers			x								x			2
	Sellers' advertisements			x											1
	Sellers' Facebook			x											1
Others	The Internet				x										1
	Google							x							1

the UPIPs and their dealers. These sources provided them with organic yet subjective references (Gartner, 1994) as to what to buy and from whom to buy. In the pre-Facebook era, consumers used actual word-of-mouth but presently, Facebook has endorsed the giving and taking of electronic word-of-mouth recommendations through its interactive environment. A consumer may know about a product and/or a seller when he/she is tagged by friends or suggested by Facebook based on his/her past activities. Such consumers can refer to the reviews and comments posted on the Facebook page of a particular site so as to decide on their own purchase behaviour (Amblee & Bui, 2012; Phang, et al., 2013). These consumers may also use their Facebook or other Internet-based engines (e.g., Google) to conduct an active search of the relevant products and/or sellers (a mix of organic and induced information). One of the participant's response is provided as illustration.

Before buying any products, I have to search the Facebook page of the seller for information. I will buy the products that my friends have already bought and used. I will read my friends' comments before buying. I will not buy a product that none of my friends has bought and used. (Participant 9)

On the other hand, Vietnamese consumers do not overlook the induced sources of information such as advertisements and Facebook pages of providers (Gartner, 1994). In this regard, the interactive environment of Facebook has been actively used by both the involved parties. Specifically, sellers and buyers use this platform to ask and answer the inquiries of each other regarding the products and the buying process. This function has helped to narrow down the spatial and geographical distance between sellers and buyers. It has also helped to create a mutual understanding and trust between both parties besides facilitating the actual transactions (Ariely & Simonson, 2003; Grabner-Kraeuter, 2002; Hassanein & Head, 2007). Response from participant 11 illustrates this point.

I will not only refer to the information posted on the Facebook page, but I will chat directly with the seller. (Participant 11)

4.2.2 Selection of Products

Vietnamese consumers also used a number of approaches to make their purchases. They seemed to rely heavily on their own experiences as well as the experiences of their acquaintances when choosing products as illustrated in Table 4.

Most of the participants mentioned that they tried the new products and/or compared them with those they have used before making their purchases. However, it appears that they may also rely on their friends or other people when buying products. This behaviour characterises the psychology of the crowd of Vietnamese consumers, with the most salient example being the stock market (Stage, 2013; Ton & Dao, 2014). Responses from the participants are provided as illustrations.

I read the reviews before buying any products. I also try a new product and compare it with the one that I used before. If that product is as good as or better than the old one, I will continue to use it. If not, I will discontinue. (Participant 2)

The first product that I bought on Facebook was a floor sweeper. It was a very popular product at that time. (Participant 9)

It also seems that Vietnamese consumers were conscious of what they buy and how they buy the products. They preferred products with low values and do not harm their health (e.g., no-food policy) and also do not involve a guarantee policy. Nonetheless, the definition of low

Table 4: Product Selection Criteria

Product Selection Criteria		Participant													Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	
Self-experience	Compare with old products	x	x						x	x		x	x		6
	Try before buying more	x	x								x				3
Peer experience	Buy products used by friends								x				x		2
	Follow the current trends or fashions										x				1
	Buy products purchased by many people											x			1
Product value	Buy products with low values			x									x		2
	Buy products which are harmless to health				x										1
	Buy products which do not involve a guarantee												x		1

value appears to differ among the participants. Participant 11 used the 2 million Vietnamese Dong (approximately 90 USD) as the cut-off point while participant 13 considered the 10 million Vietnamese Dong as threshold. Considering the profile of these two participants (Table 1), there is a potential correlation between a respondent's subjective perception of economic value and her sociodemographic characteristics as observed by Furnham (1996).

4.2.3 Selection of Sellers

When choosing the UPIPs, Vietnamese consumers not only buy products but also use the shipping services from the country of origin to their place of residence (Table 5). In this regard, it can be said that Vietnamese

Table 5: Seller Selection Criteria

Seller Selection Criteria		Participant													Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	
Evidence-based	Sellers have many reviews and comments		x				x		x	x	x			x	6
	Accredited sellers		x			x	x	x	x						5
	Sellers have showrooms		x					x	x			x			4
	Sellers have staff							x							1
Relationship-based	Products sold by friends and/or acquaintances	x			x	x	x	x							5
	Buy through intermediaries				x										1
Others	There are many dealers	x													1
	There is competition but not too much				x										1

consumers choose to do their transactions with those whom they know such as friends and/or acquaintances. In addition, they preferred those dealers who have received many positive reviews and comments and those with physical showrooms and staff. However, Vietnamese consumers were aware that there is a wide range of providers in the UPIP market. Thus, they would only select the most accredited sellers to deal with. This implies that the role of the reviews, comments, showrooms and staff as noted, and the relationship of the parties concerned, cannot be overlooked in the whole process. Some responses were drawn from the participants to support this claim.

The second reason why I make a purchase on Facebook is because the product is sold my friends or acquaintances. I am assured when buying their products. (Participant 1)

I only buy UPIPs at reliable shops. I will question those very cheap products. Why are the prices too low despite having the same origin? There is competition, but the competition is not fierce. (Participant 4)

4.2.4 Buying Process

Table 6 displays the buying process of the Vietnamese consumers which involved several steps commencing from the pre-buying stage until the delivery stage. It appears that Vietnamese consumers would go to the UPIP dealers when they were unable to buy the products that they wanted on their own or when they could not get their friends in the country of origin to help them make such a purchase. They were aware that these products were usually bought during sales campaigns. This reason, together with the fact that the products were bought outside of Vietnam, takes product guarantee off the UPIPs. However, many participants mentioned that they were not concerned about product guarantees or how these products were brought into Vietnam although some mentioned the air transport method. When making a deposit or payment, they refrained from using the escrow service but instead used cash or bank transfers. One participant mentioned that she kept the screen shot of her transaction as the invoice of the deposit. Later when receiving their orders, these buyers would check the bills, barcodes and tags of the products to verify whether they were authentic and original or not. However, this was confined to only 38.5 per cent (only five out of thirteen participants). Some of their responses are provided for illustrations.

I choose the product then send the link to the dealer. The dealer then calculates the price. For example, the official Vietnamese Dong – US Dollar rate is 22.000. Yet, the dealer’s rate may be 23.000. The dealer will also add the purchase fee to the total price. (Participant 5)

Actually I don’t care about the shipping method. I usually check the barcode of the product. Sometimes I check its bill. I rely on the barcode and the bill. (Participant 6)

Yes, I do care about product origin. First, a product must have its bill. Second, I must be able to check its code. (Participant 4)

4.3 Concerns and risks

As can be noted from Table 7, the participants mentioned some of their concerns when buying the UPIPs from Facebook. These concerns include no trial basis, wrong sizes, unauthentic products or unoriginal products,

Table 6: The Purchase Process

Purchase Process		Participant													Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	
Pre-buy	Choose product links then send to the dealers					x									1
	Study the guarantee policies			x											1
Paying	Pay on the rate defined by sellers					x									1
	Pay shipping fee					x									1
	Pay deposits for products with high values					x									1
	Pay on delivery					x									1
Shipping	Don't care how products are carried to Vietnam						x			x	x			x	4
	Ask friends to bring the products to Vietnam							x					x		2
	Bought products and brought them back to Vietnam on one's own							x							1
	Study the shipping methods		x												1
	By means of air transport					x									1
	Check product bills	x	x	x	x			x							5
Upon delivery	Check product barcodes			x		x									2
	Check product tags					x									1
	There is no guarantee if the products are sale-off items					x							x		2
Post-buy	Products sold in the Vietnam market are sale-off items					x									1

Table 7: Customer Concerns

Customer Concerns		Participants												
		1	2	3	4	5	6	7	8	9	10	11	12	13
Product	No prior try			x		x						x	x	4
	Wrong sizes	x		x										2
	Low-quality and/ or inauthentic products		x			x								2
	Product authenticity					x		x						2
	Fake products				x					x				2
	Product origin						x							1
	Expiry date								x					1
	Non-local products								x					1
Seller	Trust the dealers	x					x		x					3
	Disagreeable sellers									x				1
Financial & Transaction	Expensive											x	x	2
	Waiting time											x		1
	Fake comments								x					1
Others	Expect and rely on luck	x									x			2
	Accept the risks												x	1

low quality products or fake products, and disagreeable sellers, among others. Their concerns were particularly related to online shopping in general (Biswas & Biswas, 2004; Forsythe, Liu, Shannon, & Gardner, 2006). However, the participants were more concerned about the products and sellers' risks than the financial transactions or transaction risks (e.g., expensiveness, waiting time and inaccurate information). Some participants also stated that they trusted the sellers so they do not have any worries while other participants may rely on their luck when buying the UPIPs on Facebook. Some responses are provided as evidence.

I cannot see the products. Sometimes the size or number [of a piece of clothing] is mismatched. Yet, I haven't got any bad products when

shopping on Facebook. That may be due to my shopping method. I make a purchase based upon my friends' recommendations. (Participant 3)

The origin of the domestic products is unreliable. Sellers may sell low-quality products together with high-quality products. The origin of the UPIPs, however, is apparent. I know and trust the sellers so I buy their products. (Participant 9)

"Hàng xách tay" usually are expensive but they are high quality. For example, I paid 2 million Vietnamese Dong for a frying pan. It is costly yet acceptable because the quality is good. (Participant 13)

5. Discussions

From the responses generated and analysed, the findings indicated that a proportion of Vietnamese consumers have high demands for the UPIPs. In this regard, they shared the same opinion with their counterparts in other developing countries when rejecting home products (Hooper, 2000; Kaynak, et al., 2000; Opoku & Akorli, 2009). However, Vietnamese domestic product makers cannot blame their domestic customers totally for their low trust and pride in purchasing homemade products. Vietnam has run its "Vietnamese High-Quality Goods" programme for more than 20 years (Viet Nam News, 2017). Yet domestic suppliers are still not qualified to enter the supply chain of big producers like Samsung (Tuoi Tre News, 2014a) while its automobile industry has not made any significant development thus far (Vietnamnet, 2017). Consequently, Vietnamese consumers have to find other channels to obtain the products that they need but are not available in the local market. Buying the UPIPs, for example, is such an alternative.

In addition, Vietnamese consumers preferred the UPIP sellers who were known to them and/or their acquaintances. As buyers and users, they have also become familiar with the user-generated contents (i.e., customer reviews and comments) (Yang & Fang, 2004) while actively participating in the creation and use of such contents on the transaction platforms of the UPIPs (e.g., Facebook). Nevertheless, Vietnamese consumers are aware of the tangible aspect of the sellers' services (Shostack, 1982). Specifically, 30.8 per cent (four out of thirteen participants) mentioned that showrooms served as one of the criteria to judge if a seller is reliable or not. This point implies two things. In one sense, many Vietnamese UPIP dealers are professionals because they know how to make their services more tangible and reliable (e.g.,

showrooms and staff) (de Vries, et al., 2012; Shen & Bissell, 2013). In another sense, the Vietnamese UPIP market has gone through many stages of development in the past 40 years since the 1980s. The introduction of Facebook and other social media platforms, in particular, has brought the on-ground market to the online environment. It is that interactive environment that has propelled many UPIP sellers to ground their services once more even though the grounding is an expansion of the online activity. The latter is still the dominant transaction platform for many providers.

Moreover, a majority of the participants did not express any particular problem with regards to their previous transactions. They seemed to find it convenient and easy to buy the UPIPs on Facebook. In other words, Facebook has added some hedonic values to the transactions which traditionally only relate to the utilitarian and symbolic values of the UPIPs. The fact that Vietnamese consumers felt relatively safe when buying the UPIPs on Facebook can be explained by two observations. First, the Facebook-based market of the UPIPs in Vietnam was built and run based on trust among acquaintances (Grabner-Kraeuter, 2002; Hassanein & Head, 2007; Jones & Leonard, 2008). This trust has been established based on the experiences of the consumers and their friends and/or friends of friends. The reputation of the sellers also adds to the development of that trust (Biswas & Biswas, 2004). Second, Vietnamese consumers are optimistic. They were ranked fourth globally in the first quarter of 2018 (Nielsen, 2018). Thus, it is understandable when Vietnamese consumers do not seem to have many big concerns when buying online in general and buying the UPIPs on Facebook in particular.

In summary, consumers go to the grey market to buy cheaper, higher quality and more trendy products which local producers and/or distributors cannot make and/or provide (Malueg & Schwartz, 1994; Richardson, 2002). Due to its nature, the grey market is a relatively closed one. In the case of Vietnam, these two characteristics are still prominent in the late 2010s. However, some developments in the grey market can also be detected. First, with the development of the Internet-based devices and applications, the grey market has partly been merged with the C2C market and the e-commerce market. Second, by being highlighted on the social networking sites, the grey market has become an open market. However, due to certain reasons such as the lack of a strong and effective legal framework, this market is not yet an official one. Third, social media platforms have already been transformed into

real shopping venues. Yet the SMB C2C market is still a small one since only private businesses are actually selling their products on these platforms. However, thanks to these initial undertakings, customers can presently enjoy a personalised service with many of their niche needs met satisfactorily.

6. Implications

The UPIP market in Vietnam is a trust-based one. Nevertheless, consumer trust, as a psychological phenomenon, is an unstable asset. The trust between buyers and sellers and between buyers and buyers have gradually been built and strengthened (and vice versa) after each transaction. There may be some unavoidable incidents (e.g., fake comments, disagreeable sellers and low quality and/or inauthentic products) but the invisible hand (Johnson, Price, & Van Vugt, 2013) which is empowered by consumer reviews and comments will perform its function to expel the bad dealers from the market.

It is interesting to note that the legal owners of the UPIPs in the country of origin can profit from the current activities in the Vietnamese market. Specifically, the UPIP sellers, in order to make their businesses reliable and inviting, have already spread good word-of-mouth about the brand owners. Consequently, the image and reputation of the brand owners become established even before they actually enter the Vietnamese market. A market segment of potential consumers are already awaiting them. Therefore, legal brand owners should consider opening official stores in Vietnam so as to exploit the promise of a market whose spending power is the best in the Southeast Asian region (Nikkei, 2018). Nonetheless, Vietnamese consumers are realistic (e.g., pursuers of utilitarian values) although erratic (i.e., followers of crowd psychology). They are likely to turn their backs on the official providers if their expectations are not met, especially those involved with product categories, product origin and product prices. Therefore, a careful market research, and even a trial basis is necessary before any official entry initiatives are undertaken. Providers such as H&M, Starbucks and Zara, for example, have invested in such careful steps when making their appearances in the Vietnamese market.

While buyers and brand owners have actually benefited from the UPIP market, the Vietnamese government seems to be aloof. Both the central and provincial authorities have stated that they wanted to tax Facebook-based businesses (Tuoi Tre News, 2017) yet no significant

effort has been implemented. Consequently, the open UPIP market is not legally governed and has remained grey. If the Vietnamese government actually taxes these businesses, it needs to enact an e-commerce law, which is unavailable at the moment. Moreover, by taxing and making revenues from these markets, the government is unofficially but directly supporting the import of more consumer goods. This contradicts their official yet ineffective support for domestic production. This issue, unfortunately, is too big to be addressed by this paper. However, a non-tax policy which controls the import of illegal or harmful products (e.g., plants, meat products and drugs) is recommendable in this context. In addition, the introduction of an e-commerce law should be facilitated. Once the legal framework is established, protection to customer rights may properly help the UPIP market to perform its functions more responsibly.

7. Conclusion, Limitations and Directions for Future Studies

The Vietnamese UPIP market is no doubt a giant bazaar which partly contributes to the 4-million-USD e-commerce market of the country in 2015 (Tomiya, 2016). This market is getting bigger because it can fulfil the diverse needs of Vietnamese consumers whose income has improved but whose needs are not satisfied. Vietnamese consumers also distinguished between made-by-the-country-of-origin and made-in-the-country-of-origin products. There is a wide belief among Vietnamese consumers that the latter category is the better one. Furthermore, customers entered the market only after carefully consulting their own experiences and those of their acquaintances. In other words, they are self-educated customers. However, their self-education is limited to the buying and using of the UPIPs in Vietnam. They still lack the experience of buying and using the same products in the country of origin. Consequently, they may over-trust the sellers and be taken advantage of.

Being confined to only looking at Vietnamese consumers, this study bears some limitations. First, this study only captures the opinions of women in an urban area buying the UPIPs from Facebook. The male and rural consumers were not investigated. However, the findings may also reflect the opinions of other consumers as the female respondents had stated that they also buy for their family members including husbands and boyfriends. It is also likely that rural consumers may have a lower income level. Hence they would have a weaker market power and their opinions may be less significant. Second, this study focusses

on the buyers' perspective of the UPIP transactions while the sellers' perspective was excluded. In this regard, it is possible that the sellers would have different responses for the same research issues. Third, this study only focusses on Vietnam as a developing country. Therefore, the activities of the Facebook-based UPIP market in other countries were overlooked.

Considering these limitations, some directions for future studies can be proposed. Specifically, researchers may examine the rural market of Vietnam to see how customers perceive and evaluate domestic and imported products. This will help both the local producers and the UPIP businesses in their market penetration and extension efforts. Researchers may also focus on the suppliers' side of the current UPIP market of Vietnam so as to understand why some suppliers became big and successful while others remained small and less successful. This will further enrich the literature of grey market in the era of the Internet and social media. Further, researchers may consider examining the same phenomenon in their home countries. The outcome generated can open a new line of comparative research on grey markets. This will be helpful towards the advanced preparation of new market entry and the penetration of international companies into new markets.

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Appendix

Examples of Interview Questions

Research Question	Social Media Use	C2C	Parallel Imported Products
RQ1. Why?	What do you usually do on FB?	What do you usually buy on FB pages? From which FB pages do you usually buy these products? Why do you choose these FB pages?	Which parallel products do you usually buy? How much do you know about parallel products? (For example, their origins, how they were brought into the other country, how they were imported to Vietnam, customs procedure?)
RQ2. How?	What are the benefits of using FB? What do you do to take advantage of these benefits?	What are the benefits of buying on FB? What do you do to take advantage of these benefits?	What are the benefits of buying and using parallel products? What do you do to take advantage of these benefits?
RQ2. How?	What are your concerns when using FB? What do you do to eliminate your concerns?	What are your concerns when buying on FB? What do you do to eliminate your concerns?	What are your concerns when buying and using parallel products? What do you do to eliminate your concerns?

Islamic Religiosity and Its Influence on Muslim Students' Travel Preferences

Sedigheh Moghavvemi* and Ghazali Musa

ABSTRACT

Manuscript type: Research paper

Research aims: This paper aims to examine the relationship between Islamic religiosity and preferences towards Islamic tourism products and services. This paper also compares Islamic tourism product and service preferences between Iranian and Malay university students.

Design/Methodology/Approach: Using the online survey method, this study collects data from 422 Malay and Iranian university students. The collected data are then analysed using structural equation modelling (SEM).

Research findings: The findings indicate that Islamic religiosity plays a significant role in determining Islamic travel preferences. While Malays reported higher levels of Islamic religiosity, the Iranians are more influenced by their religiosity when deciding on travel preferences.

Theoretical contributions/Originality: Despite literature indicating that there is an interaction between religion and tourism, the effect of Islamic attributes on destination choices remains fragmented. Aiming to close this gap, this study examines and compares the influence of Islamic religiosity on Muslim travel preferences by comparing the Malay and Iranian students.

Practitioner/Policy implications: The findings imply that service providers should be mindful of the different levels and influences of Islamic religiosity on Islamic travel preferences when designing tourism products and offering services to both markets.

Research limitation/Implications: This study limits the comparison to only Iranian and Malay students, thereby suggesting that future

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research could include more diverse samples of Muslim students including those from non-Muslim countries.

Keywords: Islamic Religiosity, Islamic Beliefs, Islamic Practices, Islamic Travel Preferences, Structural Equation Modelling

JEL Classification: M3

1. Introduction

Religion and religiosity are two pertinent factors most likely to influence human behaviours (Mokhlis, 2009) and history indicates that religion is one of the most universal and influential social institutions that can assert a considerable amount of influence on the believer's attitude, values and behaviours, both at the individual and the societal level. Religion can also influence one's material life and attitude towards the consumption of goods and services (Shah Alam, Mohd, & Hisham, 2011). Religion refers to one's devotion to God or a certain faith while religiosity is defined as the degree to which an individual commits to a particular religion (Zamani-Farahani & Musa, 2012). Religiosity shapes an individual's emotional experience, cognition and psychological wellbeing and that, in turn, affects the consumption choices which the individual makes (Shah Alam et al., 2011).

The importance of religion on tourism has been highlighted by Weidenfeld (2005) who views tourism as a religious phenomenon. Tourism is described as a competitor that competes with religion for people's time, virtually. Within the context of tourism, it seems that one's religion may influence the choice of one's destination and product preferences (Weidenfeld & Ron, 2008).

Many studies (Weidenfeld, 2006; Weidenfeld & Ron, 2008, Zamani-Farahani & Musa, 2012; Battour, Battor, & Bhatti, 2014, Battour, Ismail, Battor, & Bhatti, 2014) have investigated the interaction between tourism and religion. For instance, Zamani-Farahani and Musa (2012) examined the effect of Islamic religiosity on the social cultural impact of tourism. They reported that the level of Islamic religiosity, which consists of Islamic beliefs and Islamic practices, can influence the perception of the socio-cultural impact of residents of selected small towns in Iran.

While previous studies (Battour et al., 2014; Batson, Schoenrade, & Ventis, 1993) have established the importance of Islamic religiosity on tourism, the field remains understudied, with little work done to show how Islamic religiosity affect preferred travel destinations. Researchers

such as Hassan (2005, 2007), Zamani-Farahani and Musa (2012), and Willson (2008) confirmed that the variation in Islamic religiosity in different countries affect the respective attitudes and decision making of the people in their daily lives. These researchers also believed that even though basic Islamic values and practices may be similar, there are differences in the levels of the two constructs of religion and religiosity among believers. These differences may stem from their respective origin of cultural heritage that had existed prior to Islam. This uneven focus invites further attempts to explore this field.

The number of people believing in the Islamic faith is currently increasing (from 1.84 billion in 2007 to 2.08 billion in 2014) and this escalation in number makes it necessary for scholars to conduct studies to examine their travelling needs and requirements since the world has become globalised enough for people to want to travel due to work and leisure (Zailani, Omar, & Kopong, 2011). Considering that previous travels and holiday destinations seldom take into account what Muslim travellers require, today, it has become quite a challenge for the tourism industry to pay serious attention to the needs of Muslim travellers and in particular, holiday destinations in non-Muslim countries (Battour, Ismail, & Battor, 2011). It is very likely that some Muslim travellers may decide not to travel to a particular destination which does not offer Islamic attributes that cater to the needs of Muslim travellers. However, when holiday destinations are able to be sensitive to the needs of Muslim tourists, their desire to visit these places increases. Although Islamic attributes are important considerations for Muslims when travelling abroad, efforts to explain the effect of Islamic religiosity on destination choices have remained fragmented.

Motivated by this gap, the current study thus aims to examine how Islamic religiosity influence Muslim student's travel preferences. It also compares the differences in how Islamic religiosity influences the travel preferences of the Malay and Iranian university students who share the same faith in Islam. The current study partially adopts the research instrument of Zamani-Farahani and Musa (2012) to examine Islamic travel preferences. This study specifically selected two Muslim countries comprising Malaysia and Iran where Malaysia represents the Southeast Asian region and Iran represents the Middle East peninsular. While Iranian Muslims are predominantly Shia, Malaysian Malays are predominantly Sunni, making these two groups of Muslims different in terms of denomination. A comparison of these two groups of Muslims and their preferences for travelling preferences would be able to

provide valuable information that can be used to enhance the Muslim travel markets.

This paper is organised in the following order. Section 2 reviews the literature on Islamic religiosity, Islamic tourism products and services, and the general Islamic knowledge of Malay and Iranian Muslims. Section 3 details the research method employed. Section 4 presents the results and discusses the findings of the study and Section 5 concludes this paper.

2. Literature Review and Hypotheses Development

2.1 Religion and its Influence on Behaviour

Religion is one of the major elements in the development of human history and civilisation (Vukonic, 1996), and religiosity is acknowledged to be amongst the most important cultural force and the key influence on behaviour (Essoo & Dibb, 2004). Religion defines the idea for life, which reflects the values and attitudes of societies and individuals. Such values and attitudes shape the behaviour and practices of institutions and the people. In view of the significant influence of religion on people's attitudes, values and behaviour, many studies (Battour et al., 2014; Batson et al., 1993) measured religiosity and its effect on human behaviour. The results of different researches (Weidenfeld & Ron, 2008; Battour et al., 2014; Batson et al., 1993) showed that religion affects various aspects of human life.

McDaniel and Burnett (1990) asserted that the effect of religious beliefs on behaviour emanates from two main perspectives. First, it sets taboos and obligations on its adherents. Examples include religious rules forbidding Jewish and Muslim believers from consuming pork, or Hindus from consuming beef. Second, it contributes to the formation of the culture, attitude and values in a society (McClain, 1979). This formation, however, also affects those who do not practice any religion, or do not believe in God (Elboim-Dror, 1994). Such influences may be linked to the mundane activities that are absent from the holy books frequently used by religious people as a guide for their daily lives. For example, a body of research has demonstrated the differences in certain value systems based on the individual's religious 'belonging' (Rokeach, 1969; Batson et al., 1993). Here, people perceive religion as a factor that influences their environment, and that such influences are not linked to the individual's level of religious belief. Aspects of life affected by

such religious 'belongings' could include academic studies (Lehman & Shriver, 1968) or the perception of actions as good and evil (DeJong, Faulkner, & Warland, 1976). In their studies, Poria, Butler and Airey (2003) and McDaniel and Burnett (1990) also hinted on how religion affects behaviour through explicit and clear guidelines on acceptable/unacceptable behaviour or practices. These are then used to shape the culture, attitude and values of a society.

Since religiosity is the degree by which individuals commit to a religious group (Essoo & Dibb, 2004), religiosity can be measured by using two main dimensions – belief and practice (Batson et al., 1993; Matsuoka, 1997; Zamani-Farahani & Musa, 2012). Marks and Dollahite (2001) also pointed out that religious beliefs consist of personal and internal beliefs, framings, meanings and perspectives of religion. These may be demonstrated inward by respective individuals or they may be expressed outwardly as observable expressions of faith as exhibited through behaviours such as scripture studies, praying, specific traditional practices and religious rituals. While belief is the first predictor for providing a framework to make sense of one's life (Morgan & Fastides, 2009), the Religious Orientation Scale introduced by Allport (1950) conceptualises intrinsic and extrinsic religion as the main dimension in measuring religiosity. These two dimensions represent different aspects of motivation for the believer. High intrinsic believers practise religion for its own sake; high extrinsic believers use religion as an avenue to a social or personal end (e.g. comfort, acceptance) (King & Crowther, 2004).

Most researchers (Battour et al., 2014; Hassan, 2005) agree with the two dimensions of measuring religiosity: religious belief and religious practice. Nonetheless, using the three religiosity dimensions to measure religiosity is also common among some researchers (e.g. Duriez, Fontaine, & Hutsebaut, 2000; Tan, 2006). Of those researchers who do so, the third dimension was used because it has different elements in the measurement which applies different terminologies such as 'communities' (Marks & Dollahite, 2001), 'organisations' (Krause, 1993), 'experiences' (Tan, 2006), 'spirituality' (Duriez et al., 2000), 'affects' (Cornwall, Albrecht, Cunningham, & Pitcher, 1986) and 'experientials' (Caird, 1987).

Following Zamani-Farahani and Musa (2012) and Tiliouine and Belgoumidi (2009), this study aims to measure Islamic religiosity based on the main religious texts of Islam – the Quran and the Hadith (the sayings and actions of the Prophet) which specify the two dimensions of Islamic beliefs and practices.

2.2 *The Islam of Iranians and Malays*

Islam is one of the world's major religion. It has over a billion followers (Zailani et al., 2011) throughout the world. As a religion, Islam not only emphasises on the acts of worship; it is also a way of life. Willson (2008) pointed out that religion is often influenced by the differing cultures and the respective traditions the believers live in. In that regard, it can be deduced that while two countries can practise the same faith and be Muslims, there are differences in their corresponding behaviours due to their differences in culture. This observation is verified by Zamani-Farahani and Musa (2012) who mentioned that various Islamic nations may have similar religious beliefs but their cultures and the roles of the local community, as well as the level of their governmental intervention, may vary considerably. It is thus apt to mention that the interpretation of Islamic laws across other Muslim nations in the world is not uniform. There are variations among these Muslim countries where their religiosity may vary from being conservative to liberal (Hassan, 2005). Countries such as Malaysia, Oman and Turkey exercise a more relaxed form of Islamic laws (Hashim, Murphy, & Hashim, 2007) as compared to other countries like Afghanistan, Saudi Arabia and Pakistan.

As a nation, Iran has been very much influenced by the Persian culture that surrounded the country prior to the Islamic civilisation (Zamani-Farahani & Musa, 2012). Modern Iran not only reflects its Islamic faith and culture but also its long history influenced by ancient Persia (Baum & O'Gorman, 2010). Observations also indicate that Iranians have a strong attachment to their heritage and culture (Zamani-Farahani & Musa, 2012), thus Iranians have a higher level of Islamic beliefs but lower levels of Islamic practices. It was also asserted that Iranians with higher Islamic beliefs show greater awareness in the positive socio-cultural impact of tourism (Hassan, 2005). In this regard, Iranians were less likely to express their religiosity.

The Islam practised in Southeast Asia is distinctly different from the Islam practised in the Arabian Peninsula. The former practises a more moderate form of Islam. This form of practice carries a thin veneer of the indigenous and traditional culture of animism and some extent of the earlier influence of Hinduism (Houben, 2003). Hassan (2005) compared the Muslim piety of over 6,000 respondents gathered from Egypt, Indonesia, Iran, Kazakhstan, Malaysia, Pakistan and Turkey. Based on the index of orthodoxy, the findings showed that Malaysia was a more orthodox country, scoring 55 per cent on the index compared to Iran's

14 per cent. In the ritualistic dimension, the Malays in Malaysia also demonstrated a higher commitment to Islamic rituals when compared to the Iranians (Hassan, 2005).

Religiosity can differ based on geographical locations (Krauss et al., 2006). For instance, Malaysian Muslim youths in rural areas demonstrated a higher level of religiosity when compared to their urban counterparts. This may be due to the fact that young urban Muslims have been exposed to a more diverse cultural milieu, hence they were less influenced by religion and traditional lifestyles (Krauss et al., 2006). Building on this idea, many researchers (Yoon & Uysal, 2005; Plangmarn, Mujtaba, & Pirani, 2012) in the field of tourism have argued that travellers from varying cultural backgrounds seek different travel benefits and have different preferences for travel products and services. Therefore, it is expected that Iranian and Malay Muslims who come from different cultural backgrounds would be reporting different travel preferences since they also adhere to different sects of Islam.

There are obvious differences between the two Muslim cultures. Hassan (2005, 2007) reported that Malay Muslims scored higher in orthodoxy (55 per cent) compared to Iranian Muslims (14 per cent). In the ritualistic dimension, Malay Muslims also showed higher commitments to Islamic rituals when compared to Iranians (Hassan 2005). Among the Iranians, the score for the Index of Religious commitment in religious beliefs was found to be higher when compared to Islamic practices. They were also less likely to express their Islamic religiosity when compared to other Muslim followers from other countries (e.g. Indonesia, Pakistan, Egypt and Malaysia). Iranians also participated less frequently in religious services than citizens from Indonesia, Pakistan, and Bangladesh. Religion often takes a slant when contrasted with the culture of the area (Willson, 2008).

2.3 The Relationship between Islamic Religiosity and Islamic Travel Preferences

Religion and tourism are correlated in terms of consumer (tourist) and supplier (host) behaviour and they seem to have corresponding relationships (Poria, Reichel, & Brandt, 2010). Literature (Walter, 2001; Hassan, 2005) suggests that religion is a fundamental element of our culture and it is linked to many aspects of our life and behaviour. Religion is one of the most important factors considered by consumers when deciding on their travel/location preferences (Collins & Tisdell, 2002). Most tourists,

including Muslims, choose destinations based on what complies with their beliefs (Hamza, Chouhoud, & Tantawi, 2012). Since Islam provides an extensive framework concerning what is or is not permissible for its followers' daily activities (e.g. food, cosmetics, financial issues, and pharmaceutical products) (Mukhtar & Butt, 2012), they are expected to follow the Islamic way of living and this adherence influences their decision-making more than any other factors (Shah Alam et al., 2011).

As religion is a pertinent factor in their daily activities including their choice of travel destinations and activity preferences, Muslims often wish to ensure that Islamic religious attributes are available at their travelling destinations (Collins & Tisdell, 2002). Among the attributes expected are *halal* food, suitable hotels and suitable airlines (Jibreen, 1996). According to Battour et al. (2011), many Muslim scholars believe that visiting places where sexual permissiveness is rampant is not permissible even for the sake of tourism (Poria et al., 2010). This implies that the destination attraction is a pertinent aspect that may influence the travel decision of Muslim tourists. Although some religious places also represent well-known tourist attractions (Poria et al., 2010), many scholars recognise that such religious places are not only visited for religious purposes but also for distinct reasons such as their architecture, appearance and historical importance, some of which have no association with religion (Poria et al., 2010). Travel preferences are often studied in relation to satisfaction, destination loyalty and travel revisits (Battour, Battor, & Ismail, 2012) and only a few studies (Battour et al., 2011; Ibrahim, Zahari, Sulaiman, Othman, & Josoff, 2009) had considered looking at Islamic attributes as factors contributing to travel preferences.

Duman (2011) conducted a study among Turkish Muslims and the results emphasised the value of Islamic tourism by constructing motivational factors from an Islamic perspective. The three identified motivational factors include generic, Islamic, and non-Islamic factors. From the Islamic perspective, Battour et al. (2011), Ibrahim et al. (2009) and Heyer (2008) looked at the preferences of Muslim travellers or religious travel attributes such as Islamic-friendly hotels that meet the religious needs of patrons, *halal* food and modest dress code. Literature indicates that religion influences the formation of culture, values and attitudes in a society, which, in turn, impacts their decision-making including travel and location preferences. Travel intentions and destination choices are attitudes and behaviours influenced by individual beliefs and practices. Given these arguments, this study hypothesised that:

- H₁: There is a positive relationship between Islamic beliefs and Islamic travel preferences.
- H₂: There is a positive relationship between Islamic practices and Islamic travel preferences.

Based on the hypotheses formulated, the following conceptual framework was developed (Figure 1).

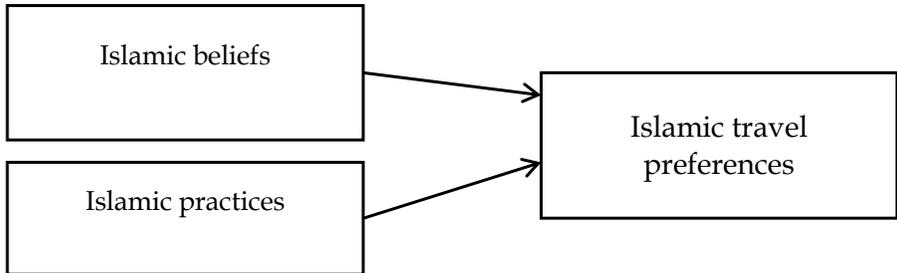


Figure 1: Conceptual Framework

3. Research Methodology

3.1 Measurement

In this study, Islamic travel preferences was measured by using twenty-three items adapted from literature (i.e. Duman, 2011; Battour et al., 2011). These measurements assess the travel preferences of Muslims, in terms of products, services, and entertainment during their holiday-taking. This study also adopted a duo-religiosity dimension consisting of Islamic beliefs (Iman) and Islamic practices (Amal) proposed by previous researchers (i.e. Mokhlis, 2009; Zamani-Farahani & Musa, 2012). In this study, eighteen items were selected to measure the two dimensions. All the 18 items were measured by using a 7-point Likert scale, ranging from (1) strongly disagree, to (7) strongly agree.

3.2 Survey Administration and Sampling Method

This study employed the online survey method using a questionnaire to test the conceptual framework and the formulated hypotheses. A panel consisting of five senior academics from relevant backgrounds was selected to establish the content validity of the research constructs. Subsequently, this study pre-tested the questionnaire with a sample of

ten students to establish its face validity. A reliability analysis was then performed. The Cronbach's Alpha for the measurement items was found to be greater than 0.70 which is within the recommended value (Cavana, Dalahaye, & Sekaran, 2001).

The population of this study comprised Malay and Iranian Muslim university students studying in Malaysia. Since Islam is a part of both cultures, the Malay and Iranian students were likely to display some similarities as well as differences in their attitudes and preferences when travelling. This study focussed on university students as subjects, and this is an accepted practice as it has been applied in various disciplines such as marketing, consumer research and social psychology (Kubickova & Ro, 2011). University students are often considered to be the current and future decision-makers (Meek, 2004) not only for their respective families but also at their workplaces. Thus, they are considered to be better representatives of future tourists who are not only highly educated, naturally curious about the world but will potentially be working for a higher pay. Furthermore, students represent an unattended segment that can increasingly engage in vacation breaks. In this regard, they serve as a potentially lucrative market segment for pleasure travels (Gallarza & Saura, 2006; Musa, Mohammad, Thirumoorthi, Moghavvemi, & Kasim, 2015).

Recruiting respondents is not an easy task and recruiting a huge set of respondents is even more challenging. Hassan's (2005) study comprised a large sample of 6,000 respondents who were recruited based on the snowballing approach. For a quantitative study, this sampling technique is considered weak because respondents are likely to be circulated among close friends. In the current study, we purposefully sampled 10 universities, and within these universities, we sampled a certain number of students to ensure a better coverage in population sampling. The respondents were selected from within Malaysia to represent the existing Malay and Iranian Muslim population of Malaysia and Iran. These public and private universities comprise Universiti Malaya (UM), Universiti Putra Malaysia (UPM), Universiti Teknologi Malaysia (UTM), Universiti Kebangsaan Malaysia (UKM), Management and Science University (MSU), Multimedia University (MMU), Universiti Islam Antarabangsa Malaysia (UIAM), Universiti Sains Malaysia (USM), and Universiti Malaysia Sarawak (UNIMAS). The ten universities were specifically selected because they contained the majority of Iranian students studying in Malaysia. From the list of students provided by the universities, we quota-sampled a total of 4,000

students (400 from each university) to represent the individual ethnic group as well as gender. From each university, 200 Iranian and 200 Malay students were selected and the sample comprise equal sampling of males and females.

Having identified the emails of the students provided by their alma mater, the questionnaires were then sent electronically to their respective e-mails. This was followed by two e-mail reminders within a month. Zikmund, Babin, Carr and Griffin (2013) concurred that an online survey done through the email is a reliable method for collecting data especially if the population of the study can be reached this way. In this study, we used the email survey because all the students registered in the universities have access to an email for communication. A total of 4000 questionnaires were distributed through the email, making this a fast, cheap, and convenient method of administration. At the end of the data collection period, we received 422 completed questionnaires, generating a response rate of 10.6 per cent, of which Iranians and Malays were represented by 235 (55.5 per cent) and 187 (44.5 per cent) students, respectively. We received a very large sample size, and the combined use of the purposive and quota sampling approach for data collection ensured that our samples would be representative of the Iranian and Malay students in Malaysia. We also assessed the possibility of non-response biases (Malhotra & Grover, 1998) by comparing the variables between early respondents (a total of 196 who responded within one to three weeks) and late respondents (a total of 226 responded after 3 weeks) (Armstrong & Overton, 1977). This form of testing for potential non response biases has been adopted in many research disciplines including tourism (e.g., Chau & Jim, 2002; Karahanna, Straub, & Chervany, 1999). In this context, we examined the means and standard deviations of all the variables and the results showed that there were no significant differences between early and late respondents. The results indicated that students who responded late to the survey were likely to have similar perceptions of the constructs compared to students who had responded earlier, thereby dismissing the possibility of non-response biases.

Of these respondents, 69.1 per cent were females, and 30.9 per cent were males (see Table 1). Majority of the respondents defined themselves as moderately religious (72.7 per cent), followed by those who defined themselves as very religious (16.6 per cent), and those who defined themselves as not religious (9.5 per cent). More than half or 50.6 per cent of the respondents were between 25 and 35 years old, followed by 24.4

Table 1: Participant Characteristics

Characteristic	Group	Frequency	Percentage
Gender	Female	291	69.1
	Male	131	30.9
Marital status	Single	307	72.8
	Married	115	27.3
Age	Below 25	103	24.4
	25-35	214	50.6
	36-45	80	19.0
	Over 45	25	6.0
Level of religiosity	Not religious	40	9.5
	Moderately religious	307	72.7
	Very religious	70	16.6

Note: n = 422.

per cent who were below 25 years and 19 per cent who were between 36 and 45 years old. The number of students above the age of 45 was six per cent. In terms of their marital status, 72.8 per cent were single and 27.3 per cent were married.

4. Data Analysis and Findings

4.1 Exploratory Factor Analysis

Prior to the structural model analysis, this study had conducted an exploratory analysis to ensure that all the measurements used were valid and reliable and also to verify the components of the proposed conceptual framework. We ran an exploratory factor analysis with principal component analysis and oblique rotation. The analyses showed that the Keiser-Meyer-Olkin (KMO) measure of sampling adequacy test was 0.818, and the Bartlett's test of sphericity was significant, indicating that the data were acceptable for factor analysis. All the items loading achieved the recommended value of 0.5. The factor loading revealed that the items related to religiosity loaded highly in their predefined construct (beliefs and practice), however, the items differed from the conceptual framework proposed earlier. The items measuring Islamic travel preferences were loaded on three dimensions called Islamic

service travel preferences (ISTP), Islamic product travel preferences (IPTP), and Hedonic avoidance travel preferences (HATP) (All the items and factor loadings and reliability of each construct are presented in Appendix 1). Islamic service travel preferences (ISTP) was concerned with religious preferences such as *halal* food, transportation services and Islamic services at hotels and tourism sites. Islamic product travel preferences (IPTP) was concerned with preferences for tourism sites with Islamic history, architecture, entertainment, and business and medical treatment. Hedonic avoidance travel preferences (HATP) was concerned with preferences to avoid hedonistic activities such as gambling, nightlife, drinking alcohol and other non-Islamic activities.

In this study, the respondents were divided into two groups - Iranians and Malays so as to examine the levels of Islamic religiosity and Islamic travel preferences. The Malay students scored higher in Islamic religiosity (Islamic beliefs (mean=4.63) and Islamic practice (mean=4.56)) while the Iranian students were lower in religiosity (Islamic beliefs (mean=3.70) and Islamic practice (mean=3.74)). The Malays also scored higher means in the dimensions of the Islamic travel preference construct: Islamic service travel preferences (Malay mean=3.70, Iranian mean=2.93) and Islamic product travel preferences (Malay mean=4.08, Iranian mean=2.99), and hedonic avoidance travel preferences (Malay mean=4.12, Iranian mean=3.54).

Based on the exploratory factor analysis results, the hypotheses and conceptual framework developed initially was revised (see Figure 2). To confirm the new model, we conducted a confirmatory factor analysis based on the results of the exploratory factor analysis.

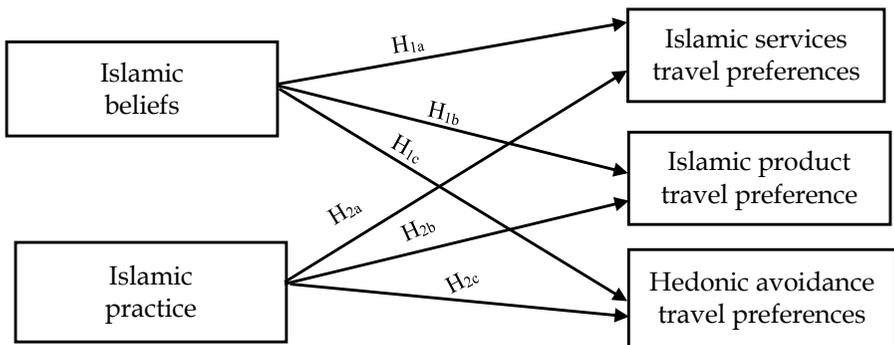


Figure 2: Muslim Travel Preferences

4.2 Confirmatory Factor Analysis

The Confirmatory Factor Analysis was conducted using the AMOS application. Multiple goodness-of-fit indices which include Chi-square (χ^2), χ^2 / df , Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), Tucker Lewis Index (TLI), and goodness of fit (GFI) were used to determine the model's fitness. All the fit indices ($\chi^2 / df = 2.69$, CFI= 0.954, RMSEA= 0.064, TLI= 0.947, GFI= 0.874) realised the recommended value (Hair, Bush, & Ortinau, 2006).

Apart from the indices, this study also carried out various validity and reliability tests on the measurement model. All of the constructs reported composite reliability of above 0.8, with the Average Variance Extracted (AVE) being above 0.6. Moreover, all of the factor loadings of the items were above 0.7, and were significant at $p < 0.001$. These results indicated that the model satisfied the convergent validity. Based on the Fornell and Lacker's (1981) approach, this study tested the discriminant validity on the measurement model (Table 2). All of the constructs had a substantially higher AVE value compared to their correlation with other constructs, proving there is discriminant validity.

Table 2: Discriminant Validity

Constructs	ISTP	ISP	HAP	IB	IP
Islamic service travel preferences (ISTP)	0.810				
Islamic product travel preferences (ISTP)	0.673**	0.782			
Hedonic avoidance travel preferences (HATP)	0.491**	0.413**	0.783		
Islamic beliefs (IB)	0.681**	0.701**	0.517**	0.831	
Islamic practices (IP)	0.699**	0.637**	0.492**	0.703**	0.819

Note: Value on diagonal are square root of AVE; CR = Composite reliability; AVE = Average variance extracted; ** $p < .01$.

4.3 Structural Model Analysis

Following the Confirmatory Factor Analysis, we conducted the structural model analysis. Similar multiple goodness-of-fit indices were used to evaluate the measurement model employed. As indicated in Table 3,

Table 3: Hypothesis Testing on Travel Preferences

Constructs	Hypothesis	β	S.E.	C.R.	P	Supported
Islamic beliefs \rightarrow ISTP	H _{1a}	0.466	0.119	5.080	0.000**	Yes
Islamic beliefs \rightarrow IPTP	H _{1b}	0.285	0.123	2.569	0.010**	Yes
Islamic beliefs \rightarrow HATP	H _{1c}	0.271	0.208	2.064	0.041*	Yes
Islamic practices \rightarrow ISTP	H _{2a}	0.409	0.090	4.446	0.000**	Yes
Islamic practices \rightarrow IPTP	H _{2b}	0.462	0.095	4.071	0.000**	Yes
Islamic practices \rightarrow HATP	H _{2c}	0.283	0.158	2.107	0.035**	Yes

Structural Model Fit Indices: $\chi^2/df = 3.14$; TLI = 0.934; CFI = 0.943; IFI = 0.943; RMSEA = 0.079; GFI = 0.859.

Note: β = Standardized Regression Weight; S.E. = Standardized Error; C.R. = Critical Ratio; * $p < 0.05$; ** $p < 0.01$.

all of the fit indices achieved the cut-off points, indicating that the model fit the data well. Overall, the model was able to explain 79 per cent of the variance in Islamic travel preferences (ISTP), 66 per cent of the variance in Islamic product travel preferences (IPTP), and 30 per cent of the variance in hedonic avoidance travel preferences (HATP).

The results of the structural model were also used to test the hypotheses. The findings indicated that the relationships between Islamic beliefs with Islamic service travel preferences (ISTP), Islamic product travel preferences (IPTP), and hedonic avoidance travel preferences (HATP) were positive and significant, thereby supporting H_{1a}, H_{1b} and H_{1c}. Similarly, the findings also indicated that all the hypothesised paths from the Islamic practices had ISTP ($\beta = 0.409$, $p < 0.001$), IPTP ($\beta = 0.462$, $p < 0.001$) and HATP ($\beta = 0.283$, $p < 0.05$) which were positive and significant, thus supporting hypothesis H_{2a}, hypothesis H_{2b} and hypothesis H_{2c} (see Table 3).

We then used a multi-group analysis method to examine the differences between the Malay and Iranian Muslim students. For this purpose, the samples were divided into two groups (Iranians and Malays), and two separate models were run (Hair et al., 2006). The Chi Square differences (constrained and unconstrained path) between the main model and the two groups were significant, proving the moderating effects (Table 4) of the variables.

Table 4: Path Coefficients for Iranian and Malaysian Samples

Constructs	β	
	Iranian	Malaysian
Islamic beliefs → ISTP	0.463***	0.520***
Islamic beliefs → IPTP	0.360**	0.292
Islamic beliefs → HATP	0.264	0.329
Islamic practices → ISTP	0.409***	0.139
Islamic practices → IPTP	0.353**	0.214
Islamic practices → HATP	0.325*	0.011

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

The results reported by the two samples differed from the total sample. The relationship between Islamic beliefs and ISTP was significant for the Malay and Iranian students. However, the relationships between Islamic beliefs and IPTP and HATP were not significant for the Malay students. In addition, the results did not show any significant relationship between Islamic practices and ISTP, IPTP or HATP among the Malay students. However, the results showed a significant relationship between Islamic beliefs and ISTP and IPTP for the Iranian students although they were not significant with HATP. The relationship between the Islamic practices and ISTP, IPTP and HATP were all significant for the Iranian students.

5. Discussion

This study confirms the presence of the two Islamic religiosity dimensions - Islamic beliefs and Islamic practices - as highlighted in prior works (Mokhlis, 2009; Zamani-Farahani & Musa, 2012). However, the findings of this study differed from previous studies (see Duman, 2011 and Battour et al., 2011) to some extent. Our results revealed three distinct factors of Islamic travel preferences which include Islamic service travel preferences (ISTP), Islamic product travel preferences (IPTP) and hedonic avoidance travel preferences (HATP).

Our findings validated Hassan's (2005) claim which stated that Malay Muslims were more orthodox in their Islamic piety compared to Iranian Muslims. The findings further indicated that Malay Muslims not only scored higher in Islamic religiosity but also in their Islamic travel

preferences. The difference between the two groups was expected. As explained by Willson (2008) and Zamani-Farahani and Musa (2012), the two groups came from two different cultural backgrounds. The difference in their cultural backgrounds may have influenced their different levels of religious convictions as evidenced by the different levels in Islamic religiosity and Islamic travel preference. Iranians, who were predominantly Shia Muslims were also possibly influenced by Zoroastrianism, which pre-dated Islam (Zamani-Farahani & Musa, 2012; Baum & O'Gorman, 2010). The Malays, on the other hand, practised Islam that has been influenced, to some extent by other indigenous traditional culture of animism and the earlier influence of Hinduism as claimed by Houben (2003).

Using structural equation modelling, we examined the relationships between Islamic religiosity and Islamic travel preferences. The findings indicated that Islamic religiosity has a significant effect on Islamic product travel preferences, hedonic avoidance travel preferences and Islamic service travel preferences. This result, however, was found to be different when the samples were analysed separately. When placed into two separate groups and examined for the constructs' relationships, the results were somewhat different. For both the Malay and Iranian groups, the strongest relationship recorded was between Islamic beliefs and Islamic service travel preferences. This supports an earlier study done by Zamani-Farahani and Musa (2012) who had likewise discovered the dominance of Islamic beliefs in influencing the perception of the socio-cultural impact of tourism in Iran. Morgan and Fastides (2009) had also claimed that belief is the first predictor because it provides a framework for which an individual makes sense of his/her life.

For the Malays, the only significant relationship noted was between Islamic beliefs and Islamic service travel preferences while the other five hypothesised relationships were not significant. These results create new insights into the Malay Muslim students' behaviour and the relationship that exists between their beliefs and practices towards their travel preferences. It is suggested that the main concern for Malay Muslims during their holidays is the existence of Islamic services (e.g., accommodation, transportation and entertainment). Other aspects such as Islamic products and hedonistic behaviours were insignificantly influenced by either their beliefs or practices. It is possible that Malay university students in Malaysia take for granted, the presence of Islamic attributes when they travel, especially within the country. This is because they expect Islamic products and services to be available

everywhere in Malaysia. On the contrary, with exception to hedonistic avoidance, Islamic religiosity was found to play a significant role among the Iranians and its influence on other Islamic travel preferences factors. The predominantly significant hypothesised relationships reflected the reality that despite the relatively lower levels of Islamic religiosity and Islamic travel preferences (compared to the Malays), the religiosity of the Iranian university students seemed to significantly influence their Islamic travel preferences. Perhaps being away from Iran and being in a rather different Islamic cultural environment, Iranians were more careful in making sure that their preferences and activities were in accordance with their beliefs and practices.

It is also interesting to note that Islamic beliefs do not influence the hedonic travel preferences of both the Malay and Iranian students. This study, however, found that unlike the Malays, the Iranians' desire for hedonic travel avoidance was affected by their Islamic practice. The insignificant effect of Islamic religiosity on hedonic travel avoidance among the Malays respondents may reflect a current shift among Muslim students in that their Islamic religiosity does not provide a significant deterrence from performing hedonistic behaviour. Perhaps the city life rampantly experienced by the Malay students (Krauss et al., 2006) and their exposure to different cultures and ethnicities at the same time had produced a set of relatively more open-minded students.

6. Theoretical and Practical Implications

The findings of this study have implications on both theory and practice. In the context of Islamic tourism, this study has expanded on prior works done by Duman (2011) and Battour et al. (2011) by further categorising Islamic travel preference into three different dimensional constructs - Islamic service travel preferences (ISTP), Islamic product travel preferences (IPTP) and hedonic avoidance travel preferences (HATP) which focused more on measuring specific needs and preferences. The empirical results generated from this study also indicated that the study has a good explanatory power in determining the three-dimensional Islamic travel preferences. The study has also improved our understanding by uncovering the existence of differences in the factors that could affect Islamic travel preferences, which showed that it could have originated from a distinct culture and behaviour.

In terms of contribution to practices, this study proves that Malay students prefer the presence of Islamic services and hedonic avoidance

travel preferences while Iranian students were more concerned with the existence of the Islamic product in the destination. Therefore, both the service providers and marketers of tourism could use this information to enhance their market segmentation and their product and service development for Muslim travellers. This study has increased our knowledge on the specific needs of Muslims and their preferences in three main categories, namely product, service and entertainment. In managing tourist destinations, managers should be aware of Muslim preferences and develop the related facilities to satisfy their needs which are related to accommodation, food, transportation, attraction and activities. From a managerial perspective, such an understanding can alert the travel agency to seek opportunities in integrating Muslim preferences and expectations into their marketing plans and products and services. Findings from this study suggest that managers and marketers need to recognise the different sets of service and products targeted for different market segments when developing a strategy to attract Muslim tourists. In order to tap into the Muslim market, they should not ignore the influence of different religiosity and beliefs on value creations, which may be affected by culture. The results of this study provide valuable knowledge on the travel preferences of Muslims and this can be used to enhance or improve the tourism industry.

7. Research Limitations and Future Research

Despite the fact that this study provides the opportunity for marketers and service operators to reflect on their products and services offered, it has its limitations. The main limitation of this study is the fact that the sampling process was carried out in Malaysia for both the Malay and Iranian respondents. It is possible that the sampling location may have contributed to the significant relationships noted in the hypothesised model among the Iranian samples since they were overseas Iranians who tend to be more careful in their travel preferences. However, since religion is a part of the culture formed over many generations, it is likely that the Iranian students in Malaysia would display similar attitudes and preferences as those students in Iran. Another possible explanation is that Iranian students who study abroad are away from home and they too could have been affected by other cultures of the host country. Future studies may need to confirm the results of this study by collecting more data from the Iranian students who are based in Iran. Another limitation of this study is that the study was only conducted

on university students, which could have restrained the generalisability of the findings. The samples may not accurately reflect the true samples of the Malays or the Iranians. It is possible that the general public may have different levels of Islamic religiosity and Islamic travel preferences. Nonetheless, as pointed out earlier, university students represent the future decision-makers and travellers, and they were more likely to be more successful financially. Thus, they would have a higher propensity to travel. Future research can apply this framework to study different religions, especially the differences between the Iranians (who live in Iran) and Malay Muslims.

In conclusion, this study has determined the impact of the Islamic religiosity on Islamic travel preferences among the Malay and Iranian students. It has also provided firm evidence showing the heterogeneous nature in the scores of the research constructs and their corresponding relationships. Marketers and managers may need to be mindful of these differences while developing their marketing and tourism product and services to cater to the increasing interest of Islamic tourism.

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Appendix 1: Exploratory Factor Analysis and Reliability Test

Factors	Source	Factor loading	Cronbach's Alpha α		
<i>Islamic Service Travel Preferences</i>			0.918		
I prefer not to travel during Ramadan	Duman, 2011; Battour et al., 2011	0.539			
I only eat in restaurants with <i>halal</i> certificate		0.556			
I prefer to fly with airlines which provide praying opportunity on board		0.701			
I prefer to use public transportation with separate areas for men and women		0.765			
I prefer to choose hotels with separate sport facilities for men and women		0.832			
I prefer to visit countries which have more freedom to practice religion		0.603			
I do not like to travel in the company of people who drink alcohol		0.554			
I only choose a travel package that provides halal entertainment		0.700			
I prefer to stay in hotels which do not serve non-halal food		0.500			
I prefer to stay in a hotel which provides praying facilities		0.631			
I do not like to go to beaches which allow mixed gender		0.517			
<i>Islamic Product Travel Preferences</i>				0.934	
I prefer to study in Islamic countries rather than non-Islamic countries				0.622	
I prefer to stay in hotels with Islamic design and architecture				0.686	
I prefer to visit Islamic holy places		0.573			
I like to visit Islamic historical places in other countries		0.637			
I prefer to travel to Islamic countries for entertainment		0.814			
I prefer to travel with my family to Islamic countries		0.785			
I prefer to conduct my business in Islamic countries		0.770			
I prefer to experience nature in Islamic countries		0.769			

Appendix 1: (continued)

Factors	Source	Factor loading	Cronbach's Alpha α
I prefer to choose Islamic countries for medical treatment		0.664	0.819
<i>Hedonic Avoidance Travel Preferences</i>			
I do not like to gamble during my holiday		0.804	
I do not plan to go to bars and or night clubs		0.779	
I do not like to have sex with strangers during my travel		0.817	
<i>Islamic Beliefs</i>			0.809
I believe that Prophet Muhammad instructs me on good conduct		0.507	
I believe that the supplication (<i>Dua</i>) helps me in my life		0.630	
I am sensitive to my religious needs while travelling		0.797	
I believe that <i>hijab</i> is obligatory for all women		0.827	
In my personal life, religion is important		0.645	
I believe in Judgment Day (<i>Qiyamat</i>)		0.523	
I believe in Prophet Muhammad		0.697	
Islam leads me to a better life	Mokhlis, 2009	0.656	
I believe that God helps me	Zamani-	0.891	
I am a religious person	Farahani &	0.724	
I believe in Allah	Musa, 2012	0.645	
<i>Islamic Practices</i>			0.897
I regularly contribute to charity (<i>sadaqah</i>)		0.630	
I annually perform the obligation of <i>zakat</i>		0.676	
I always perform my prayers on time		0.942	
I fast the whole month of Ramadan		0.808	
Performing hajj is my priority		0.898	
I perform my daily prayers		0.882	
I read the Quran regularly		0.943	