Research Article

Cultural Influences on the Disclosures of Key Audit Matters

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ABSTRACT

Our study explores the impact of national culture on the disclosures of key audit matters (KAMs). We focus two cultural dimensions of Hofstede (2001) and Hofstede et al. (2010): uncertainty avoidance and masculinity, which are the different cultural dimensions among Thailand, Malaysia, and Singapore. Thailand has strong uncertainty avoidance and is feminine but Malaysia and Singapore have weak uncertainty avoidance and are mixing between masculine and feminine. As both nature and number of KAMs vary according to an industry which a company operates in (Ernst & Young Global Limited, 2016), we select only sample from the industrial sector. Our final sample covers the disclosures of KAMs in 2016-2018 which consists of 174, 364, and 238 firm-year observations from Thailand, Malaysia and Singapore, respectively. From the results of our regression models, we found that a country's cultural characteristics of uncertainty avoidance and masculinity do not affect a number of KAMs disclosed by auditors. A country's characteristic of masculinity also does not affect types of KAMs disclosed by the auditors. However, we found that auditors from a country with strong uncertainty avoidance (e.g., Thailand) are more likely to disclose industry-common KAMs which most of companies in the same industry share the similar ones. They might avoid disclosing entity-specific and audit-specific KAMs in the first few years of the adoption of KAMs because the consequence of the disclosures of KAMs remains unclear.

Keywords: National culture, Key Audit Matters, Thailand, Malaysia, Singapore

บทความวิจัย

ผลของวัฒนธรรมในระดับชาติที่มีต่อการเปิดเผยเรื่องสำคัญในการตรวจสอบ

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บทคัดย่อ

การศึกษาของผู้วิจัยเป็นการค้นหาผลของวัฒนธรรมในระดับชาติที่มีต่อการเปิดเผยเรื่องสำคัญในการตรวจสอบ ผู้วิจัยมุ่งเน้นมุมมองด้านวัฒนธรรมของ Hofstede (2001) และ Hofstede et al. (2010) จำนวนสองด้านคือ มุมมองด้านการหลีกเลี่ยงความเสี่ยงและมุมมองด้านบุรุษเพศ ซึ่งคุณลักษณะเหล่านี้เป็นคุณลักษณะทางวัฒนธรรมที่แตกต่างกันของประเทศไทย ประเทศมาเลเซีย และประเทศสิงคโปร์ โดยประเทศไทยมีคุณลักษณะที่หลีกเลี่ยงความเสี่ยงในระดับมากและมีคุณลักษณะสตรีเพศ แต่ประเทศมาเลเซียและประเทศสิงคโปร์มีคุณลักษณะที่หลีกเลี่ยงความเสี่ยงในระดับต่ำและมีคุณลักษณะที่ก้ำกึ่งระหว่างบุรุษเพศและสตรีเพศ ทั้งนี้ เนื่องจากการเปิดเผยเรื่องสำคัญในการตรวจสอบนั้น ขึ้นอยู่กับกลุ่มอุตสาหกรรมที่บริษัทดำเนินกิจการอยู่ ผู้วิจัยจึงเลือกกลุ่มตัวอย่างจากกลุ่มอุตสาหกรรมอุตสาหกรรมเพียงกลุ่มตัวอย่างเดียว ตัวอย่างครอบคลุมการเปิดเผยเรื่องสำคัญในการตรวจสอบในปี พ.ศ. 2559-2561 ซึ่งประกอบด้วย ค่าสังเกตจำนวน 172 364 และ 238 จากประเทศไทย ประเทศมาเลเซีย และประเทศสิงคโปร์ตามลำดับ จากผลของแบบจำลองสมการถดถอย ผู้วิจัยพบว่า คุณลักษณะทางวัฒนธรรมในระดับประเทศด้านการหลีกเลี่ยงความเสี่ยงและด้านบุรุษเพศไม่มีผลต่อจำนวนเรื่องสำคัญในการตรวจสอบ คุณลักษณะทางวัฒนธรรมด้านบุรุษเพศไม่มีผลต่อประเภทของเรื่องสำคัญในการตรวจสอบที่ถูกเปิดเผยโดยผู้สอบบัญชีเช่นกัน แต่อย่างไรก็ตาม ผู้วิจัยกลับพบว่า ผู้สอบบัญชีจากประเทศที่มีคุณลักษณะที่หลีกเลี่ยงความเสี่ยงสูง (เช่น ประเทศไทย) มักจะเปิดเผยเรื่องสำคัญในการตรวจสอบที่มีลักษณะเป็นเรื่องสำคัญในการตรวจสอบที่เฉพาะเจาะจงของกลุ่มอุตสาหกรรม ที่บริษัทในกลุ่ม

อุตสาหกรรมเดียวกันเปิดเผยเป็นเรื่องสำคัญในการตรวจสอบที่เหมือนกัน ผู้สอบบัญชีเลี่ยงที่จะเปิดเรื่องสำคัญในการตรวจสอบที่มีลักษณะเฉพาะเจาะจงของแต่ละงานสอบบัญชีหรือแต่ละลูกค้าในช่วงปีแรก ๆ ของการถือใช้ปฏิบัติเกี่ยวกับเรื่องสำคัญในการตรวจสอบ เพราะผลกระทบที่ตามมาภายหลังจากการเปิดเผยเรื่องสำคัญในการตรวจสอบยังไม่ชัดเจน

คำสำคัญ: วัฒนธรรมในระดับชาติ เรื่องสำคัญในการตรวจสอบ ประเทศไทย ประเทศมาเลเซีย ประเทศสิงคโปร์

1. Introduction

After the requirement for the disclosure of KAMs in an auditor's report has been globally adopted for audits of financial statements for the periods ending on or after December 31, 2016, the current main stream of auditing research has paid more focus on its consequences. Many of them observe the impact of the disclosure of KAMs on audit quality (e.g., Almulla & Bradbury, 2018; Wei, Fargher, & Carson, 2017), audit fee (e.g., Boonlert-U-Thai, Srijunpetch, & Phakdee, 2019; Wei et al., 2017), market reaction (e.g., Almulla & Bradbury, 2018; Srijunpetch, 2017), audit delay (e.g., Almulla & Bradbury, 2018), and understandability of auditor's report (e.g.,Velte, 2018). However, a few studies have investigated factors which affect auditors' disclosures of KAMs. To our knowledge, the existing evidence of the investigation is, for example, Pinto and Morais (2018) and Boonlert-U-Thai et al. (2019).

Our study therefore contributes to the literature on this investigation by exploring the effect of national culture on the disclosure of KAMs. We apply cultural dimensions of Hofstede (2001) and Hofstede, Hofstede, and Minkov (2010) into our study and test whether a country's cultural dimensions affect a number and types of KAMs disclosed by auditors from Thailand, Malaysia, and Singapore. Our findings may be beneficial to regulators and standard setters for gaining a clearer understanding of the factors which have impacts on the auditors' considerations to disclose matters as KAMs. Their clearer understanding may help them to establish a guideline for the auditors to have a better communication of KAMs. Our findings may also be beneficial to the auditors for providing them the comparable practices on the disclosures of KAMs in the same industry in other countries. This may lead them to reconsider whether their existing disclosures of KAMs are really KAMs according to the International Standard on Auditing (ISA) 701 Communicating Key Audit Matters in the Independent Auditor's Report issued by the International Auditing and Assurance Standards Board (2015b).

Our results indicate that national culture impacts on auditors' disclosures of KAMs. Auditors from a country with strong uncertainty avoidance (e.g., Thailand) are more likely to disclose industry-common KAMs which most of companies in the same industry share the similar ones. They might avoid disclosing entity-specific and audit-specific KAMs in the first few years of the adoption of KAMs because the consequence of the disclosures of KAMs remains unclear. Regulators and standard setters shall therefore encourage auditors to disclose more entity-specific and audit-specific KAMs. These entity-specific and audit-specific KAMs are more likely to be useful for users of financial statements than industry-common ones since they provide more specific information of an audit at an engagement level. For the auditors, they shall also reconsider whether the industry-common KAMs (e.g., the pervasiveness of the disclosures of KAMs relating to revenue recognition) they disclosed are really KAMs as defined by ISA 701.

Our paper proceeds as follows. Section 2 reviews the literature and states our hypotheses. Section 3 explains our research design. Section 4 describes our sample and sources of data and reports descriptive statistics. Section 5 provides the results of our study and section 6 gives the conclusion.

2. Literature Review and Hypotheses Development

2.1 Literature Reviews

According to ISA 701, KAMs were matters which auditors selected from those matters which they had previously discussed with those charged with governance and the auditors see them as the most significant matters in their audits. KAMs should include areas of significant auditor attention, significant risks, and significant difficulties during the audit. The areas required significant auditor attention are those with higher assessed risks of material misstatement, those with high risks, and those with complexity. These areas are therefore required more resources, audit effort, and involvements of people with expertise. The areas with significant risks shall reflect specific risks of an audited company. They include transactions or areas with significant management judgment and material unusual transactions (e.g., transactions with related parties). The significant risk areas due to fraud and the areas which are presumed by the ISAs to be significant risks[1] are not necessary to be considered as KAMs. The significant difficulties are, for example, an audit of related party transactions and an additional unexpected audit effort.

From ISA 701, the section of KAMs aims at providing users with specific information of an audit at an engagement level. Each matter is separately presented by a subheading. An auditor is required to give a description of each matter which concisely explains why the matter was considered to be one of the most significance in the audit. The description may include the reference to factors which affect the auditors' risk assessments (e.g., high estimation uncertainty, economic conditions, new accounting policies, changes in company's strategy or business model that had a material effect on the financial statements) and the explanation of the audit approach in relation to the matter, and the indication of whether the matter involves significant management judgment. In order to help the users with a less reasonable knowledge of auditing to understand KAMs, the auditor should avoid using too much highly technical auditing terms.

After KAMs have globally implemented in 2016, few studies have investigated factors which affect auditors' disclosures of KAMs. Pinto and Morais (2018) investigate the disclosures of KAMs in 2016 among listed companies on the UK's FTSE 100, France's CAC 40, and the Netherlands's AEX

[1] ISA 240, for example, presumes that an auditor shall treat revenue recognition as an area with high assessed risks of misstatement arising from fraud because there are always risks of fraud in revenue recognition.

25. The results of their OLS, Logistic and Poisson regressions provide evidence that the companies with more complexity as measured by a number of business segments and companies in countries with more precise accounting standards (rule-based accounting standards) have a greater number of disclosed KAMs. However, those under stricter regulations and supervisions like those in the finance sector have a lesser number of KAMs. By using Flesch reading ease index as a measure of readability of KAMs disclosed by 333 listed companies in 2014 and those disclosed by 327 listed companies in 2015 in London Stock Exchange in the UK, Velte (2018) found that a greater number of woman on audit committees leads to the higher readability of KAMs disclosure because of their stricter monitoring and greater risk avoidance. Boonlert-U-Thai et al. (2019) investigate the disclosures of KAMs during 2016 and 2017 among 436 listed companies in the Stock Exchange of Thailand. They found that the companies with reporting loss or a greater number of pages of audit reports have a greater number of KAMs but those audited by Big 4 have a lesser number of KAMs. However, gender difference of auditors does not affect a number of disclosed KAMs. Our study differs from these three studies. First, we provide evidence from Thailand, Malaysia, and Singapore which have different accounting and auditing environments. Second, we explore the impact of national culture on the disclosures of KAMs. Third, we explore both quantitative and qualitative characteristics of KAMs.

2.2 Hypotheses development

We apply cultural dimensions of Hofstede (2001) and Hofstede et al. (2010) into our hypotheses. The four culture dimensions (power distance, uncertainty avoidance, individualism, and masculinity) are from Hofstede (2001) while the one (long-term orientation) is from Hofstede et al. (2010). Power distance (PD) indicates the influence of a higher authority on a lesser authority's behaviours, and vice versa. It also reflects the inequity in social institutions (e.g. school, family, and community) where people have different wealth, status, and power. Uncertainty Avoidance (UAI) indicates the extent to which a person is able tolerable to an uncertainty which would gradually causes anxiety. Hofstede et al. (2010) easily describe this dimension as the sentence "what is different is dangerous". Individualism (IDV) indicates the extent to which people connect each other when they live together. Individualism does a thing only for himself but collectivism does it for his group. Masculinity (MAS) indicates the characteristics of assertiveness, competitiveness, and toughness; on the other hand, femininity (FAM) indicates the characteristics of gentleness and carefulness. Long-term orientation (LTO) indicates that people are more concerned with long-term consequences and believe in long-running positive outcome of today's hard work which is contradictory to short-term orientation (STO).

Table 1 Power Distance Index (PDI), Uncertainty Avoidance Index (UAI), Individual Value (IDV), Masculinity Index Value (MAS), and Long-term Orientation (LTO) for Thailand, Malaysia, and Singapore

	PDI	UAI	IDV	MAS	LTO
Malaysia	104 (Large)	36 (Weak)	26 (Collectivistic)	50 (MAS + FAM)	n/a*
Singapore	74 (Large)	8 (Weak)	20 (Collectivistic)	48 (MAS + FAM)	48 (LTO + STO)
Thailand	64 (Large)	64 (Strong)	20 (Collectivistic)	34 (FAM)	56 (LTO + STO)

* Malaysia was excluded from the study of Hofstede et al. (2010).

Table 1 shows cultural indexes for Thailand, Malaysia, and Singapore derived from Hofstede (2001) and Hofstede et al. (2010). All countries have a large power distance and are defined as collectivistic. Malaysia and Singapore have weak uncertainty avoidance and are mixing between masculine and feminine but Thailand has strong uncertainty avoidance and is feminine.

We focus on UAI and MAS which are the different cultural dimensions among these three countries and develop our hypotheses based on these two dimensions. Auditors from a country with strong UAI are more likely to disclose a lesser number of KAMs because they may worry that their disclosures of KAMs may lead to the negative consequences in the future (e.g., regulatory scrutiny, litigation consequence, auditor-client disagreement). We therefore state the following hypothesis:

H1: Auditors from a country with strong UAI are more likely to disclose a lesser number of KAMs.

Auditors from a country with strong UAI may also feel that what is different is dangerous. They may therefore perceive that the disclosures of specific KAMs are riskier than the disclosures of industry-common KAMs. Our hypothesis is:

H2: Auditors from a country with strong UAI are more likely to disclose industry-common KAMs.

Auditors from a country with MAS culture are more assertiveness, competitiveness, and toughness. Hence, they are less worried about their disclosures of KAMs and are more willing to disclose a greater number of KAMs. Our hypothesis is:

H3: Auditors from a country with MAS culture are more likely to disclose a greater number of KAMs; and

Auditors from a country with MAS culture are less gentleness and carefulness. They may overlook an entity-specific and audit-specific information, thereby being more likely to disclose industry-common KAMs. Our hypothesis is:

H4: Auditors from a country with MAS culture are more likely to disclose industry-common KAMs.

3. Research Design

To test our hypotheses, we follow Hope, Kang, Thomas and Yoo (2008) who observe the impact of culture on auditor choice in 37 countries during 1992–2004. They regress auditor choice Big 4/non-Big 4 on countries' culture of secrecy, other country-level control variables (e.g., investor protection, legal enforcement, gross national product), and firm-level control variables (e.g., returns on equity, size measured by the log of the market value of equity, long-term accruals). Secrecy is measured by the sum of UAI, PDI, and IDV scores which are derived from Hofstede. We first draw the following relationships:

$$KAMs = f(Auditor + Audit\ Firm + Client + Country + Year)$$

Our independent variable is $KAMs$ which is separately tested in respect of their quantitative and qualitative characteristics. A number of KAMs ($NKAMs$) represent their quantitative characteristic meanwhile types of KAMs ($TKAMs$) represent their qualitative characteristic. As indicated by International Auditing and Assurance Standards Board (2015b), an auditor determines, based on his judgement, how many KAMs shall be disclosed in his auditor's report. He shall select a smaller number of matters from those which he had communicated with those charged with governance. Each disclosed KAM may involve many of auditor's considerations. For instance, the disclosure of KAM related to long-term contracts may involve the auditor's considerations on litigation and contingencies, revenue recognition, and/or accounting estimates. However, the auditor's report with too many disclosed KAMs may indicate less usefulness of the auditor's communication of KAMs. If the auditor considers to have a large number of disclosed KAMs, he shall reconsider whether each of them is really KAM as defined by ISA 701. Types of KAMs could be industry-common KAMs which companies within the same industries share the similar ones (Ernst & Young Global Limited, 2016) or entity-specific and audit-specific KAMs (International Auditing and Assurance Standards Board, 2015a) which are unique to a company (Ernst & Young Global Limited, 2016). According to the definition of KAMs given by ISA 701, the specific KAMs are more likely to be useful for users of financial statements than common ones since they provide more specific information of an audit at an engagement level.

To distinguish between industry-common KAMs and specific ones, we adapt the concept of auditor's industry specialism. Market share, which is the proportion of individual auditor's total audit fees derived from all clients in the specific industry to the total audit fees of that industry, has been widely used to identify the auditors with audit industry expertise from others. The auditors are defined as audit industry expertise if their market shares are greater than the cut-off point. 10 percent of market share is used as the cut-off point by Ferguson and Stokes (2002) while 15 percent and 20 percent of market share are used by Krishnan (2003) and Dunn and Mayhew (2004), respectively. For our study, $TKAMs$ is

a proportion of a number of industry-common KAMs to a total number of KAMs. We use 10 percent, which is the smallest cut-off point used by the study of auditor industry specialization, as the cut-off point to consider whether KAMs are industry-common KAMs.

Auditor represents individual characteristics of auditors (e.g., gender differences, levels of conservatism, experience) which may affect their disclosures of KAMs. We leave a set of variables of the auditors' individual characteristics for a further study. *Audit Firm* represents the impact of audit firm on the auditors' disclosures of KAMs. Similar to previous accounting and auditing study, we classify audit firms into Big 4 and non-Big 4 (*BIG4*). Big 4 includes Deloitte, Ernst & Young (EY), KPMG, and PricewaterhouseCoopers (PwC). The study of Boonlert-U-Thai et al. (2019) found that Big 4 discloses the lesser number of KAMs.

Client represents a set of client-specific control variables which may affect disclosed KAMs. As indicated by ISA 701, client's size, complexity, and nature of business and environment may affect the number of disclosed KAMs. We follow Pinto and Morais (2018) who found positive relationships of client's size, complexity, and balances of inventory and accounts receivable and a number of KAMs but the negative relationships of client's performance and a number of KAMs. Client's size is controlled by the natural logarithm of total assets (*LogA*) while client's complexity is controlled by the natural logarithm of a number of business segments (*LogSegmt*). We also control for company's balances of inventory and accounts receivable and compute it as dividing the summation of balances of inventory and accounts receivable by total assets (*INV&AR*). Return on assets (*ROA*) is used to control for company's performance and is computed by dividing net profits by total assets.

Year captures the time-variant effects on disclosed KAMs. The disclosures of KAMs has been required for the financial statements which have year ending on or after December 31, 2016. The disclosures in the first year (FYEAR) are more likely to be problematic since auditors had no experience in doing them before.

The test procedures are as follows. To test hypotheses H1 and H3 which explore the relationships between a number of disclosed KAMs and two cultural dimensions, we employ Poisson regression model. Greene (2012, pp. 842–843) indicates that Poisson regression model is used when the observed outcomes are count numbers. It is a non-linear regression and is drawn as follows:

$$\Pr(Y=y_i \mid x_i) = \frac{e^{-\lambda_i}\lambda_i^{\gamma_i}}{\gamma_i!},\ \gamma_i=0,1,2,\ldots$$

γ is a number of KAMs disclosed by an auditor i from a Poisson population with parameter λ_i, which is related to the regressors x_i. We also presume that the greater number of KAMs, the risker.

To test hypotheses H2 and H4 which investigate the relationships between types of disclosed KAMs and the two cultural dimensions, we employ ordinary least squares regression.

4. Sample Selection and Descriptive Statistics

4.1 Sample Selection

List of sample is derived from the websites of the Stock Exchange of Thailand (www.set.or.th), the Singapore Exchange Limited (https://www2.sgx.com), and the Bursa Malaysia Berhad (http://www.bursamalaysia.com/market/). Data of the sample covers the period from 2016 to 2018 and is manually collected from their annual reports published on each country's website of the stock exchange which they have traded. We use only the observations from industrial sectors as the disclosures of KAMs vary according to the industry which listed companies have operated in. The observations that do not have all the necessary data for calculating the variables in our models are deleted. Our final sample comprises 781 firm-year observations from Thailand, Malaysia, and Singapore. 174 firm-year observations (22.3 percent of the sample) are from Thailand. 369 firm-year observations (47.2 percent) and 238 firm-year observations (30.5 percent) are from Malaysia and Singapore, respectively.

4.2 Descriptive statistics

4.2.1 Types of KAMs

Table 2 reports types of KAMs. By using 10 percent as the cut-off point, the industry-common KAMs of the audits of listed companies from the industrial sector are KAMs related to valuation of inventories (40 percent), KAMs related to valuation of accounts receivable (34 percent), KAMs related to valuation of property, plant, and equipment (24 percent), KAMs related to revenue recognition not from fraud (17 percent), KAMs related to valuation of investments (17 percent), KAMs related to valuation of goodwill (15 percent), and KAMs related to accounting for long-term/complex contracts (11 percent).

KAMs disclosed by the auditors are likely to vary among the three countries. KAMs disclosed by the auditors from Thailand are more concerned with valuation of inventories (59 percent) and revenue recognition not from fraud (33 percent). Those disclosed by the auditors from Malaysia are more concerned with valuation of accounts receivable (45 percent) and valuation of inventories (37 percent). Those disclosed by the auditors from Singapore are more concerned with valuation of property, plant, and equipment (37 percent) and valuation of accounts receivable (34 percent).

Table 2 Types of KAMs

	Thailand		Malaysia		Singapore		Total	
Total number of auditors' considerations disclosed as KAMs	**174**		**369**		**238**		**781**	
Valuation of goodwill	10	6%	55	15%	51	21%	116	15%
Valuation of intangible assets	2	1%	11	3%	36	15%	49	6%
Valuation of assets held for sales	0	0%	1	0%	4	2%	5	1%
Accounting for taxation	13	7%	17	5%	20	8%	50	6%
Revenue recognition not from fraud	58	33%	54	15%	24	10%	136	17%
Provisions	3	2%	10	3%	8	3%	21	3%
Legal provision	1	1%	0	0%	5	2%	6	1%
Acquisitions/disposals	9	5%	7	2%	16	7%	32	4%
Valuation of investments	32	18%	49	13%	55	23%	136	17%
Pensions	3	2%	2	1%	5	2%	10	1%
Financial instruments	1	1%	4	1%	12	5%	17	2%
Valuation of property, plant, and equipment	23	13%	79	21%	88	37%	190	24%
Controls	0	0%	0	0%	1	0%	1	0%
Development costs	0	0%	4	1%	2	1%	6	1%
Mining/oil/gas accounting	0	0%	4	1%	2	1%	6	1%
Going-concern	0	0%	10	3%	3	1%	13	2%
Share-based payments	0	0%	4	1%	0	0%	4	1%
Accruals	0	0%	0	0%	2	1%	2	0%
Capitalizations	0	0%	5	1%	0	0%	5	1%
Valuation of inventories	102	59%	135	37%	73	31%	310	40%
Valuation of accounts receivable	19	11%	165	45%	81	34%	265	34%
Accounting for long-term/complex contracts	9	5%	59	16%	19	8%	87	11%
Contingent liabilities	0	0%	1	0%	2	1%	3	0%
Related parties	9	5%	10	3%	8	3%	27	3%
Loans	1	1%	9	2%	0	0%	10	1%
Investment properties	2	1%	20	5%	18	8%	40	5%
Non-operate assets	1	1%	0	0%	0	0%	1	0%
Preparation of financial statements	1	1%	0	0%	0	0%	1	0%

Table 2 Types of KAMs (Cont.)

	Thailand		Malaysia		Singapore		Total	
Currencies	1	1%	1	0%	0	0%	2	0%
Debt covenants	1	1%	1	0%	0	0%	2	0%
Biological assets	0	0%	8	2%	3	1%	11	1%
Prepaid expense/deposits	0	0%	8	2%	10	4%	18	2%
Restructuring/reorganization	0	0%	0	0%	4	2%	4	1%
Adoptions of new accounting standards	0	0%	1	0%	2	1%	3	0%
Cash and bank	0	0%	0	0%	5	2%	5	1%
Development projects	0	0%	5	1%	7	3%	12	2%
Credit risk	0	0%	3	1%	3	1%	6	1%
Bonds	0	0%	0	0%	3	1%	3	0%
Non-compliance with regulations	0	0%	1	0%	1	0%	2	0%
Expense	0	0%	0	0%	2	1%	2	0%
Net assets	0	0%	3	1%	0	0%	3	0%
Other auditors and group auditors	0	0%	4	1%	0	0%	4	1%

4.2.2 Sample characteristics

Table 3 reports descriptive statistics for dependent and our test variables by country. It shows that the sample from Singapore (mean = 2.113) has the greatest number of KAMs (*NKAMs*) whilst that from Thailand (mean = 1.655) has the smallest number of KAMs. The auditors of the sample from Thailand (mean = 0.735) are more likely to disclose industry-common KAM (*TKAMs*) but those of sample from Singapore (mean = 0.532) are less likely to do so. The sample from Singapore (mean = 0.605) is more likely to employ Big 4 (*BIG4*) and its size (*LogA*) is large (mean = 19.010 or U.S.$180 million) but that from Malaysia (0.328) is more likely to employ non-Big 4 and its size is small (mean = 18.061 or U.S.$69 million). The business operation of sample from Malaysia is more complex (*LogSegmt*) (mean = 1.161 or 3.19 business segments) but that of sample from Thailand are less complex (mean = 0.837 or 2.31 business segments). The sample from Malaysia (0.344) and that from Singapore (mean = 0.345) report the high balances of inventories and accounts receivable (*INV&AR*). The sample from Thailand (mean = 0.061) generates the good performance (*ROA*) but that from Singapore (mean = –0.087) generates the poor performance. The sample is mainly from the second and third year of the implementation of KAMs (*FYear*).

Table 3 Descriptive Statistics

	Thailand (N = 174)				Malaysia (N = 369)				Singapore (N = 238)			
Variable	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
NKAMs	1.655	0.742	0.000	4.000	1.967	0.989	0.000	6.000	2.113	1.063	0.000	6.000
TKAMs	0.734	0.375	0.000	1.000	0.676	0.369	0.000	1.000	0.532	0.379	0.000	1.000
UAI	64.000	0.000	64.000	64.000	36.000	0.000	36.000	36.000	8.000	0.000	8.000	8.000
MAS	34.000	0.000	34.000	34.000	50.000	0.000	50.000	50.000	48.000	0.000	48.000	48.000
BIG4	0.523	0.501	0.000	1.000	0.328	0.470	0.000	1.000	0.605	0.490	0.000	1.000
LogA	18.587	1.172	16.800	23.397	18.061	1.225	15.423	22.841	19.010	1.744	11.291	24.435
LogSegmt	0.837	0.463	0.000	1.946	1.161	0.614	0.000	2.303	1.088	0.546	0.000	2.079
INV&AR	0.319	0.170	0.000	0.869	0.344	0.163	0.001	0.765	0.345	0.184	0.000	1.000
ROA	0.061	0.179	−1.000	1.847	0.027	0.091	-0.656	0.480	−0.087	1.698	−25.207	4.780
FYear	0.477	0.501	0.000	1.000	0.550	0.498	0.000	1.000	0.487	0.501	0.000	1.000

NKAMs = a number of KAMs, TKAMs = a proportion of industry-common KAMs to total KAMs and use 10 percent as the cut-off point to consider whether KAMs are industry-common KAM, UAI = Hofstede's Uncertainty Avoidance Index, UAI = Hofstede's Masculinity Index Value, BIG = 1 if the company was audited by Big 4, 0 else, LogA = the natural logarithm of total assets, LogSegmt = the natural logarithm of a number of business segments, INV&AR = the proportion of balances of inventory and accounts receivable to total assets, ROA = return on assets and is computed by dividing net profits by total assets, and FYear = 1 if it was the first year of the implementation of KAMs, 0 else.

5. Results

5.1 Variance inflation factor and correlation matrix

Table 4 reports variance inflation factor (VIF) and Pearson correlation between each pair of variables. A number of KAMs are negatively correlated with Uncertainty Avoidance Index but positively correlated with Masculinity Index Value, company size, a number of business segments, and balances of inventories and accounts receivable. Meanwhile a proportion of industry-common KAMs to a total number of KAMs are negatively correlated with Masculinity Index Value and company size but positively correlated with Uncertainty Avoidance Index and balances of inventories and accounts receivable. Most of correlations between each pair of variables are smaller. The largest one is between UAI and MAS (coefficient = –0.715, $P < 0.000$). However, their VIFs are below the 10.00 threshold which are acceptable as concerned by Stanley and DeZoort (2007). Therefore, our models do not have the multicollinearity problem.

5.2 Regression Results

Table 5 reports the results of the regressions. The model 1 is used to test hypotheses H1 and H3 by employing the Poisson regression of a number of KAMs on our test and control variables. From table 5, the coefficients of UAI and MAS are insignificant. We therefore reject the hypothesis H1 that auditors from a country with strong UAI are more likely to disclose a lesser number of KAMs and the hypothesis H3 that auditors from a country with MAS culture are more likely to disclose a greater number of KAMs.

The model 2 is used to test the hypotheses H2 and H4 by employing ordinary least squares of a proportion of industry-common KAMs to a total number of KAMs on our test and control variables. From table 5, the coefficient of UAI is positively significant (0.004, $P < 0.000$). We therefore accept hypothesis H2 that auditors from a country with strong UAI are more likely to disclose industry-common KAMs. However, the coefficient of MAS is insignificant. We then reject hypothesis H4 that auditors from a country with MAS culture are more likely to disclose industry-common KAMs.

Table 4 Variance Inflation Factors and Correlation Matrix

	VIF	NKAMs	TKAMs	UAI	MAS	BIG4	LogA	LogSegmt	INV&AR	ROA	FYear
NKAMs		1.000									
TKAMs		–0.043 *0.226*	1.000								
UAI	2.37	–0.165*** *0.000*	0.184*** *0.000*	1.000							
MAS	2.31	0.147*** *0.000*	–0.096** *0.007*	–0.715*** *0.000*	1.000						
BIG4	1.17	–0.043 *0.226*	0.018 *0.616*	–0.085** *0.018*	–0.104*** *0.004*	1.000					
LogA	1.29	0.174*** *0.000*	–0.091** *0.011*	–0.133*** *0.000*	–0.082** *0.022*	0.344*** *0.000*	1.000				
LogSegmt	1.1	0.214*** *0.000*	–0.063 *0.077*	–0.139*** *0.000*	0.219*** *0.000*	–0.026 *0.473*	0.146*** *0.000*	1.000			
INV&AR	1.02	0.079* *0.027*	0.144*** *0.000*	–0.050 *0.164*	0.060 *0.096*	–0.019 *0.602*	–0.013 *0.718*	–0.081** *0.023*	1.000		
ROA	1.06	0.033 *0.363*	0.077 *0.069*	0.059 *0.100*	–0.028 *0.440*	0.046 *0.194*	0.189*** *0.000*	0.050 *0.162*	0.055 *0.122*	1.000	
FYear	1.01	0.011 *0.761*	0.032 *0.368*	0.000 *0.995*	0.047 *0.187*	–0.012 *0.748*	–0.021 *0.561*	–0.005 *0.880*	0.022 *0.544*	0.040 *0.261*	1.000

***, **, and * represent $p < 0.01$, $p < 0.05$, and $p < 0.1$, respectively, two -tailed.

NKAMs = a number of KAMs, TKAMs = a proportion of industry-common KAMs to total KAMs and use 10 percent as the cut-off point to consider whether KAMs are industry-common KAM, UAI = Hofstede's Uncertainty Avoidance Index, UAI = Hofstede's Masculinity Index Value, BIG = 1 if the company was audited by Big 4, 0 else, LogA = the natural logarithm of total assets, LogSegmt = the natural logarithm of a number of business segments, INV&AR = the proportion of balances of inventory and accounts receivable to total assets, ROA = return on assets and is computed by dividing net profits by total assets, and FYear = 1 if it was the first year of the implementation of KAMs, 0 else.

Table 5 Regression Results

$$NKAMs_i = b_0 + b_1UAI_j + b_2MAS_j + b_3BIG4_i + b_4LogA_i + b_5LogSegmt_i + b_6INV\&AR_i + b_7ROA_i + b_8FYear_i + \varepsilon_i \quad (1)$$

$$TKAMs_i = b_0 + b_1UAI_j + b_2MAS_j + b_3BIG4_i + b_4LogA_i + b_5LogSegmt_i + b_6INV\&AR_i + b_7ROA_i + b_8FYear_i + \varepsilon_i \quad (2)$$

	Predicted Sign	Model 1 Poisson regression NKAMs		Model 2 OLS regression TKAMs	
		Coef.	P-value	Coef.	P-value
UAI	H1: – and H3: +	–0.002	0.235	0.004	0.000***
MAS	H2: + and H4: +	0.003	0.542	0.003	0.275
BIG4	–	–0.105	0.063***	0.048	0.053
LogA	+	0.060	0.002***	–0.020	0.022**
LogSegmt	+	0.160	0.002***	–0.013	0.533
INV&AR	+	0.254	0.091*	0.276	0.000***
ROA	–	0.005	0.904	0.024	0.046**
FYear	+	0.010	0.842	0.014	0.520
Intercept	?	–0.759	0.164	–13.227	0.178
N		781			781
F-value		38.59			7.57
Prob > F		0.000***			0.000***
Pseudo R-squared		0.017			n/a
Adj R-squared		n/a			0.063
Log likelihood		–1135.30			n/a

P-values are one-tailed for predicted sign, except when estimated coefficient has a sign opposite to expectation. All other p-values are two-tailed.

NKAMs = a number of KAMs, TKAMs = a proportion of industry-common KAMs to total KAMs and use 10 percent as the cut-off point to consider whether KAMs are industry-common KAM, UAI = Hofstede's Uncertainty Avoidance Index, UAI = Hofstede's Masculinity Index Value, BIG = 1 if the company was audited by Big 4, 0 else, LogA = the natural logarithm of total assets, LogSegmt = the natural logarithm of a number of business segments, INV&AR = the proportion of balances of inventory and accounts receivable to total assets, ROA = return on assets and is computed by dividing net profits by total assets, and FYear = 1 if it was the first year of the implementation of KAMs, 0 else.

6. Conclusion

Our study explores the impact of national culture on the disclosures of KAMs. We focus only two cultural dimensions of Hofstede (2001) and Hofstede et al. (2010): uncertainty avoidance and masculinity, which are the different cultural dimensions among Thailand, Malaysia, and Singapore. Thailand has strong uncertainty avoidance and is feminine but Malaysia and Singapore have weak uncertainty avoidance and are mixing between masculine and feminine. As KAMs vary according to the companies which they operate in, we select only sample from the industrial sector. Our final sample covers the disclosures of KAM in 2016–2018 which consists of 174, 364, and 238 firm-year observations from Thailand, Malaysia and Singapore, respectively.

From the results of our regression models, we found that a country's cultural characteristics of uncertainty avoidance and masculinity do not affect a number of KAMs disclosed by auditors. A country's characteristic of masculinity also does not affect types of KAMs disclosed by the auditors. However, we found that auditors from a country with strong uncertainty avoidance are more likely to disclose industry-common KAMs where most of companies in the same industry share the similar ones. As highlighted by Hofstede et al. (2010), people from a country with strong uncertainty avoidance feel that "what is different is dangerous". This is the reason why the auditors from a country with strong uncertainty avoidance (e.g., Thailand) might avoid disclosing entity-specific and audit-specific KAMs but prefer disclosing industry-common ones in the first few years of the adoption of KAMs when the consequence of the disclosure of KAMs remains unclear. The auditors may worry that disclosing entity-specific and audit-specific KAMs may lead to the disagreement between auditors and clients and it may even harm their relationship. The disclosures of KAMs may also lead to regulatory scrutiny and litigation consequence in the later years. For the audits of companies in industrial sector, the auditors from a country with strong uncertainty avoidance are therefore more likely to disclose industry-common KAMs with respect to valuation of property, plant, and equipment, revenue recognition not from fraud, valuation of investments, valuation of goodwill, and accounting for long-term/complex contracts.

Our findings suggest that the auditors shall be encouraged to disclose more entity-specific and audit-specific KAMs. These entity-specific and audit-specific KAMs are more likely to be useful for users of financial statements than industry-common ones since they provide more specific information of an audit at an engagement level. Importantly, the auditors shall also reconsider whether the industry-common KAMs (e.g., the pervasiveness of the disclosures of KAMs relating to revenue recognition) they disclosed are really KAMs as defined by ISA 701. As identified by ISA 701, the significant risk areas due to fraud and the areas which are presumed by the ISAs to be significant risks (e.g., revenue recognition) are not necessary to be considered as KAMs.

Our study's limitation is that our regression models generate low Pseudo R-squared and Adj R-squared in comparison to the studies of Boonlert-U-Thai et al. (2019) and Pinto and Morais (2018). This indicates that there remain omitted variables in our models. Future international study of KAMs shall include more national factors, e.g., regulatory and supervisory system, precision of accounting standards, audit firm inspection regimes into its models. They shall also broaden sample to cover more countries which have different cultural dimensions and more industry sectors.

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