



# Portfolio Diversification on Value Creation and Its Implication on Business Performance

(A Study in the Non-Aero Airport Service Industry in Indonesia)

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**Abstract.** The present research aims to investigate the impact of business orientation and portfolio diversification on value creation and the implication on the business performance of the non-aero airport service industry in Indonesia. The study is conducted using a quantitative research approach. The observation is conducted on a cross-section/one-shot time horizon in 2023. The unit of analysis in this study is all airports in Indonesia, and 25 airports are taken as samples with consideration that the airports have sufficient complexity and have served commercial flights. Partial Least Square (PLS) is used to test the hypothesis. The results of hypothesis testing show that portfolio diversification has a dominant influence on value creation than business orientation; value creation has a significant effect on business performance, and value creation mediates the influence of business orientation and portfolio diversification on business performance. The results of this study propose managerial implications for the management of non-aero airport service industry companies in Indonesia to develop value creation based on portfolio diversification and business orientation to enhance their business performance.

**Keywords:** Business Orientation, Portfolio Diversification, Value Creation, Business Performance, Non-Aero Service Industry.

## 1 Introduction

The airport is an infrastructure for flight, passenger, and cargo operations. This role is termed the aeronautical function. To support these activities, non-aeronautical activities emerge. Airport management has undergone a radical transformation in reducing business operational boundaries by focusing its efforts on activities outside the core business, namely on "non-aviation" activities [1].

The airport management business model cannot use one generalisable business model for all airports (one size fits all). Each airport must be able to develop a variety of different business models to maximise airport performance. Non-aero income cannot depend on aero as long as management can manage the potential by attracting non-passengers to improve its performance. Aero-nautical activities include positioning and landing of aircraft for scheduled and charter flights, ground handling, and cargo services. At the same time, non-aeronautical activities include supporting airport facilities and management related to tenant service facilities such as food and beverage facilities, fashion goods facilities, banking facilities, and money changers.

Non-aeronautical income at PT Angkasa Pura II continues to increase every year. In 2010, non-aeronautical revenue was recorded at IDR 730 billion, and over ten years, it has increased by 629% to IDR 5,324 billion in 2019 [2]. This shows high growth opportunities for improving airport performance in non-aeronautical revenues. Efforts are needed to maintain and improve non-aeronautical performance. International airports are struggling to succeed in a highly competitive market to face new entrants who bring different business models, create new hubs, and continue to compete with leading traditional airports [3]. Companies can improve sustainable performance by identifying, managing, and measuring better sustainability triggers/drivers, as well as systems and structures that can be created to improve measurement performance [4].

The most crucial competency in the service economy is related to implementing sound value-creation systems aimed at redistributing the ability to increase value. [1]. In studies in the creative industries, an important part of the firm's value architecture is the ability to sense new value-creation opportunities [5]. On the other hand, by diversifying its portfolio, airports can create greater added value by offering various services and facilities such as retail, food and beverage, entertainment, hospitality, and conference services. This diversification enables the airport to attract and meet the needs of a diverse range of customers, creating a more complete and satisfying experience. The diversification of an organisation's portfolio involves investing in various assets and engaging in various venture businesses to prevent losses [6].

Most of the studies on portfolio diversification are carried out in the financial sector. [6] [7] [8] [9]. The phenomenon of portfolio diversification accounts for 68% of the variance in the financial performance of commercial banks in Kenya, and it is noteworthy that a majority of these banks have actively pursued portfolio diversification strategies, resulting in enhanced profitability and overall performance in recent times [7]. It is rare to find portfolio diversification studies in the non-aeronautical airport industry. One of them said that portfolio diversification could eliminate the potential risk of airline stock prices during a disease outbreak [10].

In addition, business orientation influences an organisation's approach to value creation. Different business orientations can lead to different strategies

for creating value. Business strategy service orientation is aimed at achieving company performance in the market to increase company profitability [11]. The enticing potential and significance of non-aeronautical operations at commercial airports naturally differ based on business opportunities determined by factors such as land, location, and assets. The presence of competition among airports is likely to stimulate the growth of supplementary non-aeronautical enterprises, which may result in different outcomes on airfare and infrastructure investment, contingent upon the specific governance framework of the airport [12]. This illustrates that the competitive environment can bring changes in business orientation to airport non-aeronautical activities.

Based on the description above, this research aims to test whether business orientation and portfolio diversification affect business performance directly or indirectly through value creation. This research is different from previous research because it involves testing portfolio diversification, business orientation, value creation, and business performance variables in Indonesia's non-aeronautical airport service industry.

## **2 Literature Review**

### **2.1 Business Orientation**

Service orientation business strategy includes three things, namely number of services, broadness of service offerings, and emphasis on services, which are aimed at achieving company performance in the market to increase company profitability [11]. The concept of service business orientation can be identified into three distinct dimensions: the number of services provided, the number of customers to whom these services are extended, and the level of emphasis placed on the provision of said services. The firm's service business orientation exhibits a positive relationship with these three dimensions [13]. Because the unit of analysis is the service industry, the business orientation variable includes the number of services offered, the number of customers, and the company's proactive emphasis on service [12] [13].

### **2.2 Portfolio Diversification**

In finance, a portfolio refers to a combination or amalgamation of distinct assets or securities. Portfolio theory offers a prescriptive framework for investors to guide their decision-making process when allocating their wealth to risky assets or securities [7]. Portfolio diversification refers to combining various assets within an organisation's portfolio to mitigate and minimise overall risk [15]. Portfolio diversification is influenced by three key factors: the number of assets chosen, the relationship among these assets, and the standard deviation of the selected assets [16]. Meanwhile, for this research, portfolio diversification is measured by the indicators of diversification by area and diversification by services.

### 2.3 Value Creation

The primary competency of utmost importance in the service economy pertains to the effective establishment and execution of a value-creation system to equitably redistribute the capacity to enhance value [1]. Within the aviation industry, the concept of value creation is intricate and multifaceted, encompassing various perspectives that consider the micro level, which includes customers and groups. The meso level pertains to the organisation, and the macro level involves stakeholders and supply chain networks [16].

From an organisational standpoint, value creation encompasses various aspects, such as introducing innovative production processes, activities, outcomes, advantages, differentiation, competitive advantage, profitability, and persistent prosperity achieved through sustainable development. Value creation is primarily identified in terms of 'convenience, new features, portfolio differentiation, efficiency, and 'sustainable growth and environment' [16]. Creating customer value is a company's effort to focus on customers by developing core competencies in the business domain and building collaborative networks with business partners [17]. The creation of activities and benefits shows the creation of customer benefits. Differentiation and excellence denote the business domain. The involvement of various perspectives, such as customers and groups, stakeholders, and supply chain networks, illustrates that companies can build business collaborations with their partners. Thus, the variable value creation in this study is built by three aspects: customer benefits, business domain, and business partners [17].

### 2.4 Business Performance

Sustainability performance reflects an ultimate target of corporate activities in a series of corporate responsibilities by the standards set for corporate performance about stakeholder expectations [18]. In measuring business performance at airports, airport managers recognise efficiency measures as a suitable guide in strategic planning and in analysing the competitive position of organisations in the airport industry [19].

Productivity measures serve as benchmarks and guidelines in strategic planning, internal analyses of operational efficiency and effectiveness, and evaluating an organisation's competitive standing within an industry. Performance can be evaluated by considering financial or operational efficiency [19]. On the other hand, most concessionaires at large airports currently generate fees based on a percentage of the concessionaire's total annual sales or turnover [20]. More and more state-owned airports are now operating with a commercial approach, which tends to achieve profitability by being more attractive to non-aeronautical sources of income [21]. Based on this description, the non-aero airport service business performance variables include the elements: sales, profit, efficiency, and productivity.

## 2.4 Hypothesis Development

The level of competition between airports will encourage the development of non-aeronautical complementary businesses [12]. The most crucial competency in the service economy relates to implementing value-creation systems aimed at redistributing the ability to increase value [1]. Adding value can be done, among others, by diversifying portfolios at airports, which can explain changes in financial performance [7]. In addition, different business orientations can lead to various strategies for creating value, which are aimed at achieving company performance in the market to increase company profitability [11]. Based on this understanding, the hypothesis is arranged as follows:

H1: Business orientation influences value creation. H2: Portfolio diversification influences value creation

H3: Business orientation influences business performance. H4: Portfolio diversification influences business performance. H5: Value creation influences business performance

H6: Business orientation affects business performance through value creation. H7: Portfolio diversification affects business performance through value creation

## 3 Research Methods

The study is conducted using a quantitative research approach. The observation is conducted on a cross-section/one-shot time horizon in 2023. The unit of analysis in this study is all airports in Indonesia, and 25 airports are taken as samples with consideration that the airports have sufficient complexity and have served commercial flights. Partial Least Square (PLS) is used to test the hypothesis.

## 4 Analysis and Discussion

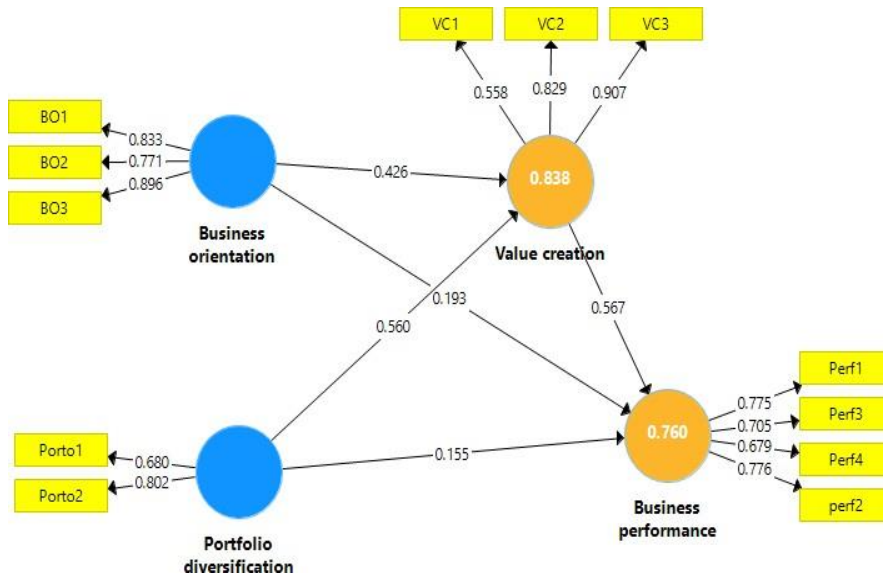
### 4.1 Measurement Model

The validation of the measurement model is the process of looking at the indicators of a construct with a convergent validity test. The components constituting a data construct exhibit a substantial loading factor with construct internal and composite reliability, widely employed for assessing construct reliability. Convergent validity is established when the Average Variance Extracted exceeds 0.50, and the factor loadings demonstrate an expected value above 0.50. The Average Variance Extracted (AVE) is a suitable indicator of convergent validity, indicating that a single underlying variable can account for more than 50% of the variance observed in its corresponding indicators, on average. The Average Variance Extracted (AVE) is anticipated to exceed 0.50 [22].

**Table 1.** R<sup>2</sup>, f<sup>2</sup>, Average Variance Extracted (AVE), and Composite Reliability (CR)

Construct	R Square	f square	Composite Reliability	Average Variance Extracted (AVE)
Business orientation	-	0.587	0.873	0.697
Portfolio diversification	-	0.955	0.711	0.553
Value creation	0.838	0.218	0.607	0.607
Business performance	0.760	-	0.824	0.540

Each construct discussed the reliability and validity of the model (Table 1). Table 1 shows that all constructs have an AVE value > 0.5, and the composite reliability (CR) is sufficient because each latent variable has a value above 0.7, so all models have high reliability.



**Fig. 1** Model Results

Figure 1 explains the value for each loading factor > 0.50, with a t value > 2.01 and a significance of 5%, obtaining a p-value < 0.05. Furthermore, these values can be seen in Table 2 below. In conclusion, all indicators are valid in measuring latent variables.

**Table 2.** Measurement Model-loading factor

Variable	Indicator-Dimension	Loading factor	SE	t-value	P Values
Business orientation	BO1 <- Business orientation	0.833	0.050	16,591.000	0.000
	BO2 <- Business orientation	0.771	0.064	12,072.000	0.000
	BO3 <- Business orientation	0.896	0.029	30,881.000	0.000
Portfolio diversification	Porto1 <- Portfolio diversification	0.680	0.118	5,780.000	0.000
	Porto2 <- Portfolio diversification	0.802	0.062	12,919.000	0.000
Value creation	VC1 <- Value creation	0.558	0.105	5,324.000	0.000
	VC2 <- Value creation	0.829	0.048	17,269.000	0.000
	VC3 <- Value creation	0.907	0.035	25,681.000	0.000
Business performance	Perf1 <- Business performance	0.775	0.067	11,526.000	0.000
	perf2 <- Business performance	0.776	0.054	14,410,000	0.000
	Perf3 <- Business performance	0.705	0.070	10,122.000	0.000
	Perf4 <- Business performance	0.679	0.092	7,393.000	0.000

#### 4.2 Structural Model

The theory-based assembling model evaluation fits the empirical data describing the conditions shown in Table 1 below.  $R^2$  for business performance is 0.696 and  $Q^2 = 0.477$ . The R-Square value is 0.67 strong, 0.33 moderate, and 0.19 weak. Q-Square values are 0.35 (large), 0.15 (medium) and 0.02 (small) [23]. Then, the research model is in accordance with empirical conditions.

The following is the structural model equation (inner model).

$$VC = 0.426*BO+0.560*PD , R^2 = 0.838$$

$$BPerf = 0.567* VC+ 0.193*BO+0.155*PD, R^2 = 0.760$$

The first equation shows the relationship between Business Orientation and Portfolio Diversification on Value Creation, where the  $R^2$  value simultaneously is equal to 0.838. The second equation shows the relationship between Business Orientation, Portfolio Diversification and Value Creation on business performance, where the  $R^2$  value simultaneously is equal to 0.760.

### 4.3 Hypothesis Testing

**Table 3.** Hypothesis Testing

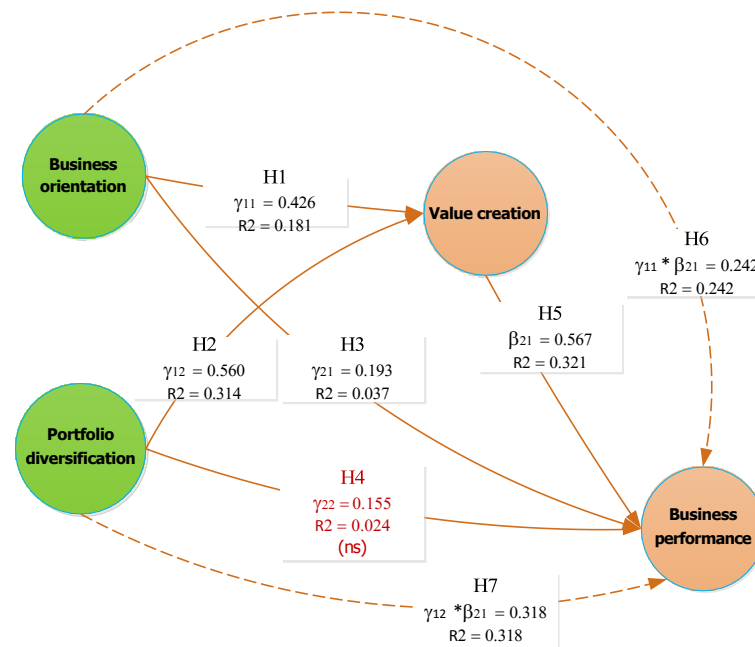
No	Structural Model	Path Coeff.	Std. Error	t-value	p value	R <sup>2</sup>	Conclusion
1	Business orientation -> Value creation	0.426	0.129	3.299	0.001	0.181	significant
2	Portfolio diversification -> Value creation	0.560	0.126	4.450	0.000	0.314	significant
3	Business orientation -> Business performance	0.193	0.092	0.210	0.036	0.037	significant
4	Portfolio diversification -> Business performance	0.155	0.172	0.904	0.366	0.024	Not significant
5	Value creation -> Business performance	0.567	0.216	2.630	0.009	0.321	significant
6	Business orientation -> Value creation -> Business performance	0.242	0.108	2.234*	0.026	0.242	significant
7	Portfolio diversification -> Value creation -> Business performance	0.318	0.144	2.206*	0.028	0.318	significant

\*Sobel test

The results of hypothesis testing revealed a significance level of 95% ( $\alpha = 0.05$ ) in Table 3. conclude that:

- Business orientation and portfolio diversification have a positive and significant direct effect on value creation, with a t-value  $> 2.01$  (Pvalue  $< 0.05$ ). Portfolio diversification has the dominant influence with  $R^2 = 0.314$
- Business orientation has a positive and significant direct effect on business performance, with a t-value  $> 2.01$  (Pvalue  $< 0.05$ ) and  $R^2 = 0.037$ . But portfolio diversification has no significant effect on business performance with  $R^2 = 0.024$
- Business orientation and portfolio diversification have a positive and significant indirect effect on business performance through value creation, with t-value  $> 2.01$  (Pvalue  $< 0.05$ ). Still, portfolio diversification has the dominant influence with  $R^2 = 0.318$ .





**Fig.2** Finding Model

The results of hypothesis testing illustrate the dominant contribution of portfolio diversification in building value creation compared to business orientation. On the other hand, the proper business orientation will generate business performance. This is unlike the case with portfolio diversification, which can improve business performance through value creation. This means that portfolio diversification can improve business performance when it can provide added value to the non-aero airport business. Portfolio diversification relates to business strategies to develop various services and facilities outside flight operations. Value creation includes the company's efforts to create added value for customers and other stakeholders through increasing customer benefits, strengthening the business domain, and strengthening cooperation with business partners. This can be built through portfolio diversification by area and services to provide added value to customers. In the end, it can have an impact on improving business performance. Portfolio diversification is a concrete form of value creation efforts in non-aero airport services, which have succeeded in creating added value through diversification to generate additional income from the non-aero sector, reduce dependence on aero revenues, and increase competitiveness. Diversification can also help reduce business risk because it comes from various sources. Through portfolio diversification, airports can expand the range of services and create a better experience for customers, while value creation becomes the basis for generating significant added value to increase sales, profit, efficiency, and productivity.

Between the two indicators of portfolio diversification, the measurement results reveal that diversification by services has a greater loading factor (0.802) than diversification by area (0.680). This illustrates that for non-aero services, diversification in terms of services will create greater value than diversification by area. This is because service diversification will provide a wider variety of services that customers can utilise to reach diverse customer needs.

On the other hand, when aligned with an organisation's business orientation, value creation will improve business performance. By providing superior value to customers and stakeholders, organisations can gain a competitive advantage, increase sales and profits, and improve efficiency and productivity. In terms of business orientation, the measurement results show that the indicator 'the company's proactive emphasis on the service' gets the highest loading factor value (0.896), compared to 'the number of services offered' (0.833) and 'the number of customers' (0.771). This implies that a business orientation that places a proactive emphasis on service will significantly impact the business orientation of non-aero airport services.

By prioritising a proactive emphasis on service, non-aero airport service companies can actively understand and meet customer expectations, and provide fast and effective solutions. By meeting customer expectations, companies can create added value and increase customer satisfaction, which can positively impact business performance. A proactive emphasis on service will also promote strong competitive differentiation. By providing services that exceed customer expectations and demonstrating proactive initiatives in solving problems or providing assistance, non-aero airport companies can help companies build a positive image, increase customer confidence, and create a competitive advantage. Customers tend to choose companies that show active concern and responsibility for their needs.

Based on the findings of this study, the increase in the performance of the non-aero airport service business is influenced by value creation, which is mainly built by the development of portfolio diversification, which is accompanied by the development of business orientation. To achieve good business performance, non-aero service airports need to integrate portfolio diversification and business orientation factors that can drive service value creation.

## 5 CONCLUSIONS AND RECOMMENDATIONS

The results of hypothesis testing show that portfolio diversification has a dominant influence on value creation compared to business orientation; value creation has a significant effect on business performance; value creation mediates the effect of business orientation and portfolio diversification on business performance; portfolio diversification is more dominant in building value creation than business orientation; business orientation can generate business performance directly, while portfolio diversification is only able to improve business performance through value creation. Value creation has the highest influence on improving business performance. Therefore, this study revealed that value creation is an important aspect that can affect business performance, where value creation is mainly obtained through portfolio diversification supported by business orientation.

The results of this study propose managerial implications for the management of non-aero airport service industry companies in Indonesia to develop value creation based on portfolio diversification and business orientation to improve their business performance. The development of portfolio diversification needs to be emphasised on service diversification. In contrast, the development of business orientation needs to be prioritised in providing a proactive emphasis on services to meet customer needs.

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