

Marketing intensity and persistence of firm performance: empirical evidence from Indonesia

Persistence
of firm
performance

1109

Dinesh Jaisinghani

Fortune Institute of International Business, New Delhi, India

Harwinder Kaur

Mittal School of Business, Lovely Professional University, Phagwara, India

Jatin Goyal

University School of Applied Management, Punjabi University, Patiala, India, and

Mahesh Joshi

School of Accounting, RMIT University, Melbourne, Australia

Received 22 February 2019
Revised 5 July 2019
14 August 2019
Accepted 27 September 2019

Abstract

Purpose – The purpose of this paper is to examine the degree of persistence of firm performance for publicly listed firms in Indonesia. The study also explores the impact of marketing expenditure on firm's performance.

Design/methodology/approach – The data comprise 165 listed firms operating in Indonesia over the period 2007–2016. Dynamic panel regression estimations using Arellano and Bond (1991) and Blundell and Bond (1998) techniques have been deployed to generate the results.

Findings – The findings show the existence of positive persistence and sub-optimal level of competition in the performance of Indonesian firms. The results highlight that marketing intensity has a positive and significant impact on firm performance. The positive persistence hints at creation of substantial entry and exit barriers by the Indonesian firms and also indicate that Indonesian firms are able to create behavioral inertia among their consumers by properly directing their marketing efforts.

Practical implications – There is a need on the part of management to strengthen the short-term profit capabilities to nurture long-term benefits of profit maximization. On the regulators part, the authorities should frame the policies to foster long-run competition.

Originality/value – The current study contributes to the sparse literature on persistence of firm performance in the context of emerging economies like Indonesia. This is the first study on persistence of firm performance for publicly listed firms in Indonesia.

Keywords Indonesia, Emerging markets, Dynamic panel, Profit persistence, Marketing intensity

Paper type Research paper

1. Introduction

Performance of firms is an important research area for both advanced and emerging markets (Anderson and Reeb, 2003; Saeidi *et al.*, 2015; Saini and Singhania, 2018). Many studies have investigated varied aspects of firm performance including those related to companies' financial performance and organizational performance, employees' performance and performance of different business units (Teeratansirikool *et al.*, 2013; Lins *et al.*, 2017). Moreover, various decisions of different stakeholders are influenced by the performance of firms in relation to some of these facets (Riahi-Belkaoui, 2003; Mano, 2010). The complexity surrounding the study of firm performance is magnified by the existence of multiple benchmarks of firm performance. These benchmarks may pertain to accounting-based standards, market-based standards and perception-based standards (Delaney and Huselid, 1996; Morgan *et al.*, 2009; Susskind *et al.*, 2018). The existing studies on the topic generally posit that firm performance is an outcome of the complex interplay between economy-wide and company-wide variables. However, most of the empirical evidence supporting the theoretical foundation of these studies pertains to advanced markets. Thus, there is significant scope to support or counter the existing theories and literature based on evidence from emerging markets.



International Journal of
Productivity and Performance
Management
Vol. 69 No. 6, 2020
pp. 1109-1127
© Emerald Publishing Limited
1741-0401
DOI 10.1108/IJPPM-02-2019-0072

The majority of economic theories concerning firm performance are based on the underlying assumption that all organizations aim at achieving a long-term equilibrium (Merton, 1981; Admati and Ross, 1985). However, firm-specific and industry-specific factors can cause organizations to diverge from this equilibrium. This can cause persistence in superior or inferior performance over an extended period. The persistence of firm performance, an important indicator of a firm's ability to constantly beat competitors and of the power to generate abnormal returns, was formally introduced by Mueller (1977). Since the work of Mueller (1977), there have been various studies that have analyzed the persistence of firm performance for different economies and industries (Gschwandtner, 2003; Pervan *et al.*, 2015).

There is no unanimous agreement in terms of the nature and degree of persistence in firm performance across different markets. For instance, certain studies contend that technological advancements and creation of patented knowledge enable firms from advanced markets to create a higher degree of persistence in their performance (Haned *et al.*, 2014). However, others argue that a complex socio-economic setup and prevalence of personal ties cause persistence to be higher in the case of firms in emerging markets (Goddard *et al.*, 2011). The inherent debate on the nature and degree of persistence in firm performance across developed and emerging markets motivates the undertaking of the present work. The existing theory on persistence of performance proposes that firms from emerging markets are characterized by low levels of competition. Therefore, there should be more persistence in performance for firms belonging to emerging markets (Yurtoglu, 2004; Chari and David, 2012). The empirical evidence, however, supports the view that the degree of competition in emerging markets is as high as that in developed markets (Glen *et al.*, 2001; Majid *et al.*, 2007).

In the literature on firm performance, it is generally argued that investments made in different marketing activities have a leading impact on firm performance (Webster, 1995; O'Sullivan *et al.*, 2009; Jaisinghani and Kanjilal, 2019). Many authors have argued that sustained investments in marketing efforts lead to enhanced performance in the long run (Kotabe *et al.*, 2002; Morgan *et al.*, 2009; Kamboj and Rahman, 2015). It is also posited that marketing efforts help firms in gaining a larger market share, especially in highly competitive industries (Bowman and Gatignon, 1996; Feng *et al.*, 2015; Becherer and Helms, 2016). Thus, there is general agreement among researchers that marketing efforts have a positive impact on firm performance. However, it is important to check whether investments in marketing efforts also have positive impact on persistence of superior performance. This knowledge can be highly relevant for firms operating in emerging markets that are continuously exposed to severe resource constraints (Sok *et al.*, 2016).

The lack of a systematic analysis of the interrelationship between marketing intensity and persistence of firm performance in the context of emerging markets necessitates the undertaking of the present study. Furthermore, the lack of research on performance persistence in the context of emerging economies is another motivating factor for initiating this study. Considering this research gap, the present study analyses the nature and degree of persistence in firm performance for Indonesia. The paper aims to answer the following research questions:

- RQ1. What is the level of persistence in firm performance for the Indonesian firms, and which factors account for the observed differences in performance persistence?
- RQ2. Is performance persistence of the Indonesian firms impacted by increased spending on marketing activities?

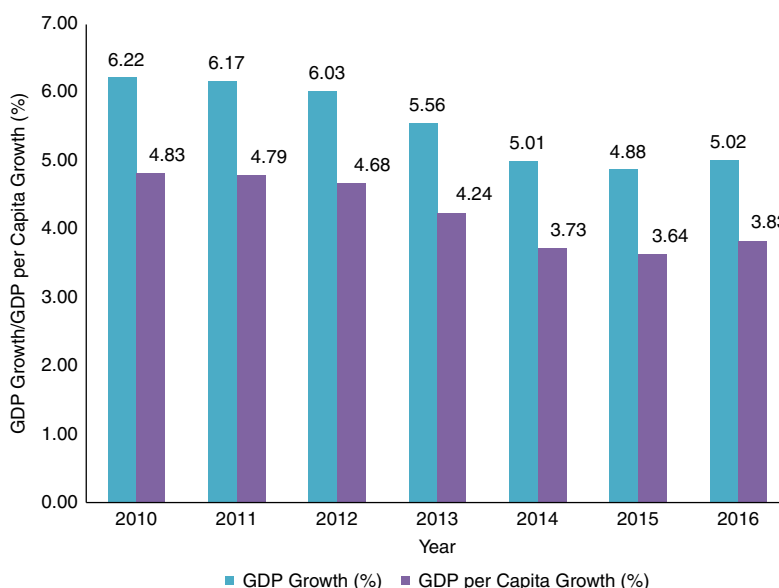
The study makes several contributions to the existing body of knowledge on performance persistence. First, to the best of our knowledge, this is the first study on persistence of firm performance of Indonesian firms. Second, the study deploys two advanced dynamic panel methods, the techniques of Arellano and Bond (1991) and Blundell and Bond (1998), to

estimate the degree of persistence in firm performance. Moreover, the study considers firms from a host of industries. We consider that use of this rigorous methodology shall make useful contributions to the “performance-persistence” literature.

The rest of the paper is organized as follows. Section 2 presents the overview of the Indonesian economy. The theoretical framework and literature review are presented in Section 3. The data and research methodology are described in Section 4. Results are reported in Section 5. The final section concludes the study.

2. Overview of the Indonesian economy

Indonesia is one of the prominent emerging economies of the Asia-Pacific region. The country plays a leading role in the trading belt of the East-Asian region and is also a member of the G-20 nations[1]. Indonesian economy has expanded strongly over the last three decades with 7 percent growth rate during the period 1968 to 1997. However, the growth rate dropped sharply to 5.3 percent due to the Asian financial crisis of 1997–1998 (Hayashi, 2005). Indonesia is currently ranked as the 10th largest economy in the world in terms of purchasing power parity[2]. Indonesia has undergone a process of industrialization and urbanization over the past 50 years. The share of manufacturing in total GDP increased from 8 to 27 percent, while that of agriculture fell from 51 to 16 percent over the time period 1967 to 2009 (Elias and Noone, 2011). Figure 1 reports the annual growth rate of GDP and per capita GDP for the period 2010 to 2016. The figure clearly highlights that Indonesia witnessed a steady fall in the growth rates of GDP and per capita GDP over the reported period. However, the country witnessed a slight rise in the growth rates for the year 2016. The Indonesian economy consists of well diversified industries in all the major segments including agriculture, manufacturing and services.



Source: The data for the table has been collected from World Development Indicators, published by The World Bank, available online at <https://data.worldbank.org/country/indonesia?view=chart>

Figure 1.
GDP growth rate –
Indonesia

Figure 2 highlights the contribution of the industrial sector to the GDP and the annual growth rate of the industrial sector over the period 2010 to 2016. The sector contributes more than 40 percent to the total GDP of the country. The industry value addition, however, has been falling and stands at 4 percent for the year 2016. The key industries in Indonesia include textiles, pharmaceuticals, processed food production, mining and construction materials. Indonesia's textile manufacturing industry is one of the world's largest textile industries with a growth rate of 3.65 percent in 2017[3]. Indonesia has the largest pharmaceutical manufacturing industry among all the ASEAN countries[4]. Indonesia also has a well-developed food processing industry. The country is the largest producer of palm oil and a leading global producer of cocoa, rubber and coffee[5].

Figure 3 highlights the contribution of the services sector to the overall GDP and the annual growth rate of the services sector over the period 2010 to 2016. The figure clearly shows that the role of services sector in the overall Indonesian economy is continuously increasing. Services accounted for more than 45 percent of the total GDP for the year 2016. In addition, the services sector witnessed a growth rate of more than 6 percent for the period 2010 to 2016. The services sector in Indonesia includes major industries such as transportation and logistics, tourism and healthcare. The transportation industry in Indonesia is largely state owned and contributes around 5.4 percent to the country's GDP. Besides this, water transportation generated 5.7 percent of the total transportation sector's gross value added in 2017, as compared to 45 percent for road transport and 30 percent for air transport[6]. Tourism sector is a major component of the Indonesian services sector, contributing more than 4 percent to the country's GDP[7].

Although the Indonesian economy is based on free market principles, there are certain noteworthy interventions and constraints. A large informal sector, a high level of protectionist policies, and direct and indirect subsidies, are the key sources of government intervention[8]. Although anti-monopoly measures in Indonesia are well in place, their effectiveness is questionable due to a lack of adequate enforcement mechanisms. The state does not grant official monopolies to entrepreneurs, as was the case earlier, but the concentration in many business sectors is still high. In the World Competitiveness Report-2017, for the category of

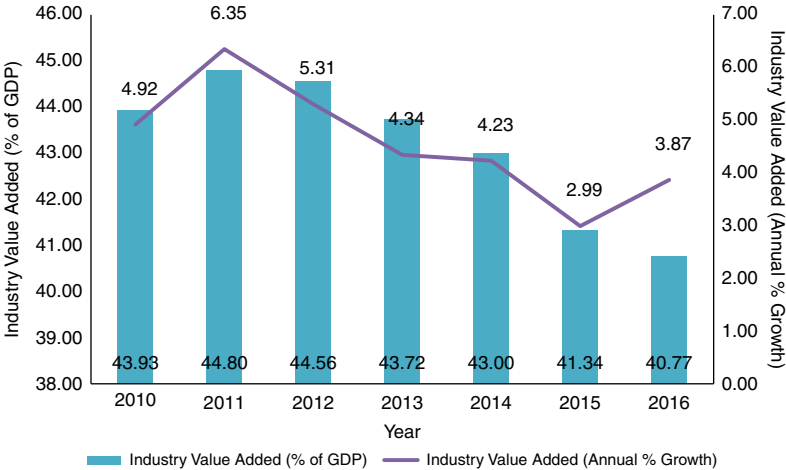
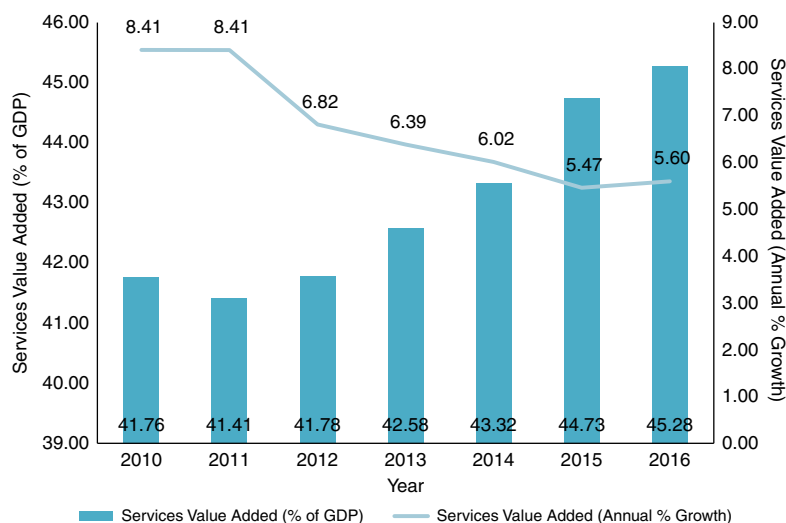


Figure 2.
Manufacturing growth
rate – Indonesia

Note: The data for the table has been collected from World Development Indicators, published by The World Bank, available online at <https://data.worldbank.org/country/indonesia?view=chart>



Note: The data for the table has been collected from World Development Indicators, published by The World Bank, available online at <https://data.worldbank.org/country/indonesia?view=chart>

Figure 3.
Services growth
rate – Indonesia

“effectiveness of anti-monopoly policies”, Indonesia dropped from 37th rank in 2015 to 51st rank in 2017[9]. To boost economic growth, the government of Indonesia has undertaken several crucial steps. For instance, the government introduced 16 economic policy packages in 2015. Similarly, the country liberalized FDI regulations in various segments such as food processing and consumer goods[10]. Thus, the authorities in Indonesia are reviving economic policies in different sectors and industries. These efforts should lead to increased competition, and thereby should eliminate persistence in firms’ performance.

3. Theoretical framework and literature review

The foundation of the present study lies in the competitive environment theory which states that competition drives away any abnormal profits in the long run (Cable and Mueller, 2008). The proponents of this theory argue that no firm can obtain “above-average” profit in the long run. This is because any form of abnormal or above-average profit will attract heavy competition. This increased competition will create pressure on both products and market factors, thereby eliminating any abnormal profits (Goddard and Wilson, 1999). However, many empirical studies have found evidence that counters the proposition of competitive environment theory (Jacobsen, 1988; Gschwandtner, 2005). The firms compete against one another by introducing innovations and imitating innovations of other firms (Schumpeter, 1934).

Many researchers also contend that, with a series of innovations, the early entrants get “first-mover advantages” and thereby earn abnormal profits (Huang, 2008). Furthermore, the profits earned in one period inherently provide the resources to maintain profits in future (Mueller, 1977). Studies have already taken into account various drivers of persistence such as reputation (Roberts and Dowling, 2002), intangible resources (Villalonga, 2004), alliances (Lazzarini *et al.*, 2013), concentration of industry (Gschwandtner and Cuaresma, 2013) and business group affiliation (Chacar and Vissa, 2005). It is generally contended that investments made in marketing have a leading impact on profitability of firms (Kotabe *et al.*, 2002; Morgan *et al.*, 2009; Bai and Chang, 2015). Therefore, it is vital to analyze the impact of

marketing intensity on profit persistence, especially in the context of emerging economies. This is because the overall institutional setup of emerging economies is significantly different to that of advanced economies (Khanna and Palepu, 1997; Edwards, 2001). The following sub-sections present a review of the major studies pertaining to profit persistence and the role of marketing intensity in firm performance.

3.1 *Persistence of firm performance*

There has been substantial interest amongst researchers in analyzing the persistence of firm performance (Mueller, 1977; Amidu and Harvey, 2016). Several studies have considered different variables to measure firm performance. These variables include return on assets (ROA), return on sales (ROS), return on equity (ROE), Tobin's Q, market to book value and enterprise value addition (Villalonga, 2004; Jusoh *et al.*, 2008; Jaisinghani, 2017). Most empirical studies have analyzed persistence of firm performance by deploying one or more such measures (Yurtoglu, 2004; Amidu and Harvey, 2016).

In terms of earlier empirical works, Mueller (1977) analyzes the persistence of firm performance for the US companies. The author deployed a sample of 472 firms for a long period, of 24 years. The results reveal significant and positive persistence in firm performance for the sample companies. Extending the research in the area, Mueller (1990) examines the dynamics of firm performance for seven developed economies over the period of 1960s to 1980s. The results show a high degree of persistence for all the countries included in sample. Similarly, Gschwandtner (2003) analyzes the persistence of firm performance for 187 surviving companies in the USA over the period 1950 to 1999. The author finds that the long-run projected profit rates and speed of adjustment are significantly different from zero. In addition, Eklund and Wiberg (2008) explore the linkages between investments in R&D and persistence in firm performance. The authors find that R&D has a significant impact on performance persistence.

There have been a few studies on persistence of firm performance in the context of emerging economies (Glen *et al.*, 2003; Chacar and Vissa, 2005; Jaisinghani, 2017). Studies from emerging markets have looked into alternative explanations for persistence of firm performance in these economies. These alternative explanations include factors such as affiliation to business groups (Chacar and Vissa, 2005), and development of managerial and political ties (Li *et al.*, 2008). Yurtoglu (2004) analyzes the persistence in firm performance for a sample of 172 companies operating in Turkey over the period 1985 to 1998. The study concludes that the intensity of competition in Turkey is no less than that in developed countries. Similarly, Jaisinghani (2017) analyzes the persistence of firm performance for listed firms in South Africa. The author finds that there is positive persistence in the performance of South African firms. However, the degree of performance persistence was quite low as compared to that of developed economies. Thus, the overall literature supports lower persistence in emerging markets as compared to that in advanced markets.

3.2 *Marketing intensity and firm performance*

The increased level of competition in business has led to a greater need for analysis of the role and the effectiveness of marketing efforts in determining firm performance. Although marketing efforts have historically been related to sales, a recent body of research has broadened the investigation to include financial accountability in marketing (Lovett and MacDonald, 2005). The literature has shown that well planned marketing strategies help firms to create an edge and achieve competitive advantage (Kerin *et al.*, 1990). Marketing competence reflects a firm's ability to differentiate its products and services from those of competitors. Various researchers have related the marketing actions to firm performance, and argue that expenditure on marketing efforts has a significant bearing on the performance of firms (Kotabe *et al.*, 2002; Bai and Chang, 2015; Kamboj and Rahman, 2015;

Jaisinghani and Kanjilal, 2019). Moreover, marketing efforts play an important role in creating and sustaining shareholder value and play an equally significant role in investment decisions (Srivastava *et al.*, 1998; Dawar, 2014). A firm that spends money on advertising and promoting its products can increase sales by expanding the sales of the product category and by getting customers to switch their brands (Kotabe *et al.*, 2002). Marketing activities also allow a firm to create entry barriers for its competitors (Aaker and Adler, 1984). However, there is no universal consensus on the impact of marketing on firm performance. Several studies also show that marketing investments diminish overall firm performance (Himmelberg *et al.*, 1999; Atuahene-Gima, 2005). This discrepancy, regarding the marketing and performance relationship, can be largely attributed to the context of the study and the nature of technique deployed (O'Sullivan and Abela, 2007). Besides this, the relationship between marketing and firm performance can be more complex in the case of emerging markets. This is because emerging markets do not have highly developed institutions (Narayanan and Fahey, 2005; Gaur *et al.*, 2014). Thus, the interplay between the marketing efforts and the ability of firms to overcome the role of missing institutions can have a significant impact on firm performance.

4. Data and methodology

4.1 Data source and filters

The data for the present study consist of observations on firm-specific variables for the publicly listed firms in Indonesia. The source of data collection is the Emerging Markets Information Services (EMIS) database. The time frame deployed is from 2007 to 2016. The initial data were obtained for 315 listed companies in Indonesia. Financial and utilities sector firms have been excluded from the sample selection as they have different financial structures and different disclosure requirements. In addition, firms having missing data have also been deleted. The filtering process resulted into a final sample set of 165 listed firms yielding a balanced panel of 1,650 firm-year observations.

4.2 Variables

4.2.1 Dependent variable. In the present study, the key dependent variable is performance of firms. ROS is often used as a measure of firms' profitability. In the present study, ROS has been defined as profit before depreciation expenses, interest paid, taxes and amortization, divided by total sales. Similar measures of profitability have been used in the past studies (Contractor *et al.*, 2003; Dyreng and Markle, 2016).

4.2.2 Explanatory and control variables. Profit persistence and marketing intensity are considered as the main explanatory variables in the present study. The degree of profit persistence is measured by the coefficient of the lagged financial performance of the firms which has been included as an explanatory variable. This has been achieved by considering the lag values of the dependent variable (ROS) among the regressor in the dynamic panel regression model. Marketing Intensity (MKTG) is operationalized as total marketing and sales expenditure scaled by total sales. Besides this, a few firm-specific factors have been introduced to control for their impact on firm performance. These variables comprise: capital structure (CS) operationalized as long-term borrowings scaled by total assets; firm size (SIZE) measured as the natural log of total assets; tangible assets (TANG) defined as the total tangible assets divided by total assets; and long-term investments (INVEST) operationalized as long-term investments in financial assets divided by total assets.

4.3 Descriptive statistics and correlation[11]

4.3.1 Descriptive statistics. Table I presents the descriptive statistics for the entire sample. The table shows that the mean (median) return on sales for the Indonesian firms is around

Table I.
Descriptive statistics

	Mean	Median	Maximum	Minimum
ROS	0.1613	0.1290	0.9295	-0.6632
MKTG	0.1715	0.1255	0.9478	0.0046
CS	0.1037	0.0427	0.8244	0.0000
INVEST	0.0590	0.0070	0.9456	0.0000
SIZE	20.9968	20.8855	26.1872	16.9589
TANG	0.3427	0.3164	0.9261	0.0001

Notes: The table presents the descriptive statistics for the entire sample. The variables included are Return on Sales (ROS), Marketing Intensity (MKTG), Capital Structure (CS), Long-term Investments (INVEST), Firms' Size (SIZE) and Assets' Tangibility (TANG)

16 percent (13 percent). Similarly, the mean (median) spending on marketing expenses is around 17.2 percent (12.6 percent) of the sales. This shows that Indonesian firms, on an average, spend a little less than one-fifth of their total sales revenues on marketing and selling efforts. Table I also highlights that Indonesian firms vary greatly in terms of factors such as size, investments and tangibility of assets. Thus, the sample is considered as a good representative of the overall Indonesian economy.

4.4 Estimation methodology

The relationship being studied in the present research is described with the help of the following equation:

$$ROS_{it} = \lambda ROS_{it-1} + \beta_1 MKTG_{it-1} + \beta_2 CS_{it-1} + \beta_3 INVEST_{it-1} + \beta_4 SIZE_{it-1} + \beta_5 TANG_{it-1} + \xi_{it}, \quad (1)$$

Equation (1) is estimated through a dynamic panel regression method. Dynamic panel techniques are increasingly being utilized in many prominent empirical studies. This is mostly because of the ability of these techniques to consider the lag of the dependent variable as an explanatory variable in the model. Two different dynamic models, the Arellano and Bond (1991) and Blundell and Bond (1998) estimation procedures, have been deployed. These two techniques are very popular and have been deployed in many empirical studies (Vandaia and Zaheer, 2014; Jaisinghani *et al.*, 2015; Nadeem *et al.*, 2017). All the explanatory variables are considered in one period lag form in order to avoid possible issues of endogeneity and contemporaneous correlation among the dependent and independent variables. The time effects are controlled by considering time dummies in all the models.

The dynamic term λ , as presented in Equation (1), helps in identifying the degree of short-run performance persistence. The rationale for considering short-run performance persistence is that it is less sensitive to changes in business cycles (Amit and Livnat, 1988) and structural changes in the economy (Park *et al.*, 2006). The present study therefore focuses on analyzing the short-run performance persistence of the Indonesian companies.

5. Results and discussion

5.1 Results of tests of stationarity

Stationarity of the underlying data set is a prerequisite for the results of any regression analysis to be meaningful. In the present work, two different panel unit root tests – the Levin Lin and Chu test (LLC) and the ADF-based fisher test (ADF-Fisher) – have been deployed to check for the stationarity. The null hypothesis of both the tests confirms the presence of unit root and hence renders the data to be non-stationary. Thus, for the data to be stationary, the null hypothesis should be rejected at conventional levels. The results of the two tests are reported in Table II. It is evident from the table that the null hypothesis for all the variables

can be easily rejected at the conventional levels. Hence, it is confirmed that the underlying data set is stationary and is conducive for panel data analysis.

5.2 Dynamic panel results[12]

Table III presents the results of the dynamic panel regression analysis estimated using the Arellano and Bond (1991) procedure[13]. The table shows that the coefficient of the lag value of the dependent variable, considered as an explanatory variable, is around 0.36 and is significant at the 1 percent level[14]. This shows that there is a moderate level of persistence in firm performance for the Indonesian companies. The table also shows that the coefficient of marketing intensity is positive and statistically significant. Hence, it is confirmed that Indonesian firms are positively impacted by spending more on marketing efforts. Thus, the empirical results lend support to both the stated hypotheses. An analysis of the control variables reveals that size is not significant at the conventional levels. Furthermore, capital structure, assets' tangibility and investment intensity are positively related to firm performance. The coefficients of these three variables are also significant at the conventional levels. The table also shows that the *J*-statistics are insignificant at the conventional levels. This indicates that the instruments considered are orthogonal, and hence provides evidence in support of the reliability of the results. Panel B of Table III reports the results of the residual diagnosis. The estimator obtained by the Arellano and Bond (1991) model is robust when the

Table II.
Panel stationarity
tests

Variable	LLC	<i>p</i> -value	ADF-Fisher	<i>p</i> -value
ROS	−34.3550***	0.0000	442.8740***	0.0000
MKTG	−24.5792***	0.0000	471.6140***	0.0000
CS	−121.6690***	0.0000	510.4630***	0.0000
INVEST	−21.0067***	0.0000	446.2540***	0.0000
SIZE	−33.0095***	0.0000	503.2090***	0.0000
TANG	−36.3715***	0.0000	490.2210***	0.0000

Notes: The table reports the results of two different unit root tests. The null hypothesis of both the tests states that the underlying variable is non-stationary. Hence, the rejection of the null hypothesis signifies the stationarity of the underlying variable. ***Indicates significance at the 1 percent level

Panel A: coefficient estimation

Variable	Coefficient	SE	<i>t</i> -statistic	<i>p</i> -value
ROS_{t-1}	0.3652***	0.0521	7.0079	0.0000
$MKTG_{t-1}$	0.4327***	0.0695	6.2289	0.0000
$SIZE_{t-1}$	−0.0113	0.0172	−0.6588	0.5102
CS_{t-1}	0.1359***	0.0487	2.7914	0.0053
$TANG_{t-1}$	0.1484**	0.0594	2.4998	0.0125
$INVEST_{t-1}$	0.1312*	0.0764	1.7176	0.0861
<i>J</i> -Statistics	25.7367	—	—	0.8732
Instrument Rank	49	—	—	—

Panel B: residual diagnosis

	<i>m</i> -statistic	ρ	SE(ρ)	<i>p</i> -value
AR(1)	−4.7143***	−4.6863	0.9940	0.0000
AR(2)	−0.5003	−0.2157	0.4311	0.6168

Notes: The table reports the dynamic panel regression results. Arellano and Bond (1991) technique has been utilized to generate the coefficients, standard errors and *p*-value. Panel A of the table reports the coefficients and Panel B reports the residual diagnosis results. *, **, ***Indicate significance at 10, 5 and 1 levels, respectively

Table III.
Dynamic panel results
(Arellano and Bond
estimation)

errors follow an AR (1) scheme but not an AR (2) scheme. The analysis of the error terms clearly shows that AR (1) is significant and AR (2) is insignificant. Hence, it can be concluded that the results obtained are robust.

Table IV presents the results of dynamic panel regression by deploying the Blundell and Bond (1998) procedure. Panel A of Table IV shows that the degree of persistence in firm performance is around 0.35, which is very close to the level of persistence observed earlier. The coefficient is also significant at the 1 percent level. Hence, it can be concluded that there is moderate level of persistence in firm performance in Indonesia. The table also shows that the coefficient of marketing intensity is positive and significant. Hence, it is reconfirmed that marketing intensity is having a positive impact on the performance of Indonesian companies. The results for other control variables are mostly similar to those obtained by deploying the Arellano and Bond (1991) procedure. The only major difference is that the variable CS has now changed to be insignificant at the conventional levels. Panel B of Table IV reports the Wald statistics. The table clearly shows that the Wald statistics are significant at 1 percent level. For this reason, it can be concluded that the results obtained are reliable.

5.3 Results of robustness tests

In order to confirm the validity of the results obtained, certain robustness tests have been conducted. These robustness tests include interaction of the lag values of ROS with the MKTG variable, trimming the ROS variable at the 1st and 99th percentiles, and results without considering the lag values of the independent variable. The results with interaction of lag of ROS with MKTG are presented in the Table AIV, which shows that the interaction effect is negative and significant. The results with trimming of the ROS variable are presented in the Table AV. These results are qualitatively similar to those obtained for the main data. The results obtained without considering the lag values of the independent variables are displayed in Table AVI. These results also show that there is positive and significant profit persistence. Thus, the robustness results confirm that the original results obtained are valid and can be utilized for the purpose of decision making.

6. Discussion and conclusion

The purpose of the present study is to examine the nature of persistence in firm performance for publicly listed firms in Indonesia. The study further analyses the impact of marketing intensity on firm performance. The empirical results indicate positive persistence of firm

Table IV.
Dynamic panel results
(Blundell and Bond
estimation)

<i>Panel A: coefficient estimation</i>				
Variable	Coefficient	SE	<i>t</i> -Statistic	<i>p</i> -value
ROS _{<i>t</i>-1}	0.3455***	0.0382	9.0303	0.0000
MKTG _{<i>t</i>-1}	0.2251***	0.0493	4.5600	0.0000
SIZE _{<i>t</i>-1}	-0.0043	0.0060	-0.7100	0.4780
CS _{<i>t</i>-1}	0.0079	0.0349	0.2300	0.8220
TANG _{<i>t</i>-1}	0.1258***	0.0335	3.7600	0.0000
INVEST _{<i>t</i>-1}	0.1267***	0.0474	2.6700	0.0080
Constant	0.1059	0.1323	0.8000	0.4240
<i>Panel B: residual diagnosis</i>				
Number of Instruments	50			
Wald χ^2	100.61***			
<i>p</i> -value	0.0000			
Notes: The table reports the dynamic panel regression results. Blundell and Bond (1998) technique has been utilized to generate the coefficients, standard errors and <i>p</i> -value. Panel A of the table reports the coefficients and Panel B reports the residual diagnosis results. ***Indicate significance at 1 level				

performance for the Indonesian economy. A moderate level of persistence of around 0.35 has been observed for the selected firms. The degree of performance persistence observed is quite similar to that found in some of the past studies. Specifically, the degree of persistence is quite close to that observed by Bartoloni and Baussola (2009) for Italian firms, and by Goddard *et al.* (2004) for several European banks. However, the degree of persistence is much lower as compared to that obtained by Bhargava (1994) for UK firms, Crespo-Cuaresma and Gschwandtner (2006) for US firms and Jaisinghani (2016) for Indian pharmaceuticals firms. These overall results show positive and significant persistence in firm performance for the firms in emerging markets. The results also counter the theory of competitive environment for firms operating in emerging economies.

The findings of positive persistence in firm performance have certain managerial implications for Indonesian firms. First, it is important that managers focus on converting short-run profitability into long-run competitive advantage. This can be achieved by several modalities including creation of entry and exit barriers (Aslan *et al.*, 2010), generation of behavioral inertia[15] (Madrian and Shea, 2001) and exploitation of mass-scale production (Baumers *et al.*, 2016). Second, managers should optimally utilize available resources in order to overcome the initial resistance to creation of efficiency. This requires that management must strengthen organizational capabilities to enable long-term profit maximization. This can be achieved by linking the compensation of senior management with the long-term performance of firms. This can also be achieved by becoming more market oriented and customer focused. The results indicating positive impact of marketing on firm performance are in accordance with many past studies (Paton and Williams, 1999; Morgan *et al.*, 2009; Qureshi *et al.*, 2017). These results also bear various useful implications for the managers of Indonesian firms. These managers can plan their marketing outlay in a manner that maximizes firm performance. This can be achieved by having a synchronized marketing strategy (Luo and Bu, 2018) and by investing in long-term marketing campaigns (Reimer *et al.*, 2014). This can also be achieved through a critical appraisal of marketing activities in order to eliminate the activities that are not currently aligned to the long-term organizational strategy.

The results in the present study also provide certain key implications for regulatory authorities. The results of positive persistence indicate that there is sub-optimal level of competition in the Indonesian economy. Therefore, the regulators should frame policies that can foster long-run competition. This can be done by having anti-monopoly policies and by promoting healthy competition. The regulators must also frame policies that can enable optimal resource allocation among the competing entities. This will lead to greater social justice and will foster public interest. However, the regulators should also ensure that the enhanced regulations are not leading to misallocation of resources[16]. Moreover, progressive taxation systems (Slemrod, 1990) and incentives to smaller firms can act as powerful tools in promoting competition and reducing existing natural monopolies. The regulators should also focus on creating more competition from foreign companies. This can be done by easing the foreign direct investment norms and other regulations that limit the functioning of foreign firms.

There are some limitations of the present study. The most important limitation is that the present research is confined to a single economy. Moreover, this study has focused on accounting-based measures of firm performance. However, accounting-based measures of firm performance may not give a complete view of the overall economic performance of various organizations. In addition, the deviation of profits from the industry average could not be considered. This is because of unavailability of segment-wise profitability data for most of the companies that operate in multiple industries. Thus, the results mostly reflect the overall economic scenario and may not necessarily be applicable to a specific industry.

Future work on the topic can investigate several key aspects of persistence in firm performance. These areas include analyzing multiple economies and analyzing market-based and perception-based measures of firm performance. Moreover, persistence literature can gain

support by analyzing other facets pertaining to emerging markets. These facets may pertain to persistence in performance of different industries, persistence in firms' efficiency, and persistence in market share of organizations.

Notes

1. G-20 Members, available at: www.g20.org.tr/about-g20/g20-members/
2. The World Bank, 2019, available at: www.worldbank.org/en/country/indonesia/overview
3. Global Business Guide Indonesia, 2017 available at: www.gbgingonesia.com/en/manufacturing/article/2017/indonesia_s_upstream_textile_sector_on_the_rise_after_a_slump_11803.php
4. Cekindo report, available at: www.cekindo.com/sectors/pharmaceutical-indonesia
5. Global Business Guide Indonesia, 2012 available at: www.gbgingonesia.com/en/main/legal_updates/legal_updates.php
6. EMIS Insight Industry Report, "Indonesia Transportation Sector, 2019."
7. Indonesia-Investments, "Tourism Industry Indonesia", available at: www.indonesia-investments.com/business/industries-sectors/tourism/item6051
8. Editorial, *The Jakarta post*, April 18, 2018, "Government market intervention", available at: www.thejakartapost.com/academia/2018/04/18/editorial-government-market-intervention.html
9. BTI, 2018 "Indonesia Country Report", available at: www.bti-project.org/en/reports/country-reports/detail/itc/IDN/
10. World Bank group flagship report, "DOING BUSINESS 2019", available at: www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB2019-report_web-version.pdf
11. The analysis of coefficients of correlation among different pairs of independent variables shows that none of the correlation is greater than 0.4. This indicates that the data set does not suffer from the problem of severe multicollinearity. The results of the analysis of correlation are presented in the Table AI.
12. For reference, the results of the static panel, that is, the pooled OLS results and the fixed effects results, are reported, respectively, in Tables AII and AIII.
13. The model is estimated by considering two-way effect, that is, time dummies have also been included in the dynamic regression model.
14. An analysis of the inclusion of more lags of the dependent variable among the regressors indicates that only the first lag is significant. The other lags are not significant at the conventional level and hence are not included in the final model. These results are not reported here but are available upon request.
15. Behavioral inertia refers to being in a state of inaction and maintaining the status quo. This is generally reflected by unwillingness on the part of customers and factor suppliers to shift to competitors. The behavioral inertia can lead to profit persistence by reducing the level of competition in the factor and product markets.
16. Eklund and Lappi (2018) argue that excess regulation in the product markets can lead to misallocation of resources and can thereby increase permanent rents.

References

- Aaker, D.A. and Adler, D.A. (1984), *Developing Business Strategies*, John Wiley & Sons, New York, NY.
- Admati, A.R. and Ross, S.A. (1985), "Measuring investment performance in a rational expectations equilibrium model", *Journal of Business*, Vol. 58 No. 1, pp. 1-26.
- Amidu, M. and Harvey, S.K. (2016), "The persistence of profits of banks in Africa", *Review of Quantitative Finance and Accounting*, Vol. 47 No. 1, pp. 83-108.

- Amit, R. and Livnat, J. (1988), "Diversification strategies, business cycles and economic performance", *Strategic Management Journal*, Vol. 9 No. 2, pp. 99-110.
- Anderson, R.C. and Reeb, D.M. (2003), "Founding-family ownership and firm performance: evidence from the S&P 500", *The Journal of Finance*, Vol. 58 No. 3, pp. 1301-1328.
- Arellano, M. and Bond, S. (1991), "Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations", *The Review of Economic Studies*, Vol. 58 No. 2, pp. 277-297.
- Aslan, A., Kula, F. and Kaplan, M. (2010), "New evidence on the persistence of profit in Turkey with first and second generation panel unit root tests", *METU Studies in Development*, Vol. 37 No. 1, pp. 25-40.
- Atuahene-Gima, K. (2005), "Resolving the capability-rigidity paradox in new product innovation", *Journal of Marketing*, Vol. 69 No. 4, pp. 61-83.
- Bai, X. and Chang, J. (2015), "Corporate social responsibility and firm performance: the mediating role of marketing competence and the moderating role of market environment", *Asia Pacific Journal of Management*, Vol. 32 No. 2, pp. 505-530.
- Bartoloni, E. and Baussola, M. (2009), "The persistence of profits, sectoral heterogeneity and firms' characteristics", *International Journal of the Economics of Business*, Vol. 16 No. 1, pp. 87-111.
- Baumers, M., Dickens, P., Tuck, C. and Hague, R. (2016), "The cost of additive manufacturing: machine productivity, economies of scale and technology-push", *Technological Forecasting and Social Change*, Vol. 102, pp. 193-201.
- Becherer, R.C. and Helms, M.M. (2016), "The role of entrepreneurial marketing in improving market share for small businesses facing external environmental or resource challenges", *Journal of Business and Entrepreneurship*, Vol. 27 No. 2, pp. 119-147.
- Bhargava, S. (1994), "Profit sharing and the financial performance of companies: evidence from UK panel data", *The Economic Journal*, Vol. 104 No. 426, pp. 1044-1056.
- Blundell, R. and Bond, S. (1998), "Initial conditions and moment restrictions in dynamic panel data models", *Journal of Econometrics*, Vol. 87 No. 1, pp. 115-143.
- Bowman, D. and Gatignon, H. (1996), "Order of entry as a moderator of the effect of the marketing mix on market share", *Marketing Science*, Vol. 15 No. 3, pp. 222-242.
- Cable, J.R. and Mueller, D.C. (2008), "Testing for persistence of profits' differences across firms", *International Journal of the Economics of Business*, Vol. 15 No. 2, pp. 201-228.
- Chacar, A. and Vissa, B. (2005), "Are emerging economies less efficient? Performance persistence and the impact of business group affiliation", *Strategic Management Journal*, Vol. 26 No. 10, pp. 933-946.
- Chari, M.D. and David, P. (2012), "Sustaining superior performance in an emerging economy: an empirical test in the Indian context", *Strategic Management Journal*, Vol. 33 No. 2, pp. 217-229.
- Contractor, F.J., Kundu, S.K. and Hsu, C.C. (2003), "A three-stage theory of international expansion: the link between multinationality and performance in the service sector", *Journal of International Business Studies*, Vol. 34 No. 1, pp. 5-18.
- Crespo-Cuaresma, J. and Gschwandtner, A. (2006), "The competitive environment hypothesis revisited: non-linearity, nonstationarity and profit persistence", *Applied Economics*, Vol. 38 No. 4, pp. 465-472.
- Dawar, V. (2014), "Agency theory, capital structure and firm performance: some Indian evidence", *Managerial Finance*, Vol. 40 No. 12, pp. 1190-1206.
- Delaney, J.T. and Huselid, M.A. (1996), "The impact of human resource management practices on perceptions of organizational performance", *Academy of Management Journal*, Vol. 39 No. 4, pp. 949-969.
- Dyreng, S.D. and Markle, K.S. (2016), "The effect of financial constraints on income shifting by US multinationals", *The Accounting Review*, Vol. 91 No. 6, pp. 1601-1627.
- Edwards, S. (2001), "Capital mobility and economic performance: are emerging economies different?", Working Paper No. w8076, National bureau of economic research, Boston, MA.

- Eklund, J.E. and Lappi, E. (2018), "Product regulations and persistence of profits: OECD evidence", *Journal of Regulatory Economics*, Vol. 54 No. 2, pp. 147-164.
- Eklund, J.E. and Wiberg, D. (2008), "R&D and the persistence of profits", *The IUP Journal of Managerial Economics*, Vol. 6 No. 2, pp. 40-53.
- Elias, S. and Noone, C. (2011), "The growth and development of the Indonesian economy", *RBA Bulletin*, pp. 33-43.
- Feng, H., Morgan, N.A. and Rego, L.L. (2015), "Marketing department power and firm performance", *Journal of Marketing*, Vol. 79 No. 5, pp. 1-20.
- Gaur, A.S., Kumar, V. and Singh, D. (2014), "Institutions, resources, and internationalization of emerging economy firms", *Journal of World Business*, Vol. 49 No. 1, pp. 12-20.
- Glen, J., Lee, K. and Singh, A. (2001), "Persistence of profitability and competition in emerging markets", *Economics Letters*, Vol. 72 No. 2, pp. 247-253.
- Glen, J., Lee, K. and Singh, A. (2003), "Corporate profitability and the dynamics of competition in emerging markets: a time series analysis", *The Economic Journal*, Vol. 113 No. 491, pp. F465-F484.
- Goddard, J., Molyneux, P. and Wilson, J.O. (2004), "The profitability of European banks: a cross-sectional and dynamic panel analysis", *The Manchester School*, Vol. 72 No. 3, pp. 363-381.
- Goddard, J., Liu, H., Molyneux, P. and Wilson, J.O. (2011), "The persistence of bank profit", *Journal of Banking & Finance*, Vol. 35 No. 11, pp. 2881-2890.
- Goddard, J.A. and Wilson, J.O. (1999), "The persistence of profit: a new empirical interpretation", *International Journal of Industrial Organization*, Vol. 17 No. 5, pp. 663-687.
- Gschwandtner, A. (2003), Profit persistence in the US: evidence from a new dataset", Department of Economics, University of Vienna, Vienna.
- Gschwandtner, A. (2005), "Profit persistence in the 'very' long run: evidence from survivors and exiters", *Applied Economics*, Vol. 37 No. 7, pp. 793-806.
- Gschwandtner, A. and Cuaresma, J.C. (2013), "Explaining the persistence of profits: a time-varying approach", *International Journal of the Economics of Business*, Vol. 20 No. 1, pp. 39-55.
- Haned, N., Mothe, C. and Nguyen-Thi, T.U. (2014), "Firm persistence in technological innovation: the relevance of organizational innovation", *Economics of Innovation and New Technology*, Vol. 23 Nos 5-6, pp. 490-516.
- Hayashi, M. (2005), "Structural change in Indonesian industry and trade: an input output analysis", *The Developing Economics*, Vol. 43 No. 1, pp. 39-71.
- Himmelberg, C.P., Hubbard, R.G. and Palia, D. (1999), "Understanding the determinants of managerial ownership and the link between ownership and performance", *Journal of Financial Economics*, Vol. 53 No. 3, pp. 353-384.
- Huang, C.H. (2008), "A note on the persistence of firms innovation behavior: a dynamic random effect Probit model approach", *Economics Bulletin*, Vol. 15 No. 5, pp. 1-9.
- Jacobsen, R. (1988), "The persistence of abnormal returns", *Strategic Management Journal*, Vol. 9 No. 5, pp. 415-430.
- Jaisinghani, D. (2016), "Impact of R&D on profitability in the pharma sector: an empirical study from India", *Journal of Asia Business Studies*, Vol. 10 No. 2, pp. 194-210.
- Jaisinghani, D. (2017), "Employees' compensation and profit persistence in emerging markets: empirical evidence from South Africa", *African Journal of Economic and Sustainable Development*, Vol. 6 No. 4, pp. 225-243.
- Jaisinghani, D. and Kanjilal, K. (2019), "Marketing investments and firm performance in manufacturing sector: a panel threshold model for China", *Journal of the Asia Pacific Economy*, Vol. 24 No. 1, pp. 1-10.
- Jaisinghani, D., Tandon, D. and Batra, D.K. (2015), "Profit persistence in emerging markets: empirical evidence from Indian banking sector", *International Journal of Business Competition and Growth*, Vol. 4 Nos 1-2, pp. 79-97.

- Jusoh, R., Nasir Ibrahim, D. and Zainuddin, Y. (2008), "The performance consequence of multiple performance measures usage: evidence from the Malaysian manufacturers", *International Journal of Productivity and Performance Management*, Vol. 57 No. 2, pp. 119-136.
- Kamboj, S. and Rahman, Z. (2015), "Marketing capabilities and firm performance: literature review and future research agenda", *International Journal of Productivity and Performance Management*, Vol. 64 No. 8, pp. 1041-1067.
- Kerin, R.A., Mahajan, V. and Varadarajan, P. (1990), *Contemporary Perspectives on Strategic Market Planning*, Allyn & Bacon, Boston, MA.
- Khanna, T. and Palepu, K. (1997), "Why focused strategies may be wrong for emerging markets", *Harvard Business Review*, Vol. 75 No. 4, pp. 41-43.
- Kotabe, M., Srinivasan, S.S. and Aulakh, P.S. (2002), "Multinationality and firm performance: the moderating role of R&D and marketing capabilities", *Journal of International Business Studies*, Vol. 33 No. 1, pp. 79-97.
- Lazzarini, S.G., Brito, L.A. and Chaddad, F.R. (2013), "Conduits of innovation or imitation? Assessing the effect of alliances on the persistence of profits in US firms", *BAR-Brazilian Administration Review*, Vol. 10 No. 1, pp. 1-17.
- Li, H., Meng, L., Wang, Q. and Zhou, L.A. (2008), "Political connections, financing and firm performance: evidence from Chinese private firms", *Journal of Development Economics*, Vol. 87 No. 2, pp. 283-299.
- Lins, K.V., Servaes, H. and Tamayo, A. (2017), "Social capital, trust, and firm performance: the value of corporate social responsibility during the financial crisis", *The Journal of Finance*, Vol. 72 No. 4, pp. 1785-1824.
- Lovett, M.J. and MacDonald, J.B. (2005), "How does financial performance affect marketing? Studying the marketing-finance relationship from a dynamic perspective", *Journal of the Academy of Marketing Science*, Vol. 33 No. 4, pp. 476-485.
- Luo, Y. and Bu, J. (2018), "Contextualizing international strategy by emerging market firms: a composition-based approach", *Journal of World Business*, Vol. 53 No. 3, pp. 337-355.
- Madrian, B.C. and Shea, D.F. (2001), "The power of suggestion: inertia in 401 (k) participation and savings behaviour", *The Quarterly Journal of Economics*, Vol. 116 No. 4, pp. 1149-1187.
- Majid, M., Yusof, R.M. and Razal, A.N. (2007), "Dynamic financial linkages among selected OIC countries", *Journal of Economic Cooperation Among Islamic Countries*, Vol. 28 No. 2, pp. 25-56.
- Mano, R.S. (2010), "Marketing and performance evaluations in non-profit services: 'missed' targeting in communicating stakeholders' expectations", *International Journal of Productivity and Performance Management*, Vol. 59 No. 6, pp. 555-570.
- Merton, R.C. (1981), "On market timing and investment performance. I. An equilibrium theory of value for market forecasts", *Journal of Business*, Vol. 54 No. 3, pp. 363-406.
- Morgan, N.A., Vorhies, D.W. and Mason, C.H. (2009), "Market orientation, marketing capabilities, and firm performance", *Strategic Management Journal*, Vol. 30 No. 8, pp. 909-920.
- Mueller, D.C. (1977), "The persistence of profits above the norm", *Economica*, Vol. 44 No. 176, pp. 369-380.
- Mueller, D.C. (1990), *The Dynamics of Company Profits*, Cambridge University Press, Cambridge.
- Nadeem, M., Gan, C. and Nguyen, C. (2017), "Does intellectual capital efficiency improve firm performance in BRICS economies? A dynamic panel estimation", *Measuring Business Excellence*, Vol. 21 No. 1, pp. 65-85.
- Narayanan, V.K. and Fahey, L. (2005), "The relevance of the institutional underpinnings of Porter's five forces framework to emerging economies: an epistemological analysis", *Journal of Management Studies*, Vol. 42 No. 1, pp. 207-223.
- O'Sullivan, D. and Abela, A.V. (2007), "Marketing performance measurement ability and firm performance", *Journal of Marketing*, Vol. 71 No. 2, pp. 79-93.

- O'Sullivan, D., Abela, A.V. and Hutchinson, M. (2009), "Marketing performance measurement and firm performance: evidence from the European high-technology sector", *European Journal of Marketing*, Vol. 43 Nos 5-6, pp. 843-862.
- Park, S.H., Li, S. and David, K.T. (2006), "Market liberalization and firm performance during China's economic transition", *Journal of International Business Studies*, Vol. 37 No. 1, pp. 127-147.
- Paton, D. and Williams, L.V. (1999), "Advertising and firm performance: some new evidence from UK firms", *Economic Issues*, Vol. 4 No. 2, pp. 89-105.
- Pervan, M., Pelivan, I. and Arnerić, J. (2015), "Profit persistence and determinants of bank profitability in Croatia", *Economic Research*, Vol. 28 No. 1, pp. 284-298.
- Qureshi, M.S., Aziz, N. and Mian, S.A. (2017), "How marketing capabilities shape entrepreneurial firm's performance? Evidence from new technology based firms in Turkey", *Journal of Global Entrepreneurship Research*, Vol. 7 No. 1, pp. 1-15.
- Reimer, K., Rutz, O.J. and Pauwels, K. (2014), "How online consumer segments differ in long-term marketing effectiveness", *Journal of Interactive Marketing*, Vol. 28 No. 4, pp. 271-284.
- Riahi-Belkaoui, A. (2003), "Intellectual capital and firm performance of US multinational firms: a study of the resource-based and stakeholder views", *Journal of Intellectual Capital*, Vol. 4 No. 2, pp. 215-226.
- Roberts, P.W. and Dowling, G.R. (2002), "Corporate reputation and sustained superior financial performance", *Strategic Management Journal*, Vol. 23 No. 12, pp. 1077-1093.
- Saeidi, S.P., Sofian, S., Saeidi, P., Saeidi, S.P. and Saaeidi, S.A. (2015), "How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction", *Journal of Business Research*, Vol. 68 No. 2, pp. 341-350.
- Saini, N. and Singhania, M. (2018), "Corporate governance, globalization and firm performance in emerging economies: evidence from India", *International Journal of Productivity and Performance Management*, Vol. 67 No. 8, pp. 1310-1333.
- Schumpeter, J.A. (1934), *Theory of Economic Development*, Routledge, Abingdon.
- Slemrod, J. (1990), "Optimal taxation and optimal tax systems", *Journal of Economic Perspectives*, Vol. 4 No. 1, pp. 157-178.
- Sok, P., O'Cass, A. and Miles, M.P. (2016), "The performance advantages for SMEs of product innovation and marketing resource-capability complementarity in emerging economies", *Journal of Small Business Management*, Vol. 54 No. 3, pp. 805-826.
- Srivastava, R.K., Shervani, T.A. and Fahey, L. (1998), "Market-based assets and shareholder value: a framework for analysis", *The Journal of Marketing*, Vol. 62 No. 1, pp. 2-18.
- Susskind, A.M., Kacmar, K.M. and Borchgrevink, C.P. (2018), "The relationship of service providers' perceptions of service climate to guest satisfaction, return intentions, and firm performance", *Cornell Hospitality Quarterly*, Vol. 59 No. 4, pp. 390-396.
- Teeratansirikool, L., Siengthai, S., Badir, Y. and Charoenngam, C. (2013), "Competitive strategies and firm performance: the mediating role of performance measurement", *International Journal of Productivity and Performance Management*, Vol. 62 No. 2, pp. 168-184.
- Vandaie, R. and Zaheer, A. (2014), "Surviving bear hugs: firm capability, large partner alliances, and growth", *Strategic Management Journal*, Vol. 35 No. 4, pp. 566-577.
- Villalonga, B. (2004), "Intangible resources, Tobin's q, and sustainability of performance differences", *Journal of Economic Behavior & Organization*, Vol. 54 No. 2, pp. 205-230.
- Webster, C. (1995), "Marketing culture and marketing effectiveness in service firms", *Journal of Services Marketing*, Vol. 9 No. 2, pp. 6-21.
- Yurtoglu, B.B. (2004), "Persistence of firm-level profitability in Turkey", *Applied Economics*, Vol. 36 No. 6, pp. 615-625.

Table AI.
Correlation

	MKTG	CS	INVEST	SIZE
CS	-0.0466			
INVEST	-0.0476	0.1271		
SIZE	-0.1133	0.2999	0.1015	
TANG	0.0101	0.3255	-0.1730	0.1748

Note: The table reports the pair-wise coefficient of correlation for all the pairs of independent variables

Variable	Coefficient	SE	<i>t</i> -statistic	<i>p</i> -value
<i>C</i>	-0.5575***	0.0445	-12.5168	0.0000
MKTG _{<i>t</i>-1}	0.2951***	0.0236	12.4912	0.0000
SIZE _{<i>t</i>-1}	0.0309***	0.0021	14.4562	0.0000
CS _{<i>t</i>-1}	-0.0508*	0.0268	-1.8956	0.0582
TANG _{<i>t</i>-1}	0.0782***	0.0165	4.7250	0.0000
INVEST _{<i>t</i>-1}	-0.0219	0.0284	-0.7695	0.4417
Adjusted <i>R</i> ²	0.2056	—	—	—
<i>F</i> -statistics	77.8294***	—	—	0.0000

Notes: The table reports the results of the pooled regression estimate using the OLS technique. *, ***, Indicate significance at 10 and 1 levels, respectively

Table AII.
Pooled OLS results

Variable	Coefficient	SE	<i>t</i> -statistic	<i>p</i> -value
<i>C</i>	-0.0529	0.1517	-0.3487	0.7274
MKTG _{<i>t</i>-1}	-0.1896***	0.0366	-5.1791	0.0000
SIZE _{<i>t</i>-1}	0.0108	0.0072	1.4935	0.1356
CS _{<i>t</i>-1}	0.0244	0.0263	0.9289	0.3531
TANG _{<i>t</i>-1}	0.0478*	0.0247	1.9371	0.0529
INVEST _{<i>t</i>-1}	0.0337	0.0372	0.9061	0.3651
<i>F</i> -statistics	21.5522***	—	—	0.0000

Notes: The table reports the results of the Fixed Effect Model (FEM). *, ***, Indicate significance at 10 and 1 levels, respectively

Table AIII.
FEM results

Table AIV.
Dynamic panel
results – interaction
effect

<i>Panel A: coefficient estimation</i>				
Variable	Coefficient	SE	<i>t</i> -statistic	<i>p</i> -value
ROS _{<i>t</i>-1}	0.6109***	0.0756	8.0760	0.0000
ROS _{<i>t</i>-1} × MKTG _{<i>t</i>-1}	-2.2835***	0.2335	-9.7794	0.0000
SIZE _{<i>t</i>-1}	-0.0837***	0.0184	-4.5587	0.0000
CS _{<i>t</i>-1}	0.1211**	0.0570	2.1240	0.0339
TANG _{<i>t</i>-1}	0.1984***	0.0584	3.3984	0.0007
INVEST _{<i>t</i>-1}	0.0593	0.0781	0.7598	0.4475
<i>J</i> -statistics	41.2289	—	—	0.2167
Instrument Rank	49	—	—	—
<i>Panel B: residual diagnosis</i>				
Test order	<i>m</i> -statistic	ρ	SE(ρ)	Prob.
AR(1)	-3.7300***	-3.0142	0.8081	0.0002
AR(2)	-2.0718**	-1.0212	0.4929	0.0383

Notes: The table reports the dynamic panel regression results. Arellano and Bond (1991) technique has been utilized to generate the coefficients, standard errors and *p*-value. Panel A of the table reports the coefficients and Panel B reports the residual diagnosis results. **,***Indicate significance at 5 and 1 levels, respectively

Table AV.
Dynamic panel
regression – trimmed
sample

<i>Panel A: coefficient estimation</i>				
Variable	Coefficient	SE	<i>t</i> -statistic	<i>p</i> -value
ROS _{<i>t</i>-1}	0.1820***	0.0513	3.5448	0.0004
MKTG _{<i>t</i>-1}	0.3704***	0.0816	4.5353	0.0000
SIZE _{<i>t</i>-1}	0.0215	0.0187	1.1513	0.2498
CS _{<i>t</i>-1}	0.0840	0.0572	1.4683	0.1423
TANG _{<i>t</i>-1}	0.0575	0.0693	0.8307	0.4063
INVEST _{<i>t</i>-1}	-0.2470***	0.0934	-2.6438	0.0083
<i>J</i> -statistics	32.4303	—	—	0.5927
Instrument Rank	49	—	—	—
<i>Panel B: residual diagnosis</i>				
	<i>m</i> -statistic	ρ	SE(ρ)	<i>p</i> -value
AR(1)	-3.7052***	-1.8991	0.5125	0.0002
AR(2)	-0.9914	-0.3231	0.3259	0.3215

Notes: The table reports the dynamic panel regression results by trimming the profitability variable (ROS) at the 1 and 99th percentile. Arellano and Bond (1991) technique has been utilized to generate the coefficients, standard errors and *p*-value. Panel A of the table reports the coefficients and Panel B reports the residual diagnosis results. ***Indicate significance at 1 level

					Persistence of firm performance
<i>Panel A: coefficient estimation</i>					1127
Variable	Coefficient	SE	<i>t</i> -statistic	<i>p</i> -value	
ROS _{<i>t</i>-1}	0.2570***	0.0280	9.1615	0.0000	
MKTG _{<i>t</i>}	-0.2987***	0.0391	-7.6299	0.0000	
SIZE _{<i>t</i>}	0.0323***	0.0074	4.3244	0.0000	
CS _{<i>t</i>}	-0.0491**	0.0230	-2.1283	0.0335	
TANG _{<i>t</i>}	-0.0520**	0.0261	-1.9905	0.0467	
INVEST _{<i>t</i>}	-0.1117***	0.0262	-4.2503	0.0000	
<i>J</i> -statistics	30.0216	—	—	0.7071	
Instrument Rank	49	—	—	—	
<i>Panel B: residual diagnosis</i>					Table AVI. Dynamic panel regression – without lagging of independent variables
	<i>m</i> -statistic	ρ	SE(ρ)	<i>p</i> -value	
AR(1)	-4.0175***	-4.2732	1.0636	0.0001	
AR(2)	-0.2735	-0.0981	0.3589	0.7844	
Notes: The table reports the dynamic panel regression results without considering the lag of the independent variables. Arellano and Bond (1991) technique has been utilized to generate the coefficients, standard errors and <i>p</i> -value. Panel A of the table reports the coefficients and Panel B reports the residual diagnosis results. **, ***Indicate significance at 5 and 1 levels, respectively					

Corresponding author

Mahesh Joshi can be contacted at: mahesh.joshi@rmit.edu.au

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgroupublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com