

# Does Positional Advantage has Impact on School Performance ? Evidence From Middle Vocational School

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## ABSTRACT

An organization can outperform competitors only if it can establish a strategic position, that is, a difference that can be maintained. This difference is defined as a positional *advantage*. In this study, positional advantage is defined as utilizing internal resources and organizational capabilities as a valuable source of competitive advantage to beat competitors and improve company performance. This study aims to examine the first-order positional advantage indicators and examine the effect of positional advantage on institutional performance in Vocational High Schools (SMK) in Indonesia. The analytical technique used in this research is *partial least square* (PLS-SEM). The population in this study was 358 SMK in West Java Province, Indonesia. The intended respondent is the Principal at the SMK. The results of this study reveal that there is a positive influence between positional advantage and institutional performance.

**Keywords:** *positional advantage, school performance, middle vocational school*

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## I. INTRODUCTION

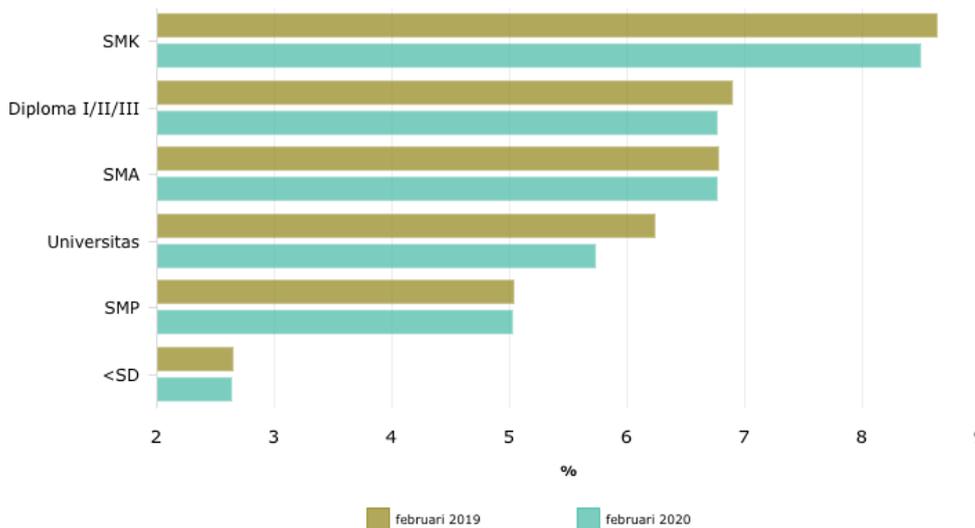
Education has a decisive role for the progress of a nation. The role of education in question is in terms of developing the nation's competitiveness, reducing poverty, and increasing economic growth (Winigsih et al., 2017). To achieve this, the Indonesian government has prepared several choices of secondary

schools for students as alternative education, including Senior High School (SMA), Vocational High School (SMK), Madrasah Aliyah (MA), Extraordinary High School (SMALB), and Paket C (Sumantri & Sa’ud, 2013).

Figure 1. Open Unemployment By Education Level (February 2019-2020)

**Tingkat Pengangguran Terbuka Menurut Jenjang Pendidikan (Februari 2019-2020)**

Sumber : Badan Pusat Statistik (BPS), 5 Mei 2020



Source: (*Rate Vocational Graduates, Highest Unemployment Rate | Databoks, nd*)

Based on the data above, it can be seen that the highest number of unemployed comes from SMK graduates who control almost 9% of the population. the number of unemployed in Indonesia. This is an indication that the world of secondary education, especially SMK, is required to be able to improve its education system in the hope of producing graduates who are able to compete in the world of work and in the future are expected to be able to reduce the unemployment rate in Indonesia. The existence of Vocational High Schools (SMK) is the front line in welcoming the era of the industrial revolution that we are facing. Therefore, there are a number of steps that must be prepared for current vocational students, such as improving the quality or ability of vocational school graduates to face the challenges of industry 4.0. SMK as a formal educational institution that is expected to be able to support the acceleration of national development must be sensitive to its potential. Vocational and curriculum adjustments are absolutely necessary so that there is relevance between education in vocational schools and the field of work. There must

be guidelines and drivers so that SMK can map future challenges and needs. In facing the challenges of the 4.0 revolution, Vocational High Schools must continue to develop dynamically and be able to provide competency-based education. It takes a high commitment so that Vocational High Schools are able to produce graduates who are competent in the fields of data literacy, technological or digital literacy, and human literacy as productive and professional workers who are recognized nationally and internationally.

Based on basic education data (Dapodik), the current total number of SMK is 14 thousand units, 25% of which are state SMK and the rest are private SMK, while the number of students is more than 5 million students, with 9 areas of expertise, 49 skill programs, and 146 skill competencies. These numbers are not only an indicator of the success of providing access to secondary education, but also reflect the magnitude of the challenge for the government to ensure the provision of quality education in accordance with national education standards (*Realita Kualitas Pendidikan SMK Di Indonesia - Kompasiana.Com*, n.d.).

In order for the Indonesian education industry to be able to compete globally, it is time for SMK as an institution to produce human resources in the middle-level vocational field to respond quickly to the rapid and dynamic development of an information-based economy with the concept of 21st century education ("21st Century Skills"). Jobs in an information-based global economy demand the importance of new competencies that are able to keep pace with the rapid development of the industry. Education is directed not only at the stage of knowing (Understanding), but must be able to achieve Higher Order Thinking Skills, namely applying (Applying - being useful), analyzing (Analyzing), evaluating (Evaluating - Critical Thinking) and solving problems (creating / problems). solving). Education is carried out with the aim of achieving human resources with the ability to think which is formulated as "Higher Order Thinking Skills" (HOTS) aimed at forming human resources with the ability to innovate and be able to solve problems. Aspects of Cognitive, Affective (Behavior/Attitude) and Psychomotor must be delivered as a unit in learning which as the end result is human resources that are innovation-oriented and able to solve problems. This is evidenced by professional attitudes and

behavior, hardworking, communicative, able to work together in a team, efficient, honest, fair, and expert in their field. SMK in Indonesia face various challenges because after all educational institutions need to survive using the funds they manage, or from their business processes, especially for private SMK. An organization can outperform competitors only if it can establish a strategic position, that is, a defensible difference (Porter, 1997). This difference is defined as a positional *advantage*, which refers to the application of low cost and/or differentiating advantages over competitors (Porter, 1985). Positional advantage, created through special abilities, will improve organizational performance (Bridson et al., 2013). In this case, SMK is expected to be able to have a strong positional advantage in order to be able to compete with other secondary education institutions.

Positional advantage can be conceptualized as a superior market position that captures providing superior customer value and achieving lower relative costs (Carbonell & Rodriguez, 2006). In this study, positional advantage is defined as utilizing internal resources and organizational capabilities as a valuable source of competitive advantage to beat competitors. Resources are factors owned or controlled by the company and capability is the company's capacity to use these resources (Amit & Schoemaker, 1993). Experts argue that physical, human, and organizational resources can enable the achievement of a sustainable competitive advantage and help improve performance (Barney, 1991; Lonial & Carter, 2015). In this case, intangible organizational resources and capabilities such as Entrepreneurial Orientation (EO), Market Orientation (MO), Human Capital (HC), Innovativeness (I), and Organizational Learning (OL) if exploited effectively, should facilitate the development of excellence. competitive (Hult & Ketchen, 2001; Jogaratnam, 2017; Lonial & Carter, 2015) and thus ultimately able to improve performance, which in this study is the performance of SMK institutions.

Based on the results of previous studies, some experts argue that there is a positive influence between resources and performance such as research conducted by Carbonell & Rodriguez (2006); Huang & Lee (2012); Hult & Ketchen (2001); Lee et al. (2015); Rivard et al. (2006); Santos-Vijande et al. (2012) and Jogaratnam (2017).

However, according to Hult & Ketchen (2001) and Jogaratnam (2017), It has long been argued that the analysis of individual components or single resources is not sufficient because the combination of multiple resources is more likely to explain performance. Jogaratnam therefore emphasizes that there is a need to clarify 'how' organizational resources affect performance. Based on the Jogaratnam and Hult research, the main purpose of this study is to examine the RBV perspective that the combination of company resources and capabilities (eg MO, EO, HC, I and OL) helps determine positional advantage (PA) and that PA in turn increases company performance (Barney, 1991), in this research is the performance of SMK institutions.

## II. LITERATURE REVIEW

The Resources based View (RBV) is derived from Penrose's research conducted in 1959 (Penrose & Penrose, 2009), in which the company is described as a collection of resources. Penrose argues that firm growth is facilitated and constrained by management's search for the best use of available resources, whereas Barney (1991) provides an appropriate and formal description of this perspective (Rivard et al., 2006). RBV shows that firms are endowed with different pools of resources and that firms can achieve superior performance by exploiting these resource pools effectively (Jogaratnam, 2017). Resources include assets, capabilities, processes, attributes, and knowledge owned by the company, and which can be used to formulate and implement competitive strategies. The resource-based view relies on two fundamental statements, namely heterogeneity of resources (resources and capabilities owned by firms may differ), and immobility of resources (Mata et al., 1995). If the resources owned by a company are also shared by some of its competitors (there is no heterogeneity), these resources cannot contribute to competitive advantage. Heterogeneity is a necessary condition for obtaining at least a temporary competitive advantage (Rivard et al., 2006).

According to RBV, competitive advantage is influenced by resources that are valuable, unique, rare and difficult to imitate (Barney, 1991). In addition, resource-based theory suggests that a firm's resources and capabilities are not productive in isolation (Pertusa-Ortega et al., 2010), but rather, they act as "sources" of competitive advantage. Thus, organizational capabilities such as Entrepreneurial Orientation, Market Orientation, Human Capital, Innovativeness and Organizational Learning

may not be valuable in isolation, but are internal capabilities, which, if exploited effectively, can contribute to the attainment of competitive advantage (Hult & Ketchen, 2001).

Positional advantage theory (Day & Wensley, 1988) proposes that a firm's unique resources and capabilities result in a positional advantage in the marketplace. Although initially conceptualized as a superior market position resulting from the creation of greater customer value or relatively low costs, positional advantage has taken different forms and has been defined operationally to fit the given context of study (Jogarathnam, 2017). For the purpose of this study, we follow previous research (eg (Hult & Ketchen, 2001; Jogarathnam, 2017; Lonial & Carter, 2015), and consider positional advantage as an individual latent construct (Jöreskog & Sörbom, 1996) which collectively determined by a combination of organizational capabilities. Latent variables are hypothetical constructs that combine two or more observed variables. This research model adapts the research model conducted by Jogarathnam (2017) and Hult & Ketchen (2001) where the model (Figure 2) which connects the five abilities (Human Capital, Market Orientation, Entrepreneurial Orientation, Innovativeness, Organizational Learning) with PA not being causal. In other words, the five abilities are not expected to affect positional advantage, but they are expected to be factors (first-order indicators) that collectively contribute to development of these latent constructs (Hult & Ketchen, 2001; Jöreskog & Sörbom, 1996). Thus, Entrepreneurial Orientation, Market Orientation, Human Capital, Innovativeness, and Organizational Learning are considered as five potential abilities (i.e. observable measures or first-order indicators) that collectively produce positional advantage (Hult & Ketchen, 2001). Although previous research has considered various indicators, Entrepreneurial Orientation, Market Orientation, Human Capital, Innovativeness, Organizational Learning are the focus of this research because these indicators have been shown to directly affect performance in previous studies (Jogarathnam, 2017).

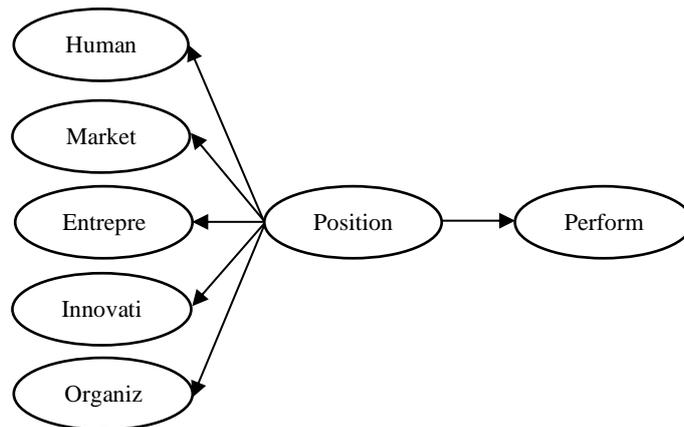


Figure 2 Conceptual Models and Hypotheses

Source: Jogaratnam (2017) and (Hult & Ketchen, 2001)

### Human Capital (HC)

Human capital should be seen as an enterprise-level resource that can be leveraged to achieve a sustainable competitive advantage (Barney, 1991; Jogaratnam, 2017; Nyberg et al., 2014). HC results from practical work-related education, experience, and learning (Davidsson & Honig, 2003; Unger et al., 2011). The strategy literature has seen human capital as a resource that affects a firm's ability to compete. From the perspective of senior managers, human capital is considered an important element of institutional operations. This means that certain types of resources are more important in achieving competitive advantage regardless of the type of industry/sector. The core functions of higher education institutions are learning, teaching, research, and community service. This core function can only be performed effectively and efficiently when high-quality academic and non-academic administrative staff are hired and retained in an educational institution (Shattock, 2010). Therefore, human capital must be managed in an integrated manner to achieve competitive advantage. This view is also confirmed by Welsh & Metcalf (2003) who state that excellent institutional performance depends on faculty and staff involvement, and support for institutional effectiveness activities (Huang & Lee, 2012). Based on the conclusions obtained from several previous studies, therefore in this study the authors expect the following hypothesis:

H1: Human Capital is a positive first-order indicator of Positional Advantage

### **Market Orientation (MO)**

Market orientation is a marketing management concept that facilitates the company's ability to provide superior products and services to internal and external customers. This is especially important in today's dynamic market environment where competition and uncertainty are increasing (Lee et al., 2015). Meanwhile, Slater & Narver (1995) define market orientation as a market-oriented company, which seeks to understand the latent and expressed needs of customers, and develop superior solutions to these needs. Among the company's capabilities, market orientation most clearly highlights the need for organizational culture to be customer and competitor oriented. The conceptualization carried out by Day (2000) states that market-oriented companies have processes to collect market intelligence about customers and competitors and integrate it with strategic decision-making processes. He suggests that market intelligence comes from inside-out processes linked to spanning processes (eg, strategic planning) that facilitate integration and implementation (Hult & Ketchen, 2001). According to Kohli & Jaworski (1990), market orientation refers to the acquisition of market intelligence across the company, the circulation of company-wide material across departments, and company-wide reactions to it. In other words, this means that companies must first identify the various needs of market participants such as competitors, consumers, and suppliers, learn how to respond effectively to market changes, and work diligently to create products and services that will provide a competitive advantage (Lee et al., 2015). In summary, there is ample evidence supporting the relationship between MO and performance; however, the strength and significance of these associations is expected to vary by industry context and firm size. In addition, MO is considered a special ability and a potential source of positional advantage. Based on the conclusions obtained from several previous studies, therefore in this study the authors expect the following hypothesis:

H2: Market Orientation is a positive first-order indicator of Positional Advantage

## **Entrepreneurial Orientation (EO)**

Entrepreneurship refers to the pursuit of new market opportunities and renewal of existing areas of operation (Naman & Slevin, 1993). EO is conceptualized as a uni-dimensional construct and the three most commonly studied EO dimensions are innovation, proactiveness, and risk taking (Miller, 1983). EO represents the company's overall tendency towards entrepreneurship (Miller, 2011; William J Wales et al., 2013). Entrepreneurial-oriented companies monitor market trends and act quickly to take advantage of opportunities that arise ahead of the competition. They are proactive in bringing new product/service combinations to market and take calculated business risks as they innovate and rejuvenate companies to outpace the competition (e.g. Covin & Slevin (1989). Taken together, the combination of these capabilities gives them a competitive advantage (Jogaratnam, 2017).

Although EO was initially conceptualized as having universal relevance, subsequent studies have shown that the nature of EO and its effect on performance differ across contexts (e.g. Covin & Slevin (1989)). On the basis of previous studies, Jogaratnam, (2017); Rauch et al., (2009) undertook further studies of intervention constructs to help reduce the considerable explained variance in the relationship. In addition, there is also interest for the study of intervention variables to enrich our understanding of the 'how' and 'why' of EO improving performance in industry settings or certain types of companies (e.g. William John Wales (2016; Wiklund & Shepherd (2011)). In this study, entrepreneurial orientation in the context of curriculum and organizational innovation is expected to be able to provide a positional advantage for vocational institutions so as to improve performance. Based on the conclusions obtained from several previous studies, therefore in this study the authors expect the following hypothesis:

H3: Entrepreneurial Orientation is a positive first-order indicator of Positional Advantage

## **Innovativeness**

Innovation is an idea or item/new thing that does not exist or already exists but has not known by its adopters (Firman et al., 2019). Innovation is an important complement to entrepreneurship because organizations that pursue new opportunities, but are not innovative in meeting market demands, are unlikely to enjoy long-term success (Van de Ven & Polley, 1992). Innovation is present when the implementation of new ideas, products, or processes is supported by the company (Hurley & Hult, 1998). Then innovation alone does not guarantee success. For example, innovation can only improve outcomes if the organization is entrepreneurial, i.e. if the organization leverages innovation to enter new arenas or renew its presence in existing ones (Garud & Nayyar, 1994). To survive in a dynamic environment, organizations must be able to cope with increasing complexity and high-speed change (Brown & Eisenhardt, 1995). In this context, firms with the capacity to innovate will be able to respond to challenges more quickly and take advantage of new product and market opportunities better than non-innovative firms (Brown & Eisenhardt, 1995). Based on the conclusions obtained from several previous studies, therefore in this study the authors expect the following hypothesis:

H4: Innovativeness is a positive first-order indicator of Positional Advantage

### **Organizational Learning**

literature contains many different definitions of organizational learning according to the level of analysis as well as complexity and context. where organizational learning is used. There is no general definition of organizational learning that commands widespread acceptance (Miller, 1996). This is due to the influence of various perspectives and disciplines that lead to a lack of consensus in understanding (Salim & Sulaiman, 2011). Organizational learning is defined as an organization that has the ability to continuously improve its performance on an ongoing basis, as its members are committed and competent individuals who are able to learn and share knowledge at a superficial and substantial level for the organization (Jiménez-Jiménez & Sanz-Valle, 2011). Organizational learning is the basis for obtaining a sustainable competitive advantage and a key variable in improving organizational performance (Brockman & Morgan, 2003; Dodgson, 1993;

Fiol & Lyles, 1985; Garvin, 1994; Gayawali et al., 1997; Nevis et al., 1997). Companies that are able to learn have a better chance of sensing events and trends in the market (Day, 2000; Sinkula et al., 1997; Tippins & Sohi, 2003). As a result, learning organizations are typically more flexible and quicker to respond to new challenges than competitors (Day, 2000; Slater & Narver, 1995), which enables firms to maintain long-term competitive advantages (Dickson, 1996). In today's rapidly changing economic conditions and business competition, many organizations are trying to survive and stay competitive. To develop and do so, organizational learning (OL) has been considered as one of the strategic ways to secure long-term organizational success (Liao & Wu, 2009). Organizational learning is seen as a dynamic process based on implicit knowledge that moves between different levels of action, from the individual to the group level, and then to the organizational level (Crossan et al., 1999; Huber, 1991). To achieve and maintain competitive advantage in a rapidly changing business environment, organizations must be able to increase their learning capacity (Varela, 1997). The measurement indicators of organizational learning are the acquisition of technology, new development processes, learning something new, managerial and organizational, knowledge and skills, increasing knowledge for efficiency, and the ability to find solutions (Firman et al., 2019). Based on the conclusions obtained from several previous studies, therefore in this study the authors expect the following hypothesis:

H5: Organizational Learning is a positive first-order indicator of Positional Advantage

### **Positional Advantage (PA)**

According to RBV, some unique assets and abilities are more important than those others, are more challenging to duplicate, and thus help differentiate their owners from competitors (Barney, 1991). It is important to underline that the relationship between human capital, market orientation, and entrepreneurial orientation and positional advantage is not causal. These capabilities are not expected to "cause" profits, but rather are predicted as elements that collectively contribute to the development of these latent and intangible constructs (Hult &

Ketchen, 2001). The resource-based view of the firm provides a theoretical basis for the model's expectation that high-level positional advantage will positively affect performance.

For the purposes of this study, EO, MO, HC, I, and OL are not considered to be unique independently, but together can produce a unique resource labeled positional advantage (Hult & Ketchen, 2001). In other words, the confluence of EO, MO, HC, I, and OL should collectively stimulate PA creation (Hult & Ketchen, 2001; Jogaratnam, 2017; Lonial & Carter, 2015). PA is thus viewed as a mechanism through which EO, MO, HC, I, and OL affect performance. In practical terms, PA is said to represent the unique skills and abilities used by an organization to increase barriers to entry and deter competitors' attempts to imitate (Lonial & Carter, 2015). PA in turn should produce superior performance. In this research, positional advantage is expected to be able to improve the performance of SMK institutions so that they have competitiveness among their competitors. Based on the conclusions obtained from several previous studies, therefore in this study the authors expect the following hypothesis:

H6: Positional Advantage is positively related to institutional performance.

### III. METHODS

#### Population and Sample

The population in this study was 358 SMK in West Java, Indonesia. The targeted respondents were 288 Principals of Vocational Schools in West Java. Data was collected through surveys sent via email to respondents. Data collection was carried out from January to September 2021.

To measure *Entrepreneurial Orientation*, an indicator adapted from (Jogaratnam, 2017) consisted of 6 indicators. To measure *Market Orientation*, an indicator adapted from (Jogaratnam, 2017) is used which consists of 10 indicators. To measure *Human Capital*, an indicator adapted from (Jogaratnam, 2017) is used which consists of 2 indicators. To measure *Innovativeness*, an indicator adapted from (Hurley & Hult,

1998) is used which consists of 5 indicators. To measure *Organizational Learning*, an indicator adapted from (Salim & Sulaiman, 2011) is used, which consists of 5 indicators. To measure Positional Advantage, an indicator adapted from (Carbonell & Rodriguez, 2006) consists of 3 indicators. To measure Institutional Performance used indicators adapted from (Huang & Lee, 2012) which consist of 4 dimensions and 14 indicators. Respondents were asked to fill in their level of agreement with 45 statements using 5 Likert scales.

**Data Collection and Analysis The**

Analytical technique used in this study is *partial least square (PLS-SEM)* to estimate the structural equation model (Chin, 1998; Hair et al., 2017). PLS-SEM has proven to be very useful for analyzing moderate to very complex models with relatively small sample sizes (Reinartz et al., 2009).

**RESULT**

**Validity Test**

At this stage, the validity test is carried out, namely construct validity. Construct validity testing can be done by paying attention to whether or not the correlation between constructs and construct indicators is strong, as well as weak relationships with other constructs. Construct validity consists of two parts, namely convergent validity and discriminant validity.

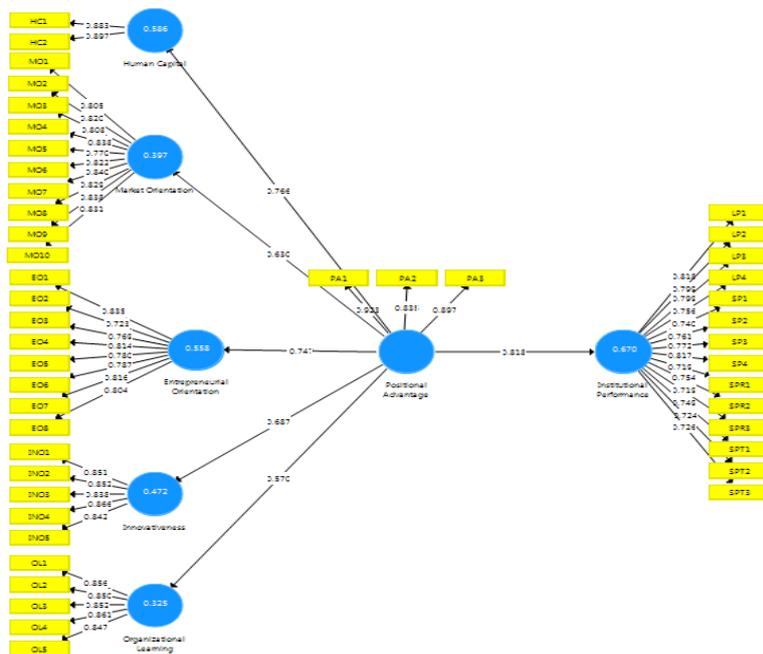


Figure 3. OuterModel

Convergent Validity Testing of each construct indicator according to Chin in Ghozali & Latan (2015), an indicator is said to be valid if its value is greater than 0,5. Convergent validity can be seen from the *loading factor* for each construct indicator. *The rule of thumb* used to assess convergent validity is that the value *loading factor* must be greater than 0.5. Based on the data processing carried out by the author, it can be seen that all values are *loading factor* above 0.5, so it can be concluded that all indicators in this study are valid.

Based on the results of the calculations carried out by the PLS Algorithm for the indicators in table 1, the AVE value and the AVE square value are obtained as in table 1

Table 1 Results of *Average Variance Extracted (AVE)*

| Variable                       | Average Variance<br>Extracted (AVE) | Description |
|--------------------------------|-------------------------------------|-------------|
| Positional Advantage           | 0.784                               | Valid       |
| Human Capital                  | 0.792                               | Valid       |
| Market Orientation             | 0.673                               | Valid       |
| Entrepreneurial<br>Orientation | 0.627                               | Valid       |
| Innovativeness                 | 0.722                               | Valid       |
| Organizational Learning        | 0.728                               | Valid       |
| Institutional Performance      | 0.580                               | Valid       |

Source: *SmartPLS Data Processing Results (2021)*

From table 1 it can be seen that the AVE value for all variables meets the requirements value, which is above 0, 5. The lowest AVE value is found in the variable *Institutional Performance* with a value of 0.580. By paying attention to the *loading factor* value and the AVE value in table 1, the data from this study can be declared to have met the requirements of the convergent validity test.

Another method to assess *discriminant validity* is to compare the value of *cross loadings* for each construct with the correlation between the construct and other constructs in the model. From the data processing carried out by the author, it shows that the value of the *cross loading* of each item on its construct is greater than the value of loading with other constructs. From these results, it can be concluded that there is no problem with *discriminant validity*.

### Reliability Test

After testing the construct validity, the next test is the construct reliability test which is measured by two criteria, namely *Composite Reliability (CR)* and *Cronbach's Alpha (CA)* from the indicator block that measures the CR construct were used to show good reliability. A construct is declared reliable if the value is *composite reliability*  $>0.7$

Table 2 *Composite Reliability (CR)*

| variable                    | Composite Reliability | Description |
|-----------------------------|-----------------------|-------------|
| Positional Advantage        | 0.916                 | Reliable    |
| Human Capital               | 0.884                 | Reliable    |
| Market Orientation          | 0.954                 | Reliable    |
| Entrepreneurial Orientation | 0.931                 | Reliable    |
| Innovativeness              | 0.929                 | Reliable    |
| Organizational Learning     | 0.930                 | Reliable    |
| Institutional Performance   | 0.951                 | Reliable    |

*Source: SmartPLS Output Data Processing*

Based on table 2, the test results *composite reliability* show a value  $> 0.7$ , which means the value for each instrument is reliable. A construct is declared reliable if the value of composite reliability and *Cronbach's Alpha*  $>0.6$

Table 3 Cronbach's Alpha

| Variable                       | Cronbach's Alpha | Description |
|--------------------------------|------------------|-------------|
| Positional Advantage           | 0.862            | Reliable    |
| Human Capital                  | 0.738            | Reliable    |
| Market Orientation             | 0.946            | Reliable    |
| Entrepreneurial<br>Orientation | 0.915            | Reliable    |
| Innovativeness                 | 0.904            | Reliable    |
| Organizational Learning        | 0.907            | Reliable    |
| Institutional Performance      | 0.945            | Reliable    |

Source: SmartPLS Output Data Processing

Based on table 3, the results of the test *Cronbach alpha* show a value  $> 0.7$ , which means the value on each instrument is reliable. After evaluating the model and found that each construct was eligible *Covergent Validity, Discriminant Validity, and Composite Reliability*, then the next one is the structural model evaluation that includes testing path coefficient, and  $R^2$ .

Inner models (*inner relations, structural models, and substantive theory*) describe the relationship between latent variables based on substantive theory. The structural model was evaluated using R-square for the dependent construct, Stone-Geiser Q-square test for the relevant predictive. The value of  $R^2$  can be used to assess the effect of certain independent latent variables, latent variables influence the dependent whether substantive (Ghozali, 2014). The higher the value of  $R^2$ , the greater the ability of independent latent variables can explain the dependent latent variables. Results of  $R^2$  of 0.67, 0.33, and 0.19 indicate that the model of "good", "moderate", and "weak" (Ghozali, 2014).

Table 4 R-squared coefficients

|                           | R Square | R Square Adjusted |
|---------------------------|----------|-------------------|
| Institutional Performance | 0.670    | 0.668             |

Source: SmartPLS output data processing

Based on table 4, the R-Square value for the Institutional Performance variable is 0.670, this means that 67% of variations or changes in Institutional Performance are influenced by Positional Advantage, while the remaining 33% explained by other reasons. Based on this, the results of the calculation of R2 show that R2 is good.

Besides looking at the R-square value, the model is also evaluated by looking at the predictive Q-square relevance for the constructive model. Q-square measures how well the observed values are generated by the model as well as the estimated parameters. The magnitude of  $Q^2$  has a value range of  $0 < Q^2 < 1$ , where 1 means that the model closer the better. The magnitude of  $Q^2$  is equivalent to the total coefficient of determination on the path analysis (*pathanalysis*). The value of  $Q^2 > 0$  indicates that the model has predictive relevance, otherwise if the value of  $Q^2 \leq 0$  indicates the model lacks predictive relevance. Calculation of  $Q^2$  total variable *Institutional Performance* can be seen in the table below:

Table 5 Q-square test

|                             | SSO       | SSE       | $Q^2 (= 1 - \text{SSE} / \text{SSO})$ |
|-----------------------------|-----------|-----------|---------------------------------------|
| Positional Advantage        | 864,000   | 864,000   |                                       |
| Human Capital               | 576 000   | 319 700   |                                       |
| Market Orientation          | 2,165.760 | 2,880.000 |                                       |
| Entrepreneurial Orientation | 1,552.410 | 2,304.000 |                                       |
| Innovativeness              | 1,440.000 | 981 491   |                                       |
| Organizational Learning     | 1,122.491 | 1,440.000 |                                       |
| Institutional Performance   | 4,032.000 | 2,603.209 | 0354                                  |

*Source: SmartPLS output data processing*

Value shows that the magnitude of  $Q^2$  of 0354, which has a value that is in the range  $0 < Q^2 < 1$ . Because the value of  $Q^2 > 0$  it is concluded that the model has predictive relevance.

### Effect Analysis

In PLS, each relationship is tested using a simulation using the method *bootstrapping* on the sample. This test aims to minimize the problem of abnormalities in research. The test results using the bootstrapping method from PLS are as follows:

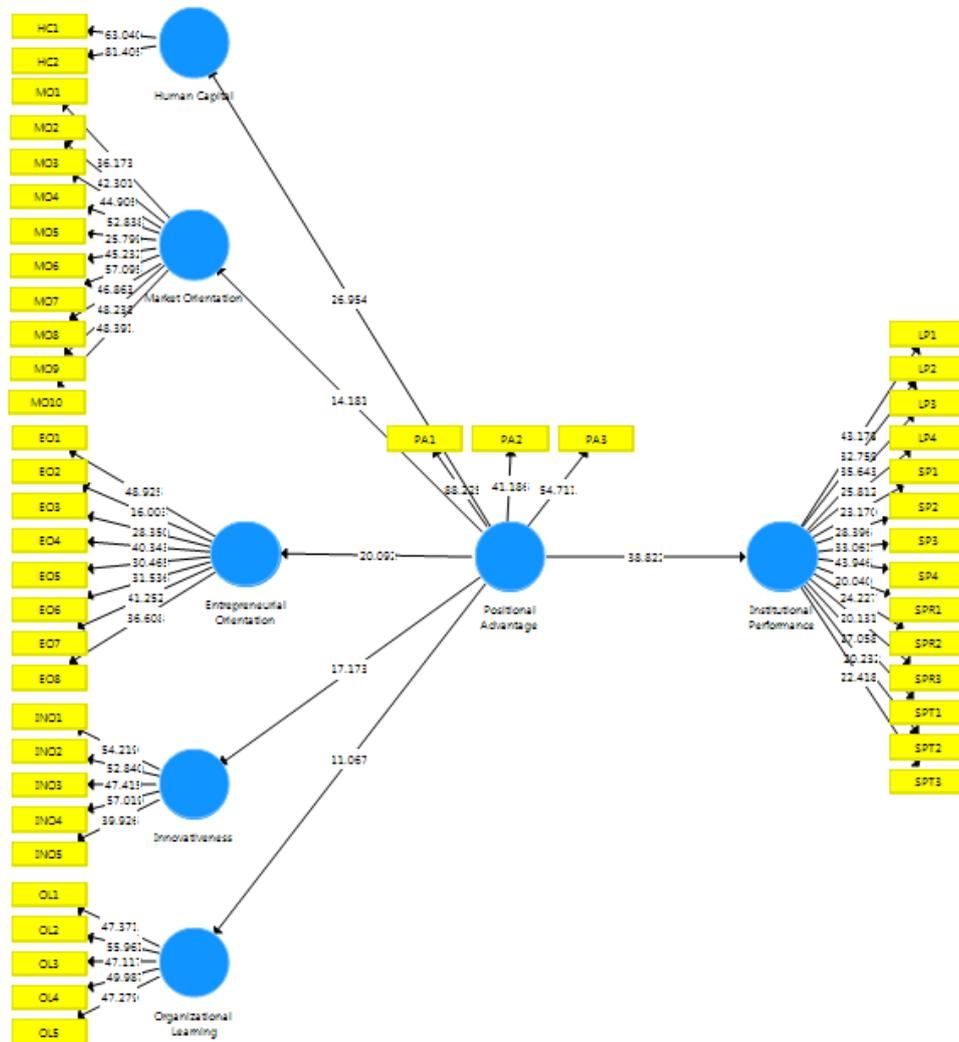


Figure 4 Inner Model

Source: *SmartPLS output data processing*

Meanwhile, the calculation results can be seen based on the direct influence below.

Table 6 Direct Effect

|                                       | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics ( O/STDEV ) | P Values |
|---------------------------------------|---------------------|-----------------|----------------------------|--------------------------|----------|
| Positional Advantage -> Human Capital | 0.766               | 0.765           | 0.028                      | 26.954                   | 0.000    |
| Positional Advantage -> Market        | 0.630               | 0.627           | 0.044                      | 14.181                   | 0.000    |

| Orientation   |                          |       |       |
|---|--------------------------|-------|-------|
| Positional Advantage -> Entrepreneurial Orientation | 0,749<br>0,037<br>20,092 | 0,747 | 0,000 |
| Positional Advantage -> Innovativeness              | 0,687<br>0,040<br>17,173 | 0,687 | 0,000 |
| Positional Advantage -> Organizational Learning     | 0,568<br>0,052<br>11,067 | 0,570 | 0,000 |
| Positional Advantage -> Institutional Performance   | 0,819<br>0,021<br>38,822 | 0,818 | 0,000 |

Source: SmartPLS output data processing

Based on the above table shows the results of the PLS calculation which states the direct influence between variables. It is said that there is a direct effect if the T Statistics value is  $> 1.96$  and it is said to have no effect if T Statistics  $< 1.96$ . Based on table 4.6, it can be stated as follows:

1. The variable *Human Capital* is a positive first-order indicator of *Positional Advantage* with T Statistics value of  $26.954 > 1.96$ .
2. The variable *Market Orientation* is a positive first-order indicator of *Positional Advantage* with T Statistics value of  $14,181 > 1.96$ .
3. The variable *Entrepreneurial Orientation* is a positive first-order indicator of *Positional Advantage* with T Statistics value of  $20,092 > 1.96$ .
4. variable *Innovativeness* is a positive first-order indicator of *Positional Advantage* with T Statistics value of  $17,173 > 1.96$ .
5. variable *Organizational Learning* is a positive first-order indicator of *Positional Advantage* with T Statistics value of  $11.067 > 1.96$ .
6. The variable *Positional Advantage* is positively related to institutional performance with T Statistics value of  $38,822 > 1.96$ .

#### IV. RESULTS

This section contains the summarized data, data analysis, and interpretation of the results. Include whether the research findings support or contradict previous studies.

## V. CONCLUSION AND SUGGESTION

In this study, we examine first-order indicators that positively affect positional advantage and the impact of positional advantage on institutional performance at Vocational High Schools (SMK) in West Java. The results of this study reveal that the first-order indicators in this study have a positive impact on positional advantage and positional advantage has a positive effect on increasing institutional performance.

Apart from the contributions made, like other research, this study also has limitations, especially related to the object of research. Where in this study only examined 358 vocational schools in the province of West Java, Indonesia. So it can not give a complete conclusion about the state of vocational institutions in a country. This can be a consideration for further research so that it can expand the scope of research objects and consider other types of educational institutions to enrich scientific literacy.

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