

Identifying Key Performance Indicators for Manufacturing Industries Bumiputera Entrepreneurs (MIBE) in East Coast Malaysia

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Abstract— The Manufacturing Industries in Malaysia were the fastest-growth industry over the past few years. In doing so, involvement of Bumiputera Entrepreneurs in this area was competitive. After the support gave from the government to the entrepreneur, the government still doesn't have any apparatus for analyzing Manufacturing Industries Bumiputera Entrepreneur (MIBE) performance. The development of the MIBE performance index will give the government, agencies and other stakeholders a clear picture of the success achieved so far, the efficacy of strategies used, failures if any, areas that needed to be polished, so as to achieve optimum utilization of resources towards the entrepreneurship development. Similarly, the government will be able to use this performance index in order to have a stand on whether to continue with the support or make necessary adjustments. However, there are limited published studies on the evaluation of the sustainability performance of the MIBE sector. Thus, this paper aims to formulate a list of key performance index (KPI) for the MIBE. First, a literature study on the Bumiputera Entrepreneur development carried out. This study continued with study of KPI from various industries. Finally, a set of KPI which can be used for measuring performance index in MIBE was identified. These KPI was used to design a question which will be distributed to some agencies to strengthen the list of performance index .

Keywords— Performance Indicators; Entrepreneur's; Bumiputera; Manufacturing Industries, Malaysia.

I. INTRODUCTION

Entrepreneurship is like a marathon, and not just because it isn't a sprint. Think of it: Thousands of companies set out for an achingly long test of their strategy, their preparation and, most of all, their ability to endure. For all companies, the start is the same where everyone is equal before the starting gun goes off. But soon some break free of the masses and move ahead; others fall behind (Shea, 2015). Entrepreneurship is responsible for the vast majority of new income, new jobs, new innovations, new organizational forms and wealth created in society (Town, 2017).

The Bumiputera would equally get to know their economic contribution in the national productivity grid as this would stimulate their efforts towards paying back the government support with more output if needed or the government would know how far of the support it has gone and if more is needed to thrust the competitive edge of the nation forward. Of course,

several researchers interested in entrepreneurship study about and consider only those successful entrepreneurs or entrepreneurial firms, forgetting that failure is a key component of the entrepreneurial process as it lends a rich and useful knowledge to the stakeholders and policy makers to understand the complexities involved. Thus, an entrepreneur even if he/she fails, they are nevertheless considered entrepreneurs and remain entrepreneurial (Abdullah, 2007).

In the following section, the performance index was identified. The second section provides an analytical literature to identify performance index. Finally, in the last section, a summary and conclusion are provided. In particular, this paper suggests that the contribution that the performance index to justify the government support program not just a waste initiative. Therefore, the Bumiputera, government and agencies may use this performance index to prove to the critics what benefits they had derived from the government support and the achievements made so far..

II. MATERIALS AND METHOD

In Malaysia a lot of efforts used, several programs executed, various initiatives introduced, diverse range of supports given, huge amount of funds expended, and lots more towards the development of Bumiputra Entrepreneurship. Significantly, government's strategic national plans and developmental plans had been focusing and incorporating the Bumiputra entrepreneurship development all along as part of their key agenda.

A. Bumiputera Entrepreneurship Development in Malaysia from 1971 until now

The Malays in these states are the dominant and most relevant in the history of the Malaysian entrepreneurship development. They are commonly known to be Muslims engrossed in their customs (adats) and cultures, enjoying the inalienable rights and privileges of the Bumiputera ordained for them under the constitution (Federal Constitution, 1957). These rights were conferred on the Malays being the indigenous people in Malaysia so as to compensate them for the imposition of the other immigrant races of Chinese and Indians on them by the British colonists. These other races had a massive influx into Malaysia during the early 20th

century as a result of the boom in the tin and rubber production in Malaysia, and subsequently, got citizenship status during the independence era (Alom, Abdullah, Moten, & Azam, 2016);(Shome & Hamidon, 2009).

Due consideration is given to entrepreneurship by policy makers in several countries or international corporations in promoting and enhancing the entrepreneurial climate. They formulate viable policies to boost the entrepreneurial development either by uprooting bottlenecks or some forms of palliatives designed to tackle some menace (N. Ahmad & Hoffman, 2007). This had been a trend witnessed since around the mid-20th century in developed nations as US, UK, Australia, as well as in developing nations.

Hence, no doubt that in order to address the growing discontentment among the races, and revamp the marginalized Bumiputera society under the colonial period, the Malaysian government initiated some developmental policies. Hence, since 1970s, through the various policies: New Economic Policy (1970 – 1990); National Development Policy (NDP) (1991 – 2000); National Vision Policy - NVP (2001 – 2005); National Mission Policy (NMP) (2006 – 2020), which later incorporated the Malaysian National Development Strategy (MyNDS) (2015 – 2020); billions of Malaysian ringgits were spent on programs and initiatives created to cater for the Bumiputera entrepreneurship development.

Most SMEs requires support or assistance from the government to be more competitive in the global business environment. The role of government is to encourage companies to move to higher levels and gain competitive advantage in the globalized environment (Lukas & Basuki, 2015). SMEs has become the backbone of the world economy as they take a huge function in employment, whereas, the vigor, excellence, achievement and success of the SMEs are said to be key indicators in evaluating an economy's growth and potential development (Wiklund, 1998). The basic entrepreneurial activity contributed by SMEs has been widely acknowledged as the motivating factor for innovation and economic growth. Therefore, the achievement or otherwise of SMEs as well as entrepreneurship remains paramount to government and policy makers (Schaper, 2010).

B. Manufacturing Industries in Malaysia

What is Manufacturing Industries? Heightening challenges in today's global competition have pressed many manufacturing firms to adopt new manufacturing management strategies in order to enhance the firms' efficiency and competitiveness. Generally, manufacturing is a process of transforming raw material into semi-finished or finished product (Mynors & Loose, 2003). Follow to the (Brocal, Sebastián, & González, 2019), manufacturing is a process of transforming includes casting or moulding, forming, mechanical assembly parts and machining. Manufacturing industries are one of the important parts of Malaysian economic growth. (Wang, 2018) it is a contribution significantly to Malaysian exports where in 1987, it

contributes 19.8 per cent of the gross domestic product (GDP). Furthermore, in 1990 the contribution increased to 24.6 per cent and the percentages was increased to 44.8 per cent in 2001. In addition, manufacturer exports namely exports of manufacturing goods, machinery and transport equipment and miscellaneous manufactured articles was contributed 39.9 per cent of total export in 1987. The Malaysian manufacturing industry was generated a significant number of employment opportunities (M. Zulkifli & Corresponding, 2010). This view shows the importance of manufacturing industry in Malaysian economic. The intent of this study is to lend perspective to other less-talked-about topics that are important for the successful implementation of the future of manufacturing.

C. Bumiputera Entrepreneur Development

Entrepreneurship proves to be the facilitator to structural developments in the economic sphere. Entrepreneurship is much needed in an environment where businesses are confronted with limited opportunity openings, as well as rapid technological changes, business environment, social aspects and political functions (Scheepers, 2007)(Town, 2017). In the same vein, (N. Ahmad & Hoffman, 2007) elucidated on the due consideration given to entrepreneurship by policy makers in several countries or international corporations in promoting and enhancing the entrepreneurial climate while formulating viable policies to boost the entrepreneurial development either by uprooting bottlenecks or some forms of palliatives designed to tackle some menace. But then, using (Mungaray Lagarda, Feitó Madrigal, & Taxis Flores, 2016) argument as they highlighted that perhaps the most widely known objective of a business is for maximization of returns, but they made an implicit statement that the main aim of micro businesses in developing economies is to make the best use of their invested assets and be afloat and kicking. Based on this argument above, we may as well, perhaps presume that the Bumiputera's aims and perception about business share some commonality with the above predicate.

(Newbert, 2011) (Nadzri, Shamsudin, Firdaus, & Sabri, 2014), the indigenous rural community is often considered marginalized and lags behind in all aspects compared to the other groups. Hence, the Malaysians should take the initiative to make changes and drastic transformation of all aspects, especially, in terms of thinking and mentality to become entrepreneurs to enhance the strength and stability of the economy for a healthy competition with other nations and not to be left behind in the country's journey towards being a high income country by 2020 (C. M. Zulkifli, Omar, Mohd, & Azmi, 2015).

III. RESULT AND DISCUSSION

Measurement of success is done through performance key indicators (KPIs). KPIs is a limited number of performance measures that answer the following questions. Are we doing enough the right things to reach our goals? If not, what are the corrective actions to be taken (Enos, 2017).

Performance indicators are part of a structure of activities required to monitor the different aspects of performance in any organization (Clarkson & Challis, 2006). As emphasized by (N. Ahmad & Hoffman, 2007) a country has the free will to decide which kind of performance indicators to look into in line with their policy aims.

Performance measurement, and the use of associated indicators draws largely on the theory and techniques of management accounting, which uses information summarizing the sum total of an organization's actions in quantitative terms. Performance indicators are expressed in the form of ratio measures, which relate units of information to each other. The resulting measures are intended to express important aspects of a company's overall performance (Challis, Clarkson, & Warburton, 2006). According to (Enos, 2017);

- 1) Measurement provides a basis for knowing where performance is and "a baseline" for deciding where it should to be. Key Performance Indicators (KPIs) help us know where the goal attainment is, and whether the activity to reach those goals is sufficient and effective.
- 2) Knowing the current performance of the team or organization cannot occur without these elements except at the very general or intuitive level. Having these elements provides the basis for knowing current performance compared to desired performance. The difference between desired and current is a gap or deficiency.
- 3) Without knowing exactly where performance is compared to where it should to be (gap or deficiency) there is little basis for knowing what to improve. This often leads to performance interventions based on fad or program popularity.
- 4) Where there is a clear definition on performance and the current status is known, then there exists a logical basis for understanding what areas need improvement.

PIs are classified according to whether they are financial or non-financial, global or local, internal or external, and according to which part of the organization they belong (Clarkson & Challis, 2006).

Follow to (Clarkson & Challis, 2006) an indicator should point out or signify this relationship and be a sign, token or explanation of how the system performs. Performance indicators are most effective when they express this relationship in the form of ratios between input and output and when differing outputs are related to each other in an integrated system which expresses the overall objective of the service.

While, measurement of performance at the organizational, team, and individual levels are necessary for performance evaluation and performance improvement, no organization or team need to spend a huge amounts of time or resources on collecting data for measurement of goals or KPIs. Only a few

primary goals and "key" performance indicators need to be chosen for measurement. For example, if the goal is on a certain level of sales volume, then the KPI may be the new leads. If the goal toward certain level of employee morale measured by a survey, then the KPI may be undesired turnover. The principle here is Pareto's famous 80/20 rule. Simply stated, the famous principle is that 80 percent of what is important can be measured through the sampling percent of these important dimensions (Enos, 2017).

(Challis et al., 2006) justify that performance measurement is also dependent on who is interested in the results of measurement. There are thus political implications in the choice and use of particular measures. There is also a sense of in which performance measurement is "context dependent".

Performance measures and their indicators used to support it, are thus a child of their times, subject to political priorities and dependent on the nature and purposes of the organization under review. There will therefore be no "best measures of performance for any organization. Indicators will need to be devised which allow for and reflect on any organization's particular circumstances and objectives (Challis et al., 2006).

In the arena of entrepreneurship, literature has neglected to propose a standard definition concerning performance measurement (Mattila & Åhlqvist, 2001). Therefore, performance may be defined as "the amount made or done in relation to the resources used to make or produce or do it" (Challis et al., 2006). Or "the way the organization carries its objectives into effect". Performance may thus be an execution occurring between inputs and output. Similarly, performance measures were defined in some ways as revenue, firm size, business growth, and the propensity of the firm's survival (Fried & Tauer, 2015a).

(Murphy, Trailer, & Hill, 1996) asserted that exact and suitable assessment of performance is key in studying entrepreneurship. When there is lack of meaningful methods for measuring performance, theory generation is hindered, and it equally frustrates the process of developing valuable guide for entrepreneurs. (N. H. Ahmad & Seet, 2009) added that success achievement in business is viewed as a definitive objective of any entrepreneurial activity. Clear and precise measures of performance as well as success achievement, particularly in SMEs, are essential for the comprehension of success achievement and otherwise.

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Similarly, entrepreneurial performance has been measured as the yearly rate of increase in business calculated through sales turnover from inception (Lukas & Basuki, 2015), as some employed profits in measurement like (Chen, Hsu, & Tzeng, 2011), others opined that the firms could do the rating by themselves to indicate if they are successful or not (Hirschfeld et al., 2007), while, the duo of (González-Benito, Suárez-González, & Spring, 2000) defines a firm as successful if the firm surpasses the median operating profit margin of its four digit industry sector.

Performance measures have long been recognized as an integral part of the planning and control cycle (Barnard, Bee, & Hammond, 1984). (Neely, 1999) listed seven main reasons why business performance measurement receives continuous attention and emphasis: the changing nature of work, increasing competition, specific improvement initiatives, national and international awards, changing organizational roles, changing external demands and the power of information technology (Othman & Rauf, 2009). Performance measurement involves the development of metrics that quantify the efficiency and effectiveness of action (Neely, 1999).

Performance measurement may mean financial related components which may include return on equity (ROE) or earnings, and non-financial components such as frequency of customer complaints entertained and conveyance time (Mattila & Åhlqvist, 2001).

(Naman & Slevin, 1993) contend that performance could be measured in two ways: objectively and subjectively. In objective measurement, absolute monetary gains such as sales and profits were referred to, whereas in subjective measures, the administrator's self-fulfillment of both the financial elements which may include profits, sales growth as well as market share, and the non financial elements that may include career advancement, customer loyalty, employee satisfaction are included (N. H. Ahmad & Seet, 2009). Equally, (Wiklund, 1998) suggests that both financial and non-financial measures commensurate each other and provide a richer description of actual performance. This view is also reflected by (Murphy et al., 1996), who argue, in the context of SMEs, that: "Organisational performance is composed of multiple dimensions. Financial measures are necessary but not sufficient to capture total organizational performance. Thus, future studies should continue to include financial measures, but non-financial measures need to be emphasized as well." (N. H. Ahmad & Seet, 2009).

There are several measurement tools adopted by several organizations around the world in measuring performance. Mostly used is the Balanced Scorecard. Similarly, in Malaysia some organizations have used tools such as SCORE as used by SME CORP. The concept of SME Competitiveness Rating for Enhancement (SCORE) introduced in 2007, is a form of performance detecting instrument used to rate and improve SMEs' competitiveness checking on their performance and

competence. The first pilot was conducted for SMEs under manufacturing sector to measure the effectiveness of the support companies obtained in order to enhance their business performance. Subsequently, the SCORE tool was widely used by different sub-sectors in Malaysia (SME Corp Annual Report 2015).

However, the uniqueness of Bumiputera entrepreneurs among other breeds of entrepreneurs is paramount that their entrepreneurship development is given a special consideration by the Malaysian government. Likewise, the rising demand to measure their performance may require a customized approach of assessment specifically for the Bumiputera. Adopting a blanket measure developed elsewhere or which is applied to non-Bumiputera in Malaysia may not serve the intended purpose. Therefore, this would necessitate that a separate set of measures that would cover a wide selected indicators to assess their performance.

A. Definition of Key Terms

Entrepreneurs are those individuals that own a business and who try to obtain value, through the initiation or increase in economic activity, through finding and utilizing new products, ways or markets to their advantage (N. Ahmad & Hoffman, 2007).

Performance measurement refers to the measurement of performance of an activity or part of a firm, for example operating income, product quality, or customer satisfaction (Adhikari, Beyene, Sam, & Haynes, 2005). Consequently, this study focuses on a wide use of performance measurement, including measurements of both financial and non-financial nature. Performance measures are the specific numbers or quantities used to present concentrated information about firm performance received from the measurement of activities or parts of the firm (Neely, Gregory, & Platts, 2005).

Effectiveness refers to the extent the result or output achieved, meet the desired goals or objectives (Child, 1972).

B. Reasons for Developing Performance Index

To achieve sustainable business success in the demanding world marketplace, a company must use relevant performance measures (Ghalayini & Noble, 1996). The researcher (Neely, 1999) inquired on the reasons why business performance measurement becomes so attractive and hot topic to most organizations, and thus outline them as: the changing nature of work; increasing competition; specific improvement initiatives; national and international awards; changing organisational roles; changing external demands; and the power of information technology.

The DPI can be a useful guide along with other enablers and the result variable in combination to guide manufacturers reallocate its support and focus to different distributors (Sharma, Sahay, & Sachan, 2004). (Neely, 1999) described the phenomenon of the performance measurement revolution, how it came about, the genesis, the current status and the way

forward. In essence, this paper has argued that there are four fundamental questions that research in business performance seeks to address:

- 1) What are the determinants of business performance?
- 2) How can business performance be measured?
- 3) How to decide which performance measures to adopt? and
- 4) How can the performance measurement system be managed?

C. How Can Business Performance be Measured

Denmark is one country that strived to achieve the attainment of its 2015 goal of a highly competitive economy through raising a pool of high growth firms as one of the criteria to measure their performance by looking into the growth and job creation impact (N. Ahmad & Hoffman, 2007).

(McKelvie, Wiklund, & Davidsson, 2006) also find that for smaller firms, almost all of their growth comes from organic growth, while the converse is true for the largest firms. That is, large firms primarily grow via acquiring others, whereas small firms grow organically. In other words, the creation of new jobs for society is negative for large firms as they simply “add” jobs via acquisitions instead of creating them internally (McKelvie et al., 2006).

(Othman & Rauf, 2009) the school performance index (SPIn) was developed in order to measure the education criteria for performance excellence in schools. The introduction of SPIN as a new instrument for school self-evaluation is an important start in developing a more holistic approach to primary school evaluation in Malaysia. SPIN is a simple but comprehensive evaluation index that takes into consideration feedback from all stakeholders: school management and administrator, teachers, students and parents teachers association. The school performance index (SPIn) is divided into four main categories as follows:

- 1) Leadership;
- 2) Measurement;
- 3) Analysis and knowledge management; and
- 4) Strategic planning and examination results.

According to the (Masterplan, n.d.) which focuses on increasing the growth of SMEs via creativity and strategies for increasing productivity, that could ultimately promote the achievement of high income status for Malaysia come 2020 (SME, 2016). Indicators used by SME CORp in their performance include:

- 1) Sales Turnover
- 2) Pre-tax Profit
- 3) Averaged Selling Price
- 4) Export Sales
- 5) Production (manufacturing & agric)
- 6) Domestic Sales

Similarly, lessons learnt from the outcome of the findings would lend benefit to the stakeholders and Bumiputera

individuals to know better about the SOP of others and replicate from the success of industry leaders. The study would provide input for the executive decision makers on what competitive business plans and policies to employ and execute.

The study aims to provide new knowledge of the performance measurement in the context of Bumiputera entrepreneurship. As this study happens to be the first focusing on developing Bumiputera entrepreneurs’ performance index, thus, a major contribution of this is the generating on of knowledge of Bumiputera. Consequently, the outcome of the research may be taken as input for future research, to serve as guide to raise hypotheses to be tested on.

IV. CONCLUSIONS

The objective of this study is to explore the performance index for Manufacturing Industries Bumiputera Entrepreneurs (MIBE). Using this performance index, the government will be able to use this index in order to have a stand on whether to continue with the support or make necessary adjustments. From the study it is found that the identified measures of performance index are essential and must be included in the study to carry out government evaluation. Due to these measures one can be able to identify the level of extent by which successful implementation of MIBE is carried out or not. The main impartial of this research was to help the government agencies in Malaysia to promote, encourage and carry out economic and community development in the federal, especially in rural areas. More than that, they also need to run all efforts, especially the development of trade and corporate enterprises and marketing of goods output, conduct research and training for Bumiputera Entrepreneur. Finally to promote the above business with the help of capital, lending and others. These measures will ultimately guide the agencies to extract the results of performance index implementation and guide them about the area in which its implementation appears weak.

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REFERENCES

- [1]. Abdullah, S. (2007). Peranan MARA Dalam Memperkasa Usahawan.pdf. *My Unimap*.
- [2]. Adhikari, N. K. J., Beyene, J., Sam, J., & Haynes, R. B. (2005). Effects of Computerized Clinical Decision Support Systems on Practitioner Performance. *Journal of American Medical Association*, 293(10), 1223–1238. <https://doi.org/10.1001/jama.293.10.1223>
- [3]. Ahmad, N. H., & Seet, P. S. (2009). Understanding business success through the lens of SME founder-owners in Australia and Malaysia. *International Journal of Entrepreneurial Venturing*, 1(1), 72. <https://doi.org/10.1504/IJEV.2009.023821>
- [4]. Ahmad, N., & Hoffman, A. (2007). A framework for addressing and measuring entrepreneurship. *Oecd*, 2(November), 1-4,6-21,23,25-29,31-36. <https://doi.org/10.1787/243160627270>

- [5]. Alom, F., Abdullah, M. A., Moten, A. R., & Azam, S. M. F. (2016). Success factors of overall improvement of microenterprises in Malaysia: an empirical study. *Journal of Global Entrepreneurship Research*, 6(1), 7. <https://doi.org/10.1186/s40497-016-0050-2>
- [6]. Barnard, K. E., Bee, H. L., & Hammond, M. A. (1984). Developmental changes in maternal interactions with term and preterm infants. *Infant Behavior and Development*, 7(1), 101–113. [https://doi.org/10.1016/S0163-6383\(84\)80026-0](https://doi.org/10.1016/S0163-6383(84)80026-0)
- [7]. Brocal, F., Sebastián, M. A., & González, C. (2019). *Advanced Manufacturing Processes and Technologies. Management of Emerging Public Health Issues and Risks* (Vol. 0). <https://doi.org/10.1016/B978-0-12-813290-6.00002-0>
- [8]. Challis, D., Clarkson, P., & Warburton, R. (2006). *Performance Indicators in Social CARE for Older People. Routledge* (Vol. 91).
- [9]. Chen, F. H., Hsu, T. S., & Tzeng, G. H. (2011). A balanced scorecard approach to establish a performance evaluation and relationship model for hot spring hotels based on a hybrid MCDM model combining DEMATEL and ANP. *International Journal of Hospitality Management*, 30(4), 908–932. <https://doi.org/10.1016/j.ijhm.2011.02.001>
- [10]. Child, J. (1972). Organizational Structure, Environment and Performance: The Role of Strategic Choice. *Sociology*, 6(1), 1–22. <https://doi.org/10.1177/003803857200600101>
- [11]. Clarkson, P., & Challis, D. (2006). Performance Measurement in Social Care: A Comparison of Efficiency Measurement Methods. *Social Policy and Society*, 5(04), 461. <https://doi.org/10.1017/S1474746406003174>
- [12]. Enos, D. D. (2017). *Performance Improvement (Making it Happen second edition). Auerbach Publications* (Vol. 91).
- [13]. Federal Constitution, 1957. (1957). FEDERAL CONSTITUTION 1957 (Reprint 2010), (November), 450. <https://doi.org/JW51622118-09-2010>
- [14]. Fried, H. O., & Tauer, L. W. (2015a). An entrepreneur performance index. *Journal of Productivity Analysis*, 44(1), 69–77. <https://doi.org/10.1007/s11123-015-0436-0>
- [15]. Fried, H. O., & Tauer, L. W. (2015b). An entrepreneur performance index. *Journal of Productivity Analysis*, 44(1), 69–77. <https://doi.org/10.1007/s11123-015-0436-0>
- [16]. Ghalayini, A. M., & Noble, J. S. (1996). The changing basis of performance measurement. *International Journal of Operations and Production Management*, 16(8), 63–80. <https://doi.org/10.1108/01443579610125787>
- [17]. González-Benito, J., Suárez-González, I., & Spring, M. (2000). Complementarities between JIT purchasing practices: An economic analysis based on transaction costs. *International Journal of Production Economics*, 67(3), 279–293. [https://doi.org/10.1016/S0925-5273\(00\)00032-3](https://doi.org/10.1016/S0925-5273(00)00032-3)
- [18]. Hirschfeld, R. M. a, Petukhova, M., Kessler, R. C., Merikangas, K. R., Akiskal, H. S., Angst, J., ... Kessler, R. C. (2007). Lifetime and 12-month prevalence of bipolar spectrum disorder in the National Comorbidity Survey replication. *Archives of General Psychiatry*, 64(5), 543–552. <https://doi.org/10.1001/archpsyc.64.5.543>
- [19]. Lukas, S., & Basuki, B. (2015). Implementation of Good Corporate Governance. *The International Journal of Accounting and Business Society* 47, 23(1), 1–25.
- [20]. Masterplan, S. (n.d.). *Ringkasan Pelan Induk PKS*.
- [21]. Mattila, P., & Åhlqvist, M. (2001). *Performance Measurement in Entrepreneurial Organisations*.
- [22]. McKelvie, A., Wiklund, J., & Davidsson, P. (2006). A Resource - Based View on Organic and Acquired Growth. In *Entrepreneurship: Frameworks And Empirical Investigations From Forthcoming Leaders Of European Research Emerald Group Publishing Limited.*, 9, 175–194.
- [23]. Mungaray Lagarda, A., Feitó Madrigal, D., & Taxis Flores, M. (2016). Factors associated with learning management in Mexican micro-entrepreneurs. *Estudios Gerenciales*, 32(141), 381–386. <https://doi.org/10.1016/j.estger.2016.10.003>
- [24]. Murphy, G., Trailer, J., & Hill, R. (1996). Measuring Research Performance in Entrepreneurship. *Journal of Business Research*, 36(1), 15–23. [https://doi.org/10.1016/0148-2963\(95\)00159-X](https://doi.org/10.1016/0148-2963(95)00159-X)
- [25]. Mynors, D. J., & Loose, M. (2003). Increasing yield during the manufacture of semi-finished extruded products. *Journal of Materials Processing Technology*, 135(2-3 SPEC.), 247–252. [https://doi.org/10.1016/S0924-0136\(02\)00904-4](https://doi.org/10.1016/S0924-0136(02)00904-4)
- [26]. Nadzri, S., Shamsudin, S., Firdaus, M., & Sabri, M. (2014). Faktor-Faktor Penyumbang Kepada Kejayaan dan Kegagalan Perusahaan Kecil dan Sederhana (PKS) Bumiputera di Malaysia. In *Synergizing Knowledge on Management and Muamalah* (pp. 978–983).
- [27]. Naman, J. L., & Slevin, D. P. (1993). Entrepreneurship and the Concept of Fit: Model and EMpirical Tests. *Strategic Management Journal*, 14(2), 137–153.
- [28]. Neely, A. (1999). The performance measurement revolution: why now and what next? *International Journal of Operations & Production Management*, 19(2), 205–228. <https://doi.org/10.1108/01443579910247437>
- [29]. Neely, A., Gregory, M., & Platts, K. (2005). Performance measurement system design: A literature review and research agenda. *International Journal of Operations and Production Management*, 25(12), 1228–1263. <https://doi.org/10.1108/01443570510633639>
- [30]. Newbert, S. (2011). Technology Entrepreneurship and Policy: In Memory of Bruce A. Kirchoff. *Technovation*, 31(8), 347–348. <https://doi.org/10.1016/j.technovation.2011.06.003>
- [31]. Othman, R., & Rauf, F. A. (2009). Implementing school performance index (SPIn) in Malaysian primary schools. *International Journal of Educational Management*, 23(6), 505–522. <https://doi.org/10.1108/09513540910981032>
- [32]. Schaper, M. (2010). Making Ecopreneurs : Developing Sustainable Entrepreneurship. *British Library Cataloguing in Publication Data*, (February), 1–321. <https://doi.org/10.1108/13552551211228052>
- [33]. Scheepers, M. (2007). Entrepreneurial intensity: a comparative analysis of established companies in South Africa. *South African Journal of ...*, 10(2), 238–255. Retrieved from http://reference.sabinet.co.za/sa_publication_article/ecoman_v10_n_2_a8
- [34]. Sharma, D., Sahay, B. S., & Sachan, A. (2004). Modelling distributor performance index using system dynamics approach. *Asia Pacific Journal of Marketing and Logistics*, 16(3), 37–67. <https://doi.org/10.1108/13555850410765221>
- [35]. Shea, R. (2015). Announcing Entrepreneur 360 , Our Index of the Most Entrepreneurial Companies. Retrieved from <https://www.entrepreneur.com/article/240628>
- [36]. Shome, A., & Hamidon, S. (2009). The Contradiction of Entrepreneurship through Affirmative Action: The Case of Malaysia. *The Copenhagen Journal of Asian Studies*, 27(1), 38–66. Retrieved from rauli.cbs.dk/index.php/cjas/article/view/2217
- [37]. SME, A. R. (2016). *SME Annual Report 2015/16. SME Annual Report 2015/2016*. Retrieved from <http://www.smecorp.gov.my/images/Publication/Annual-report/SME AR 2015-16 English Final web.pdf>
- [38]. Town, G. U. of C. (2017). The Entrepreneurial Performance Index. Retrieved from <http://home.intekom.com/gsbuct/conf.htm%0AThe>
- [39]. Wang, B. (2018). The Future of Manufacturing: A New Perspective. *Engineering*, 4(5), 722–728. <https://doi.org/10.1016/j.eng.2018.07.020>
- [40]. Wiklund, J. (1998). Small Firm Growth and Performance Entrepreneurship and Beyond. *Doctoral Thesis - Jönköping International Business School*, 1–361.
- [41]. Zulkifli, C. M., Omar, C., Mohd, N., & Azmi, N. (2015). Factors Affecting the Success of Bumiputera Entrepreneurs in Small and Medium Enterprises (SMEs) in Malaysia. *International Journal of Management Science And Business Administration*, 1(9), 40–45. <https://doi.org/dx.doi.org/10.18775/ijmsba.1849-5664-5419.2014.19.1004>
- [42]. Zulkifli, M., & Corresponding, M. (2010). Small and Medium Enterprises (SMEs) Competing in the Global Business Environment: A Case of Malaysia. *Challenges*, 3(1), 66–75. Retrieved from <http://journal.ccsenet.org/index.php/ibr/article/view/3893>