

VOLUME 2 NO. 2
DEC 2005

ISSN 1675-7017

SOCIAL AND MANAGEMENT RESEARCH JOURNAL



INSTITUTE OF RESEARCH, DEVELOPMENT AND COMMERCIALISATION



SOCIAL AND MANAGEMENT RESEARCH JOURNAL

Chief Editor

Prof. Dr. Rashidah Abdul Rahman,
Universiti Teknologi MARA, Malaysia

Managing Editor

Assoc. Prof. Dr. Loo Ern Chen,
Universiti Teknologi MARA, Malaysia

Editorial Advisory and Review Board

Prof. Dr. Normah Omar, Universiti Teknologi MARA, Malaysia
Prof. Dr. Sardar M.N. Islam, Victoria University, Melbourne, Australia
Prof. Dr. Faridah Hassan, Universiti Teknologi MARA, Malaysia
Assistant Prof. Alexander N. Kostyuk, Ukrainian Academy of Banking of National
Bank of Ukraine, Sumy, Ukraine
Assoc. Prof. Dr. Razidah Ismail, Universiti Teknologi MARA, Malaysia
Assoc. Prof. Dr. Nor'azam Matstuki, Universiti Teknologi MARA, Malaysia
Assoc. Prof. Dr. Roshayani Arshad, Universiti Teknologi MARA, Malaysia
Assoc. Prof. Dr. Nor Aziah Alias, Universiti Teknologi MARA, Malaysia
Dr. Sabarinah Sheikh Ahmad, Universiti Teknologi MARA, Malaysia
Assoc. Prof. Dr. Maznah Wan Omar, Universiti Teknologi MARA, Malaysia
Dr. Megawati Omar, Universiti Teknologi MARA, Malaysia
Dr. Rashid Ameer, Universiti Teknologi MARA, Malaysia
Dr. Azizah Abdullah, Universiti Teknologi MARA, Malaysia
Dr. Azmi Abdul Hamid, Universiti Teknologi MARA, Malaysia
Dr. Kalsom Salleh, Universiti Teknologi MARA, Malaysia

Copyright © 2005 by Institute of Research, Development and Commercialisation (IRDC), Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means; electronics, mechanical, photocopying, recording or otherwise; without prior permission in writing from the Publisher.

Social and Management Research Journal is jointly published by Institute of Research, Development and Commercialisation (IRDC) and University Publication Centre (UPENA), Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia.

The views and opinion expressed therein are those of the individual authors and the publication of these statements in the Scientific Research Journal do not imply endorsement by the publisher or the editorial staff. Copyright is vested in Universiti Teknologi MARA. Written permission is required to reproduce any part of this publication.

SOCIAL AND MANAGEMENT RESEARCH JOURNAL

Vol. 2 No. 2

December 2005

ISSN 1675-7017

1. **The Influence of Personal and Organizational Factors on Ethical Decision-Making Intention Among Managers in Oil and Gas Based-Companies** 1
Zetty Zahureen Mohd Yusoff
Zainuddin Zakaria
Md Izuddin Ali
Wan Anisabanum Salleh

2. **Number Sense and Mental Computation among Secondary Students' in Selangor** 13
Parmjit Singh
Rosmawati Abdul Halim
Rusyah Abdul Ghani

3. **Financial Risk Management by Malaysian Life Insurers: The Application of Reinsurance** 25
Rosmi Yuhasni Mohamed Yusuf
Saharani Abdul Rashid
Rozain Daud

4. **Building ISO 9000 Based Quality Management Systems in Education: The Case of the Faculty of Business Management, UiTM Shah Alam** 41
Norhana Salamudin
Noraini Ismail
Hazman Shah Abdullah

5.	Linking Theory and Practice: The Case of TESL Trainee Teachers <i>Siti Salina Ghazali</i> <i>Lee Lai Fong</i>	53
6.	The Interaction of Students' Perceptions of Classroom Learning Environment and their Academic Achievement <i>Azani Saleh</i> <i>Lili Syahani Rusli</i> <i>Roslinda Rosli</i>	69
7.	A Study on Taxpayers' Awareness and Confidence in Administering Self Assessment <i>Ho Juan Keng</i> <i>Afidah Sapari</i> <i>Rani Diana Othman</i> <i>Loo Ern Chen</i>	79
8.	Determinants of Income Smoothing Practices: Evidence from South East Asia Countries <i>Wan Adibah Wan Ismail</i> <i>Khairul Anuar Kamarudin</i> <i>Muhd Kamil Ibrahim</i>	103
9.	Exploring the Role of Trust in the Satisfaction-Loyalty Link : Empirical Evidence From a Follow-Up Study <i>Rosidah Musa</i> <i>Sarminah Samad</i>	121
10.	Motivating Reluctant Readers using the Bibliography Technique : A Case Study in UiTM Melaka <i>Josephine Lourdunathan</i> <i>Angeline Ranjethamoney Vijayarajoo</i>	135

Determinants of Income Smoothing Practices: Evidence from South East Asia Countries

*Wan Adibah Wan Ismail
Khairul Anuar Kamarudin
Muhd Kamil Ibrahim
Faculty of Accountancy,
Universiti Teknologi MARA (UiTM), Malaysia*

ABSTRACT

This paper presents the findings of a comparative study of income smoothing practices in Malaysia, Indonesia, Singapore, Philippines and Thailand. The objective of this study is to identify the factors associated with the incidence of income smoothing in these countries. The sample comprises 1,028 listed companies during the period 1999 to 2003. Five hypotheses, which relate income smoothing to company age, growth, size, leverage and earnings are tested in the study. Descriptive statistics indicate that income smoothing is practiced in South-east Asia countries. The results from t-tests of difference found significant difference in size, leverage, earnings and age of companies between companies that smooth their reported income and that do not. The logit analysis on pooled sample resulted that company size, earnings and age of companies are significantly associated with income smoothing practices. We then sub-sampled the companies by countries and found that different countries have different determinants of income smoothing practices. In Malaysia, earnings and age of companies are significant determinants whereas in Singapore, growth, size and leverage are more dominant factors. For Thailand, Indonesia and Philippines, earnings and size are significantly associated with income smoothing practices.

Introduction

Income smoothing, or an intentional act done by managers to hide fluctuations of income stream have been viewed as a logical and rational practice by many accounting researchers. This is due to the fact that managers are agents, who are responsible for the resources owned by the shareholders. As agents, the managers are not only responsible for the resources entrusted on them, but are also accountable to every single decision they make as well as the results of their actions. Because of this, it is logical for a manager to smooth a company's income over time, as a company with smooth income is seen as a company with a good performance.

Besides that, there are several other reasons why companies practice income smoothing. Hepworth (1953) proposed that managers tend to smooth income to reduce companies' overall tax liability. He also put forward that a smoothed income stream can support a stable dividend policy and thus increases investors' confidence. Moreover, income smoothing can enhance the relationship between managers and workers because a sharp increase in reported income may lead to demands for higher salaries. Finally, a smooth income stream can have a psychological effect on the economy in that cyclical upswing and downswing can be countered.

As certain accounting standards leave managers with choices, income smoothing becomes possible and achievable. According to Ronen and Shadan (1975), smoothing of income can be accomplished by shifting the timing of an event's recognition, where the managers can time transactions so that their effects on reported income tend to dampen its variation over time. Income smoothing can also be achieved through allocation of expenses (which are subject to managers discretion), such as depreciation and amortization. Besides that, classification of income and expenses (either above or below the line) also open possibilities for income smoothing practices.

Despite the accounting choices and discretion left to managers, not all companies choose to smooth their income. As shown by previous researches, there are certain factors that are found to be empirically associated with income smoothing. Smith (1976) and Kamin and Ronen (1978) provide evidence that income smoothing is associated with a company's ownership. Particularly, they proved that manager-controlled companies have a significantly more tendency to smooth income, compared to owner-controlled companies. On the other hand, researchers including Ronen and Sadan (1981) and Belkaoui and Picur (1984) found that income smoothing is associated with industries. Besides that, researchers also found a significant association between income smoothing and company size, the divergence of actual earnings from expectations, and the existence of bonus compensation plans (Moses, 1987), as well as companies profitability, nationality (Ashari, Koh, Tan and Wong,

1994) and cumulative abnormal returns (Michelson, Jordon-Wagner and Wootton, 2000).

As such, this research attempts to provide evidence that there are associations between factors including company size, profitability, age, growth and leverage with income smoothing practices of a sample of companies in South-east Asia countries.

Literature Review

Income smoothing has been a topic of interest by many researchers. Initially, the researchers would start with discussions and arguments as well as evidence on the existence of income smoothing activities. They then develop frameworks to distinguish between smoother and nonsmoothing companies, (Gordon, 1964; Imhoff, 1977 and Eckel, 1981).

Gordon (1964) suggested three general methods for identifying income smoothing behaviour: (1) directly ascertain from management by interview, questionnaires, or observation; (2) contact second parties such as CPA's; or (3) examine ex-post data. However, the researchers used the third method in determining the income smoothing practice. Imhoff (1977) suggested that normalized earnings could be a function of an independent variable. Imhoff selected sales, as the independent variable with an assumption that sales is not subject to smoothing. He regressed income and sales on time: $\text{Income} = \alpha + \beta (\text{time})$ and $\text{Sales} = \alpha + \beta (\text{time})$. He then defined variability as the size of R^2 for each regression. Imhoff (1977) determined the smoothing behaviour through following criteria: (1) smooth income stream and weak association between sales and income, or (2) a smooth income stream and variable sales stream. Eckel (1981) proposed that (1) income is a linear function of sales; (2) ratio of variable cost in dollar to sales remains constant over time; (3) fixed cost may remain constant or increase from period to period but it will not decrease and (4) gross sales can only be intentionally smoothed by real smoothing only not by artificial smoothing. As a result, the coefficient of variation method was developed based on the above assumption which determine smoothing when the coefficient of variation of sales is greater than the coefficient of variation of income.

Previous studies have investigated income smoothing instruments such as dividend income, changes in accounting policies, pension costs, extraordinary items, investment tax credit, depreciation and fixed charges, discretionary accounting decisions and many other possible income smoothing tools, (Gordon, Horwitz and Meyers, 1966; Dopuch and Drake, 1966; Archibald, 1967; Cushing, 1969; Dascher and Malcom, 1970; Barefield and Comiskey, 1972; Beidleman, 1973; Barnea, Ronen and Sadan, 1976 and Ronen and Sadan, 1975 and Brayshaw and Eldin, 1989).

Gordon, Horwitz and Meyers (1966) examined the relationship between the method of accounting for investment tax credits (income smoothing instrument) and the growth rates of earnings per share and the returns on the stockholders' equity (income smoothing objectives). Their results indicated a significant relationship between the two, suggesting the existence of income smoothing practices.

Later studies include Archibald (1967) on depreciation methods and Cushing (1969) on accounting changes. Dascher and Malcom (1970), Barnea, Ronen and Sadan (1975), Ronen and Sadan (1975) and Ibrahim et al (2004) studies on extraordinary items also reported income smoothing behaviour among sample companies. Beidleman (1973) provided evidence to show that incentive compensation, pension and retirement expenses, research and development costs, sales and advertising expenses were also used by companies to smooth income. Copeland (1968) and Ronen and Sadan (1975) also tested different smoothing instruments and found significant income smoothing behaviour. Ma (1988) concluded that banks used loan loss provisions and charge-offs to smooth income while Brayshaw and Eldin (1989) claimed that management used exchange differences to achieve the same objective. On the other hand, Dopuch and Drake (1966) investigated the amounts of capital gains/losses from the sale of investments and could not detect any significant income smoothing. Conclusions of no income smoothing were also reached by White (1970) in his study of discretionary accounting decisions and Copeland and Licastro (1968) in their study of accounting for unconsolidated subsidiaries. However, Barefield and Comiskey (1972) studied the accounting for unconsolidated subsidiaries and found some evidence of companies smoothing their income.

Apart from that, several researchers have come up with different arguments on determining the income smoothing objective. Copeland (1986) suggested net income as the ultimate aim of income smoothing. On the other hand, Imhoff (1981) possible measures of income smoothing include fully diluted EPS, net income, net income before extraordinary items, operating income and gross margin. Beattie et. al (1994) claimed that profit before tax as the income smoothing objective. In a more recent study conducted by Michelson, Jordon-Wagner and Wootton (2000), they assumed operating income after depreciation, pretax income, income before extraordinary items and net income as a smoothing objective. Although the previous researchers did not reach to a mutual agreement, basically all the researchers agreed that the smoothing objective is the profit above the line.

Hypotheses Development

Hypothesis 1

A number of previous studies found that companies' size had an effect on income smoothing practices. Moses (1987) reported that income smoothing was associated with company size. He concluded that smaller companies were likely to be subject to less public scrutiny than larger companies. This may be due to the effect of a large company's performance to the investors, tax authority, creditors, bankers, employees and the public at large. Moreover, large companies could possibly have larger fluctuations in earnings compared to small companies. Benston and Krasney (1978) stated that large fluctuation in earnings may attract the attention of regulators while Ronen and Sadan (1981) believed that large upward fluctuation in earnings may indicate a signal of monopolistic practices and large downward fluctuation may signal crisis and cause regulators to act. These arguments are supported by recent findings by Michelson, Jordan-Wagner and Wootton (2000), that smoother companies are larger in size than nonsmoothing companies. On the other hand, Albrecht and Richardson (1990) argued that since larger companies may receive more analyst scrutiny, they may have lower tendency to smooth income. In this study, company size is measured by total assets in natural logarithms. Thus, the first alternate hypothesis tested in the study is as follows:

H_{a1} : Income smoothing is associated with the size of companies

Hypothesis 2

Most of the previous researchers claimed that low profitability companies have greater propensity to smooth income. Archibald (1967) concluded that a high proportion of companies smoothed their income when their profitability was relatively low. The results were also supported by White (1970), when he proved that a company with declining profitability has more tendencies to smooth its income compared with other companies. In addition to that, Ashari et al. (1994) also found an association between income smoothing practices and company's profitability. Particularly, they found that the incidence of income smoothing is greater in less profitable companies in Singapore. Based on the result of previous studies, this research hypothesized that companies with lower profitability tend to smooth their income more than companies with higher profitability. We believe that fluctuations in downward income streams have a more severe impact on low profitability companies; hence, they have a stronger motivation to smooth income. This study used earnings per share (EPS) as a proxy to measure company profitability. Therefore the second alternate hypothesis is:

H_{a2} : Income smoothing is associated with the profitability of companies

Hypothesis 3

Logically, the companies that have a strong tendency to smooth their income are the ones that have fluctuations in their original income. Many believe that most of the companies that are young or newly incorporated are the ones that may possibly have greater fluctuations or variations in income. This is because they are not yet matured and have less experience in their operations. On the other hand, older companies that may not be involved in income smoothing, since they are already matured and have appropriate control over the industry and operations they are currently in, and thus lead to stable income stream. Therefore, we hypothesized that income smoothing is associated with a company's age, which is measured by the number of years they are incorporated. Thus, our third alternate hypothesis is:

H_{a3} : Income smoothing is associated with the age of companies

Hypothesis 4

A number of studies including Beidleman (1973), Lev and Kunitzky (1974) and Michelson et.al (1995) suggested that one reason for income smoothing is to reduce the actual or perceived risk of a company. Because of this, studies were carried out to investigate associations between companies' risks and income smoothing practices. To test the hypothesis of difference in riskiness between smoothing and non-smoothing companies, Michelson et. al (1995) examined the beta of companies in their sample. They found that the betas for companies that smooth income appear to be lower than the betas for non smoothing companies. This is consistent with the argument that income smoothing practice allows companies to reduce the actual or perceived risks. In this study, we introduce a new factor that may be associated with income smoothing practice, which is a company's leverage, which also indicates a company's level of risk. In this study, we expect that companies that practice income smoothing has a relatively lower leverage compared to companies that do not practice income smoothing. Thus, the fourth alternate hypothesis can be stated as follows:

H_{a4} : Income smoothing is associated with the leverage of companies

Hypothesis 5

Our last hypothesis is that income smoothing practices are associated with a company's growth. We believe that companies that have higher growth rate may have greater fluctuations income stream. Therefore, they may tend to smooth their income to show smoother income stream. This is because stockholders satisfaction does not only increase with the rate of growth in a

company but also the stability of its income. In this study, we measured growth by using the percentage of changes in sales. Specifically, the last alternate hypothesis is as follows:

H_{a_5} : Income smoothing is associated with the growth of companies

Research Design

Generally, this study was conducted on 1,028 companies from 5 South-east Asia countries comprises of Indonesia, Malaysia, Philippines, Singapore and Thailand. The period under study was from the year 1999 to 2003. This five-year period is used to minimize classification error. The financial data of these companies was extracted from the Data stream, provided by Thomson Financial. The full sample and the sub-samples by countries are described in Table 1.

Table 1: Sample

	Population		Sample (%)
		No	
Indonesia	323	151	46.7
Malaysia	916	380	41.5
Philippines	233	78	33.5
Singapore	536	207	38.6
Thailand	433	212	49.0
Total	2,441	1,028	42.1

According to the table, the sample size represents 42.1% of the total population of 4,441 companies. This is because only companies with complete set of data for five years are included in the research. Apart from that, this research excludes companies that were listed later than the year 1999 or delisted during the period 1999-2003. In order to ensure that the result is not affected by the outliers, extreme observations with absolute studentised residual greater than three were also excluded from the sample as suggested by Benartzi, Michaely and Thaler (1997)

Income Smoothing Descriptor

This research employed the coefficient of variation method developed by Eckel (1981) to determine the presence of income smoothing. Using this method, the coefficient of variations are used to measure the variability of sales and income This method was used in many previous studies to determine the presence of income smoothing, (Albrecht and Richardson, 1990; Ashari, Koh, Tan and Wong,

1994; Booth, Kallunki, and Martikainen, 1995; Michelson, Jordan-Wagner, and Wootton, 1995). According to Eckel (1981) income smoothing is present when

$$\frac{|CV\ INC|}{|CV\ SALES|} < 1.0$$

Where INC denotes one period change in income, SALES represents one period change in sales and CV is the coefficient of variation. For companies with a coefficient of variation of income per coefficient of variation of sales more than 1.0 were classified as nonsmoother. This method measures income smoothing by aggregating the effects of potential smoothing variables and considering them over time. This method is consistent with the idea that companies select accounting procedures, not independently, but based upon their overall expected effects on income, Zmijewski and Hagerman (1981). This implies that changes in income are the result of income smoothing practices.

Table 2: Smoothing Classification

	Smoother		Non Smoother		Total
	No	(%)	No	(%)	
Indonesia	24	15.9%	127	84.1%	151
Malaysia	52	13.7%	328	86.3%	380
Philippines	11	14.1%	67	85.9%	78
Singapore	45	21.7%	162	78.3%	207
Thailand	31	14.6%	181	85.4%	212
Total	163	15.9%	865	84.1%	1028

Table 2 shows the number of income smoothing and non smoothing companies. It also provides evidence on the existence of income smoothing practices in South-east Asia countries. Around 13% to 16% companies carry out income smoothing activities in the countries except for Singapore with 21.7% companies smoothing their reported income. This recent findings overwhelm the previous findings of Ashari et. al (1994) that Malaysian companies have greater propensity to smooth income compared to Singaporean companies.

Statistical Test

Several statistical methods are used to investigate the factors associated with income smoothing practices. Firstly, the descriptive statistics are used to

develop a profile of the sampled companies. Then, the univariate test is conducted to investigate any significant systematic differences between companies that smooth their reported income and companies that do not. Finally, we conducted logistics regression to investigate the factors associated with income smoothing practices.

Logistic analysis is employed in this study since it does not impose any distribution on the explanatory variable and it can directly provide the probability of an item (Field, 2000). In logistic regression, instead of predicting the value of a variable Y from a predictor variable X_1 or several predictor variables (X_s), we predict the probability of Y occurring given known values of X_1 (or X_s). In many instances probabilities are stated as odds. In general:

$$\text{Ln}[\text{odds}(Y|X_1, X_2, \dots, X_n)] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n \quad (1)$$

When applied to this research, the model is

$$\text{SMOOTHER} = \beta_0 + \beta_1 \text{AGE} + \beta_2 \text{GROWTH} + \beta_3 \text{SIZE} + \beta_4 \text{LEVERAGE} + \beta_5 \text{EARNINGS}$$

Multicollinearity Issue

This research also considers the multicollinearity issue between the independent variables. According to Gujarati (1995), the term multicollinearity is used where the variables (regressors) are intercorrelated (perfect or non-perfect). If multicollinearity is perfect, the regression coefficients of the X variables are indeterminate and their standard errors are infinite. If multicollinearity is less than perfect, the regression coefficients, although determinate, possess large standard errors (in relation to the coefficients themselves), which means that the coefficients cannot be estimated with great precision or accuracy.

Therefore, the presence of a severe multicollinearity problem could result in drawing misleading inferences from sample t-statistics. The simple correlation (based on the Pearson correlation) are presented in Table 3.

As illustrated in Table 3, the Pearson correlation between the independent variables are very low. The highest reported correlation value is 0.119, which refers to the correlation between size and leverage. No variable has a correlation more than 0.70 or -0.70 which can be considered as serious multicollinearity as claimed by Mason and Lind (1992). Apparently, the correlation coefficients can be considered as not serious to create problems of multicollinearity which can distort the robustness of the results from logistic analysis.

Table 3: Correlation Matrix

Variable	Statistics	Age	Growth	Size	Leverage	Earnings
Age	Pearson Correlation Sig. (2-tailed)	1.000				
Growth	Pearson Correlation Sig. (2-tailed)	0.055 (0.028)	1.000			
Size	Pearson Correlation Sig. (2-tailed)	0.240 (0.000)	0.015 (0.483)	1.000		
Leverage	Pearson Correlation Sig. (2-tailed)	0.075 (0.002)	-0.002 (0.933)	0.119 (0.000)	1.000	
Earnings	Pearson Correlation Sig. (2-tailed)	0.023 (0.359)	0.002 (0.927)	-0.105 (0.000)	-0.033 (0.118)	1.000

Empirical Result

The univariate results shown in Table 4 provide evidence of whether there are significant difference between the age, growth, size, leverage and earnings of smoother and non smoother companies.

Table 4: Comparison of Mean (Pooled Sample)

Variables	Status	Mean	Std. Deviation	Mean Difference	t-value
Age	Smoother	27.088	19.494	-3.755	-1.868**
	Non Smoother	30.844	17.751		
Growth	Smoother	0.583	3.765	0.397	1.152
	Non Smoother	0.186	0.917		
Size	Smoother	2.395	0.641	0.247	3.529 ***
	Non Smoother	2.148	0.735		
Leverage	Smoother	22.017	18.643	-16.647	-2.615 ***
	Non Smoother	38.664	190.553		
Earnings	Smoother	0.096	0.169	0.070	2.801 ***
	Non Smoother	0.025	0.269		

Notes: The table indicates significance at 1% (***) , 5%(**) and 10% (*) levels.

Based on the above table, it is found that there are significant differences in size, leverage, earnings and age of companies between companies that

smoothed their reported income and that do not. Companies' size, leverage and earnings are significantly different at 1% significant level, whereas companies' age at 5% significant level.

Pooled Results

Table 5 reports results from pooled logistic regression analysis. The pooled regression has an accuracy rate of 87.96%, which implies that the determinants successfully capture a sizeable proportion of income smoothing practices in South-east Asia countries.

Table 5: Pooled Result (EBIT)

	B	Wald
Constant	-2.506	30.573***
Age	-0.016	4.648**
Growth	0.142	2.276
Size	0.513	9.201***
Leverage	-0.012	4.918**
Earnings	1.079	3.035*
Cox & Snell R Square		0.082
Accuracy (%)		87.96

Notes: The table indicates significance at 1% (***), 5%(**) and 10% (*) levels.

The table illustrated that company size is positively related with income smoothing practices at 1% significant level. It proves that larger companies have more tendencies to smooth their income. This may be due to the argument that large companies are subject to greater public attention, and thus may lead the companies to smooth their income. In addition to that, larger companies could possibly have larger fluctuations in earnings compared to smaller companies. This result is consistent with previous studies done by Moses (1987), Benston and Krasney (1978), Ronen and Sadan (1981), and Michelson et al (2000).

On the other hand, companies with higher income are found to be positively related with income smoothing practices. This is contradictory to previous researches done in other countries which claimed that companies with lower profit have greater propensity to smooth income. However, this may be because the public is more concerned with companies that produce higher income. Therefore, companies with higher income have greater tendencies to practice income smoothing.

The result of the logistic regression also shows that the age of companies and leverage are found to be negatively associated with income smoothing practices at 5% significant level. As expected, companies that are young or newly incorporated as well as companies that have lower leverage have greater tendencies to smooth income.

Table 6 shows the result from logistic regression, using sub-samples which were divided based on countries. It is found that in Malaysia, only the age and earnings of companies are significantly associated with income smoothing practices. In this country, the age of companies is negatively associated with income smoothing practices at 10% significant level. Consistent with the overall findings, this implies that companies that are young or newly incorporated have more tendencies to smooth their income. On the other hand, companies' earnings are found to be positively associated with income smoothing practices at 5% significant level. This result is also in line with the overall findings, which provide evidence that companies with higher income have greater tendencies to smooth their income.

Table 6: By Countries (EBIT)

	Malaysia			Singapore			Indonesia, Thailand & Philippines		
	B	Wald	Sig.	B	Wald	Sig.	B	Wald	Sig.
Constant	-2.104	9.759	***	-2.772	10.111	***	-3.078	9.644	***
AGE	-0.018	2.824	*	-0.019	1.290		-0.019	1.722	
GROWTH	0.117	1.990		0.495	4.504	**	-0.221	0.130	
SIZE	0.288	1.396		0.836	6.597	***	0.702	3.209	*
LEVERAGE	-0.008	1.101		-0.033	5.047	**	-0.011	0.870	
EARNINGS	2.306	4.018	**	0.034	0.003		4.416	7.322	***
Nagelkerke R Square		0.074			0.155			0.200	
Accuracy (%)		88.312			87.065			89.542	

Notes: The table indicates significance at 1% (***), 5%(**) and 10% (*) levels.
 AGE: Number of Years Since Incorporation; GROWTH: Changes in Sales in Percentage;
 SIZE: Total Asset in Natural Logarithm; LEVERAGE: Debt Equity Ratio; EARNINGS: Earning Per Share

For Singaporean companies, growth, size and leverage are found to be significantly associated with income smoothing practices. The companies' growth is found to be positively associated with income smoothing practices at 5% significant level. This result supports the argument that companies with higher growth rate may have greater fluctuations income stream, and thus have greater tendencies to smooth their income. Consistent with the result in Table 5, Table 6 also shows that in Singapore, companies' sizes are found to be positively related with income smoothing practices, whereas companies leverage are negatively associated with income smoothing practices.

We found that the number of income smoothing companies is small in Indonesia, Philippines and Thailand, which are 24, 11 and 31 companies respectively. Due to this reason, we run the logistic regression for the countries together. The results for these countries show that only companies' sizes and earnings are significantly associated with income smoothing practices. Similar to the scenario found in Malaysia, companies' earnings are found to be positively associated with income smoothing practices which implies that companies with higher earnings have more tendencies to smooth their income. Another factor that is found to be positively associated with income smoothing in Indonesia, Thailand and Philippines is companies' size. As found in Singapore, larger companies are proved to have higher tendencies to smooth income compared to smaller companies.

Sensitivity Analysis

Table 7 shows the results from the sensitivity analysis done on the pooled sample. Using earnings before interest, tax and depreciation as the income smoothing objective, we found that companies' age, size and leverage are significantly associated with income smoothing practices at 1% level. These results support the earlier findings, except for earnings.

Table 7: Pooled (EBITD)

	Pooled Sample		
	B	Wald	
Constant	-1.785	19.440	***
Age	-0.024	10.950	***
Growth	0.164	2.005	
Size	0.476	9.374	***
Leverage	-0.013	6.981	***
Earnings	0.677	1.731	
Cox & Snell R Square		0.048669	
Accuracy (%)		83.47458	

Notes: The table indicates significance at 1% (***) level

Using sub-samples divided based on countries and earnings before interest, tax and depreciation as smoothing objective, it is found that in Malaysian companies, age, leverage and earnings are significantly associated with income smoothing practices. As posited, age and leverage are negatively associated with income smoothing, while leverage is found to be positively associated with income smoothing. On the other hand, in Singapore, it is found that companies' age is negatively associated with income smoothing, and companies'

growth and size is positively associated with income smoothing practices. In Indonesia, Thailand and Philippines, age and earnings are the only factors that are significantly associated with income smoothing practices.

Table 8: By Countries (EBITD)

	Malaysia			Singapore			Indonesia, Thailand & Philippines		
	B	Wald	Sig.	B	Wald	Sig.	B	Wald	Sig
Constant	-1.275	4.268	**	-2.546	11.641	***	-1.796	3.805	*
AGE	-0.023	4.749	**	-0.025	2.735	*	-0.034	4.420	**
GROWTH	0.177	0.974		0.422	3.536	*	-0.217	0.177	
SIZE	0.173	0.563		0.933	9.858	***	0.464	1.534	
LEVERAGE	-0.015	3.911	**	-0.016	2.143		-0.010	1.015	
EARNINGS	2.179	3.546	*	-0.262	0.169		5.621	5.968	**
Nagelkerke R Square	0.043285			0.084748			0.115452		
Accuracy (%)	85.86957			80			85.51724		

Notes: The table indicates significance at 1% (***), 5%(**) and 10% (*) levels.

AGE: Number of Years Since Incorporation; GROWTH: Changes in Sales in Percentage; SIZE: Total Asset in Natural Logarithm; LEVERAGE: Debt Equity Ratio; EARNINGS: Earning Per Share

Summary and Conclusion

Generally, this study found some significant associations between income smoothing practices in the South-east Asia countries (which includes Malaysia, Singapore, Indonesia, Thailand and Philippines) and factors such as companies' age, growth, size, leverage and earnings. The results show that only certain factors are associated with income smoothing practice in each of the countries. The logit regression conducted on pooled sample give some evidence that company size, earnings and age of companies are significantly associated with income smoothing practices. On the other hand, results from the logit analysis conducted on the sub-sample show that in Malaysia, the earnings and age of companies are significant determinants whereas in Singapore, growth, size and leverage are more dominant factors. For Thailand, Indonesia and Philippines, the earnings and size are significantly associated with income smoothing practices. In conclusion, this study provides empirical evidence that in South-east Asia, different countries have different determinants of income smoothing practices.

References

- Albrecht, W.D. and Richardson, F.M. (1990). Income smoothing by economy sector. *Journal of Business Finance and Accounting*, 17 (5), 713-730.
- Archibald, T.R. (1967). The return to straight-line depreciation: An analysis of a change in accounting method, *Journal of Accounting Research* (Supplement), 164-180.
- Ashari, N., Koh, H.C., Tan, S.L. and Wong, W.H. (1994). Factors affecting income smoothing among listed companies in Singapore. *Accounting and Business Research*, 24 (96), 291-301.
- Barefield, R.M. and Comiskey, E.E. (1972). The smoothing hypothesis: an alternative test. *Accounting Review*, 47 (2), 291-298.
- Barnea, A., Ronen, J. and Sadan, S. (1976). Classificatory smoothing of income with extraordinary items. *The Accounting Review*, 56 (1), 110-122.
- Beattie, V., Brown, S., Ewers, D., John, B., Manson, S., Thomas, D. and Turner, M. (1994). Extraordinary items and income smoothing: a positive accounting approach. *Journal of Business Finance and Accounting*, 21 (6), 791-811.
- Beidleman, C.R. (1973). Income smoothing: the role of management. *Accounting Review*, 48 (4), 653-667.
- Belkaoui, A. and Picur, R.D. (1984). Smoothing of income numbers: some empirical evidence on systematic differences between core and periphery industrial sector. *Journal of Business Finance and Accounting*, 11 (4), 527-545.
- Benartzi, S., Michaely, R. and Thaler, R. (1997). Do changes in dividends signal the future or the past. *Journal of Finance*, 52 (3), 1007-1034.
- Benston, G.J. and Krasney, M.A. (1978). DAAM: The demand for alternative accounting measurements. *Journal of Accounting Research*, 16, 1-30.
- Booth, G., Kallunki, J. and Martikainen, T. (1996). Post-announcement drift and income smoothing: Finnish evidence. *Journal of Business Finance and Accounting*, 23 (8), 1197-1211.
- Brayshaw, R.E. and Eldin, A.E.K. (1989). Smoothing hypothesis and the role of exchange differences, *Journal of Business Finance and Accounting*, 16 (5), 621-633.

- Copeland, R.M. (1968). Income smoothing. *Journal of Accounting Research*, 6 (3), 101-116.
- Copeland, R.M. and Licastro, R.D. (1968). A note on income smoothing. *Accounting Review*, 43 (3), 540-545.
- Cushing, B.E. (1969). An empirical study of changes in accounting policy. *Journal of Accounting Research*, 7 (2), 196-203.
- Dascher, P.E. and Malcom, R.E. (1970). A note on income smoothing in the chemical industry. *Journal of Accounting Research*, 8 (2), 253-259.
- Dopuch, N. and Drake, D.F. (1966). The effect of alternative accounting rules for non-subsidiary investments. *Journal of Accounting Research*, 4 (3), 192-219.
- Eckel, N. (1981). The income smoothing hypothesis revisited. *Abacus*, 17 (1), 28-40.
- Gordon, M. J., Horwitz, B. and Meyers, P. (1966). Accounting measurements and normal growth of the firm. *Research in Accounting Measurement, American Accounting Association*, 221-231.
- Gordon, M. J. (1964). Postulates, principles and research in accounting. *The Accounting Review*, 39 (2), 251-263.
- Gujarati, D.N. (1995). *Basic Econometrics*, Third Edition, McGraw-Hill Inc, New York.
- Hepworth, S.R. (1953). Smoothing periodic income. *Accounting Review*, 28 (1), 32-39.
- Ibrahim, M.K., Mohamed Zain, M. and Kamarudin, K. A. (2004). Financial Reporting In Malaysia: Some Empirical Evidence, *Utusan Publications*, 21-37.
- Imhoff, E.A. (1981). Income smoothing: an analysis of critical issues. *Quarterly Review of Economics and Business*, 21 (3), 23-42.
- Imhoff, E.A. Jr. (1977). Income Smoothing: A Case for Doubt. *Accounting Journal* (Spring), 85-100.

- Kamin, J.Y. and Ronen, J. (1978). Smoothing of income numbers: some empirical evidence of systematic differences among management-controlled and owner-controlled firms. *Accounting, Organization and Society*, 3 (2), 141-157.
- Lev, B. and Kunitzky, S. (1974, April). On the association between smoothing measures and the risk of common stock. *The Accounting Review*, 259-270
- Ma, C.K. (1988). Loan loss reserves and income smoothing: the experience in the US banking industry. *Journal of Business Finance & Accounting*, 15 (4), 487-497.
- Mason, R.D. and Lind, D. (1992). *Basic Statistics for Business and Economics*, McGraw-Hill Higher Education.
- Michelson, S.E., Jordan-Wagner, J. and Wootton, C.W. (1995). A Market Based Analysis of Income Smoothing. *Journal of Business Finance & Accounting*, 22 (8), 1179-1193.
- Michelson, S.E., Jordan-Wagner, J. and Wootton, C.W. (2000). The relationship between the smoothing of reported income and risk-adjusted returns. *Journal of Economics and Finance*, 24 (2), 141-159.
- Moses, O.D. (1987). Income smoothing and incentives: empirical tests using accounting changes. *The Accounting Review*, 62 (2), 358-377.
- Ronen, J. and Sadan, S. (1975). Classificatory smoothing: alternative income models. *Journal of Accounting Research*, 13 (1), 133-149.
- Ronen, J. and Sadan, S. (1981). *Smoothing Income Numbers, Objectives, Means and Implications*, Reading, MA, Addison Wesley.
- Smith, E.D. (1976). Effects of separation of ownership from control on accounting policy decisions, *Accounting Review*, 51 (4), 707-723.
- White, G. E. (1970). Discretionary accounting decisions and income normalization. *Journal of Accounting Research*, 8 (2), 260-273.
- Zmijewski, M.E. and Hagerman, R.L. (1981). An income strategy approach to the positive theory of accounting standard setting/choice. *Journal of Accounting and Economics*, 3 (2), 129-149.