The Perceived Difference of National Competitiveness in Indonesia

Liang-Hsuan Chen,* Zulkieflimansyah,** Azhar Hadi** and Ninasapti Triaswati***

Abstract

In the global competitive environment, the concept of the national competitiveness of a country should be understood and further investigated in order to recognize global competitive advantages and to help policy makers evaluate the shortcomings of their development strategies. As the world’s largest archipelago, Indonesia was hit seriously by the Asian economic crisis due to its having several economic weaknesses. For investigating the national competitiveness of Indonesia, this paper studies the perceived difference of importance and levels of achievement as perceived from the Indonesian point of view. These are grouped into five categories of indicators which constitute the elements of national competitiveness. The findings show that the perceived achievement levels in most indicators are lower than Malaysia or Singapore’s, especially in the categories of economic performance and human resources. The comparisons between the perceived importance and achievements of subjects in each category are also made in order to examine their consistency.

Keywords: National competitiveness; Productivity; Indonesia

1. Introduction

The entrance of foreign direct investment and the participation in international business has resulted in increased pressure on competition [11]. Firms have to compete with competitors in both the domestic and global markets. This increased competition forces firms to increase their productivity in order to survive. Policy makers must understand the strengths and weaknesses in their country’s national competitiveness, relative to other countries, in order to help domestic firms establish the most effective business strategies. In the global competitive environment, the national competitiveness of a country must be investigated in order to offer businesses the opportunities for understanding the global competitive advantages required to survive [14].

The meaning of national competitiveness is that countries’ economies
competes with each other, and when broken down into statistics it can measure a country’s relative competitive performance [7]. Competitiveness indices are useful to benchmark national performance so as to help policy makers evaluate the shortcomings of their development strategies. Indices can also aid investors in allocating resources between countries [7]. Tyson [13] defines competitiveness as “our ability to produce goods and services that meet the test of international competition while our citizens enjoy a standard of living that is both rising and sustainable.” Some key issues must be considered, such as a nation’s ability to increase the wealth and welfare of its people and the ability of its companies to gain competitive advantage from technologies and products in the global markets [12]. For examples, Porter [9], Scott and Lodge [10], and Blaine [2] have given similar definitions of national competitiveness based on the above concerns. It is recognized that pure economic indicators do not sufficiently indicate a nation’s overall welfare and competitiveness level. A number of factors can influence a nation’s competitiveness, such as economic, social, human resources, technological, and environmental factors. The policy makers in developing countries are always concerned with national competitiveness and their country’s ranking in international competitive performance [7]. Particularly, the East Asia countries consider competitiveness to be a matter of national economic survival [7].

Indonesia achieved independence from the Netherlands in 1949, and is the world’s largest archipelago, comprised of more than 13000 islands and having a land area of about two million square kilometers. In 2003, Indonesia’s population was estimated at 235 million [16]. The Indonesian economy was one of the fastest developing in Southeast Asia until 1997, when the Asian economic crisis began. Since then, most countries belonging to the Association of South-East Asian Nations (ASEAN) have been fighting for economic recovery. Indonesia was hit seriously by the crisis due to several economic weaknesses [4]. The Rupiah was de-valued by about 80% in comparison to the US dollar in 1998, with inflation running at over 80% and growth rates dramatically reduced to 0.6% from a high of around 8% prior to the crisis [17]. Figure 1 shows the growth of real Gross Domestic Product (GDP) in Indonesia from 1996 to 2002 [15]. Two particularly low points were hit in 1998 and 1999. In 2002, Indonesia’s GDP was estimated at US$663 billion, the real GDP grew at approximately 3.5%, and the GDP per capita was around US$3100 [16]. Political turmoil led to the resignation of President Soeharto in May 1998. Although Abdurrahman Wahid was then elected President in June 1999, serious political and economic problems still
remained. On 23 July 2001, President Wahid was replaced by his Vice President, Megawati Soekarnoputri. Under President Megawati, the economy has moved onto firmer footing than previously [17].

Because the country is rich in natural resources, the Indonesian economy has been strongly supported by the exploitation of enormous mineral deposits, resulting in Indonesia being one of the world’s leading exporters of liquid and natural gas [17]. Agriculture was the main contribution of the Indonesian economy until the late 1980s. Although its contribution to GDP has since been surpassed by manufacturing, the agricultural sector still employs more than one-half of the labor force, which shows its importance in the Indonesian economy [1]. Currently Indonesia faces severe economic development problems due to the secessionist movements, the lack of reliable legal recourse in contract disputes, corruption, weakness in the banking system, strained relations with International Monetary Fund (IMF), and other things [16]. The current issues in the nation include: alleviating widespread poverty, implementing IMF-mandated reforms in the banking sector, and so on [16].

Being mainly interested in the national competitiveness of Indonesia, this paper investigates the subjective measurements of perceived importance and the achievement levels of various national competitiveness categories from the Indonesian point of view. The differences between the perceived importance and achievement levels, called “perceived difference” in this paper, will be discussed. In the following sections, we will first introduce the national competitiveness categories and the associated subjects. The perceiv-

![Figure 1 The Trend of Growth of Real GDP from 1996 to 2002](image-url)
ed difference between importance and achievement levels of subjects in each
category is analyzed in Section 3. We draw our conclusions in the final
section.

2. National Competitiveness

A variety of factors influence a nation’s competitiveness. Among them,
usually five categories are the most important, namely, economic perfor-
mance, technology development, human resources, management capability,
and productivity. In order to investigate the perceived difference of national
competitiveness with respect to perceived importance and achievement from
the Indonesian point of view, the above five categories are explored in this
paper. Each category consists of several primary subjects, which may also
have a few secondary subjects. Each secondary subject’s data can be either
measured data or surveyed data. Since we are interested in the perceived
importance of subjects and the perceived achievements of secondary sub-
jects, accordingly only the surveyed data are adopted for analyses. However,
for measuring productivity, measured data must be applied. The productivity
indices are considered as the achievement levels. Therefore, productivity
category includes measured data and surveyed data. Formulations are pro-
posed in this section to calculate the productivities of the five sectors using
the measured data. For data collection, this paper adopts the following main
subjects and subordinated secondary subjects for each category for the
survey purpose:

2.1 Subjects and the Subordinated Secondary Subjects

(1) Economic performance

(a) Domestic Economic Information (DEI)–resilience of economy.

(b) Government Efficiency (GE)–degree of political stability, ef-
fectiveness of government policy implementation, adequacy of
legal framework in promoting the country’s competitiveness,
degree of compliance with respect to the legal requirements for
conducting business, and adaptiveness of government policies
to changes in the economic environment.

(c) International Trade (IT)–adequacy of government’s provision
to access foreign markets.

(d) Finance (FI)–feasibility of access to the local financial market,
soundness of central bank policy on the country’s economic
development.
(2) Technology development

(a) Technology Management (TM)–technological cooperation between companies, technological cooperation between companies and universities, technological cooperation between companies and government research institutes, technology transfer between universities and companies, the degree of the insufficient financial resources constraining the technological development in the country.

(b) Technology Environment (TE)–the degree of basic research enhancing technological development, the degree that students prefer the fields science and technology as a college major, the adequacy of the enforcement of patent and copyright protection in the country.

(3) Human resource

(a) Employees’ Competitiveness (EC)–the competitiveness level of employees.

(b) Turnover (TU)–the competitiveness of recruitment cost, the competitiveness of training cost, the competitiveness of severance payments.

(c) Labor or industrial disputes and union power (DUP)–the enforcement degree of labor legislation, the coverage degree of labor legislation, the positive influence of unions on wage rates, the level of collaboration with foreign companies.

(4) Management capability

(a) Innovation Capability (IC)–price/quality ratio of products.

(b) Corporate Responsibility (CR)–prestige of company managers, corporate boards, shareholder value, social responsibility.

(c) Managers’ Competence (MC)–availability of senior managers, competence level, labor relations, recognition of enterprise identity, employee training.

(d) Culture (CL)–customer orientation, entrepreneurship, risk taking orientation, ethical practices, tax evasion, inhibition of bribery.

(e) Intra-Industrial Integration (IDI)–supporting and related indu-
tries, manufacturer-channel relations.

(f) International Operations (IO)—vertical integration between up-
stream firms and downstream firms, level of experience of
managers, management competence.

(5) Productivity

(a) Agriculture-related trade (AG)
(b) Mining Industry (MI)
(c) Manufacturing Industry (MA)
(d) Construction Industry (CI)
(e) Service Industry (SI)

Particularly, the productivity of each sector is considered as the achieve-
ment of subject, as mentioned before. In order to determine productivity
values, productivity measures must be defined beforehand. They are intro-
duced in the following.

2.2 Productivity Measures

Productivity is generally used to measure the efficiency of resource
utilization, and is defined as the ratio of all outputs to all inputs in monetary
terms for measuring transformation efficiency. Considering various inputs
and outputs, many productivity measures have been presented over the years.
Among them, labor productivity (LP), capital productivity (CP), and total
factor productivity (TFP) are commonly used, and therefore they have been
adopted in this paper. Firstly, TFP is defined as [5,6,8]

\[
TFP = \frac{Value-added}{Labor \ inputs + Capital \ inputs}.
\]

For a business unit, value-added is the net contribution of its production
activity during a period. From the viewpoint of a nation, value-added can be
considered as the net contribution generated by the nation’s economic activi-
ties over a period. Based on this definition, we use GDP as the value-added
to evaluate its economic outcome. Labor inputs (LI) include a variety of
expenses related to employees. To evaluate a nation’s labor inputs, the
remuneration of all employees in the nation is used in this study. For
collecting the data, we use the average remuneration per employee and the
number of employees in the nation to obtain labor inputs during a period, i.e.,
LI = average remuneration per employee in the nation × the number of
employees in the nation.

Capital inputs for a firm include fixed capital inputs and working capital inputs. For a nation, its gross capital formation (GCF) can be used as capital inputs. Based on the above definitions, a nation’s TFP can be expressed as

\[
\text{TFP} = \frac{\text{GDP}}{\text{LI} + \text{GCF}}. \tag{2}
\]

In addition, a nation’s labor productivity (LP) and capital productivity (CP) can be formulated as

\[
\text{LP} = \frac{\text{GDP}}{\text{LI}}, \tag{3}
\]

and \[
\text{CP} = \frac{\text{GDP}}{\text{GCF}}, \tag{4}
\]

respectively. Mathematically, a nation’s TFP can be reformulated as

\[
\text{TFP} = \frac{1}{(\text{LP})^{-1} + (\text{CP})^{-1}} \tag{5}
\]

As mentioned before, both LP and CP are partial indices. Increasing either one will definitively enhance the TFP. Calculating TFP can be accomplished by calculating LP and CP. Since a nation’s GDP is attributed to five sectors, namely agriculture, mining, manufacturing, construction, and service, this paper also investigates these sectors’ productivities using Equations (2) to (4). As an example, the TFP of the manufacturing sector, TFP_{MA}, can be determined as

\[
\text{TFP}_{MA} = \frac{\text{GDP}_{MA}}{\text{LI}_{MA} + \text{GCF}_{MA}}, \tag{6}
\]

where GDP_{MA} is the GDP contributed by the manufacturing sector, and LI_{MA} and GCF_{MA} are the labor inputs (total remuneration) and gross capital formation of the manufacturing sector, respectively. Similarly, the other sectors can also be formulated in the same manner.

3. Analysis of Perceived Difference

In order to collect the data, five kinds of questionnaires were designed for each of the five categories, i.e., economic performance, technology development, human resources, management capability, and productivity. The design of the questionnaires is based on the secondary subjects of each category listed in the previous section.
The survey of each category of competitiveness is made up of fifty completed questionnaires, 20 from academic researchers, 20 from business managers, and 10 from government officers. Each questionnaire includes questions regarding the importance of all primary subjects and the achievement levels of all secondary subjects for each category. The respondents were asked to evaluate the relative importance of the primary subjects. The highest possible rating for each subject is 100%. More important primary subjects have higher ratings. For objectively assessing the achievement levels of the secondary subjects, the respondents were asked to compare the level of achievement in Indonesia with that of Malaysia and Singapore, and to give a score between 0 and 10 for each country. The reason for comparison with Malaysia and Singapore is because they were all colonial countries. If the relative achievement in Indonesia is the highest, the rating given to Indonesia should be the largest among the three countries.

After the data was collected, the scores for the perceived importance of the primary subjects belonging to the same category were standardized to make the sum of all subjects equal to 100%. In addition, two relative scores of achievement for each secondary subject were determined by calculating the ratios of Indonesia to Singapore and Indonesia to Malaysia, i.e., \( \frac{\text{achievement level of Indonesia}}{\text{achievement level of Singapore (Malaysia)}} \). Then, the relative scores of each secondary subject were averaged among the 50 samples to represent the average achievement of the secondary subject. Finally, the relative score of each primary subject was determined by averaging its associated secondary subjects. Obviously, the relative score of a primary subject greater than 1.0 means that the achievement of that primary subject by Indonesia is better than that by Malaysia (or Singapore). Table 1 lists the perceived importance and the relative achievement levels of the primary subjects for each category from the Indonesian point of view. In general, the achievement levels relative to Singapore are lower than those relative to Malaysia, especially in government efficiency, technology management, technology environment, corporate responsibility, intra-industrial integration, and international operation. The descriptions are itemized as follows.

3.1 Economic Performance

In this category, all of the primary subjects achieved by Indonesia are rated as smaller than one, especially the score for government efficiency in relation to Singapore. This means that Indonesia has lower achievement levels in the economic subjects, compared to Malaysia and Singapore. The greatest difference in ranking occurs in the comparison of government effi-
ciency vis-à-vis Singapore. This may explain why Indonesia suffers from economic and political problems all the time, and why government efficiency is more emphasized than the other primary subjects.

3.2 Technology Development

From the viewpoint of Indonesia, Indonesia has a slightly better technology environment than Malaysia. Compared with Singapore, technology management and environment are much less developed than in Indonesia. For developing countries, the ways to accumulate technological capability are important to policymakers and development planners [3].

3.3 Human Resources

Similar to economic performance, the achievements of all primary subjects in this category are worse than those of Malaysia and Singapore. As mentioned before, a developing country like Indonesia should build up human resources of high quality in order to foster economic recovery.

3.4 Management Capability

With regard to management capability, Indonesia has better achievements than Malaysia in all primary subjects except innovation capability. Notably, the subject of culture is rating as being superior to Singapore’s, although the remaining subjects are judged to be inferior when compared to Singapore.

3.5 Productivity

Table 1 lists the total factor productivities (TFPs) of each sector from 1999 to 2001, respectively. As mentioned before, the total factor productivity is considered as the achievement level of each sector (the primary subject for the productivity category). Almost all TFPs are greater than one, although they are still not large. This implies that value-added achieved by each sector is greater than labor inputs and capital inputs. Among them, the TFP produced by the mining industry is the largest. This may justify the higher relative importance of the mining industry, as perceived by the Indonesians (26.86% in Table 1), when we consider the fact that the Indonesian economy has been strongly supported by the exploitation of enormous mineral deposits. In addition, due to the economic recession in year 2001, the TFP of each sector was low in that year.

For each category, Table 2 lists the weighted average of the relative achievement levels of the primary subjects with respect to perceived importance
## Table 1 The Achievement Levels and Importance of the Primary Subjects in the Five Categories for National Competitiveness

<table>
<thead>
<tr>
<th>Category</th>
<th>Subject</th>
<th>Achievement (mean)</th>
<th>Importance (relative percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Relative to Malaysia</td>
<td>Relative to Singapore</td>
</tr>
<tr>
<td>Domestic Economic Information (DEI)</td>
<td>0.6504</td>
<td>0.6504</td>
<td>21.63</td>
</tr>
<tr>
<td>Government Efficiency (GE)</td>
<td>0.6575</td>
<td>0.1872</td>
<td>33.31</td>
</tr>
<tr>
<td>International Trade (IT)</td>
<td>0.7599</td>
<td>0.7599</td>
<td>24.19</td>
</tr>
<tr>
<td>Finance (FI)</td>
<td>0.7585</td>
<td>0.6829</td>
<td>20.87</td>
</tr>
<tr>
<td>Technology Management (TM)</td>
<td>0.9396</td>
<td>0.7276</td>
<td>50.96</td>
</tr>
<tr>
<td>Technology Environment (TE)</td>
<td>1.0216</td>
<td>0.7358</td>
<td>49.04</td>
</tr>
<tr>
<td>Employees’ Competitiveness (EC)</td>
<td>0.7934</td>
<td>0.7378</td>
<td>30.11</td>
</tr>
<tr>
<td>Turnover (TU)</td>
<td>0.7651</td>
<td>0.7767</td>
<td>37.17</td>
</tr>
<tr>
<td>Labor disputes or industrial disputes and union power (DUP)</td>
<td>0.8802</td>
<td>0.9028</td>
<td>32.72</td>
</tr>
<tr>
<td>Innovation Capability (IC)</td>
<td>0.8678</td>
<td>0.8608</td>
<td>19.09</td>
</tr>
<tr>
<td>Corporate Responsibility (CR)</td>
<td>1.0036</td>
<td>0.7468</td>
<td>18.71</td>
</tr>
<tr>
<td>Managers’ Competence (MC)</td>
<td>1.0873</td>
<td>0.7396</td>
<td>19.24</td>
</tr>
<tr>
<td>Culture (CL)</td>
<td>1.0766</td>
<td>1.1452</td>
<td>17.38</td>
</tr>
<tr>
<td>Intra-Industrial Integration (IDI)</td>
<td>1.0779</td>
<td>0.7826</td>
<td>13.63</td>
</tr>
<tr>
<td>International Operation (IO)</td>
<td>1.2115</td>
<td>0.7126</td>
<td>11.95</td>
</tr>
<tr>
<td>Agriculture-related trade (AG)</td>
<td>2.256, 2.096, 1.003</td>
<td></td>
<td>16.27</td>
</tr>
<tr>
<td>Mining Industry (MI)</td>
<td>5.054, 4.700, 2.866</td>
<td></td>
<td>26.86</td>
</tr>
<tr>
<td>Manufacturing Industry (MA)</td>
<td>3.842, 3.218, 2.383</td>
<td></td>
<td>22.75</td>
</tr>
<tr>
<td>Construction Industry (CI)</td>
<td>1.412, 1.218, 0.952</td>
<td></td>
<td>14.22</td>
</tr>
<tr>
<td>Service Industry (SI)</td>
<td>1.327, 1.112, 0.874</td>
<td></td>
<td>19.9</td>
</tr>
</tbody>
</table>
Table 2 The Weighted Average and Correlation Coefficient of Primary Subjects in the Five Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Subject</th>
<th>Relative to Malaysia</th>
<th>Relative to Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Weighted average</td>
<td>Correlation Coefficient</td>
<td>Weighted average</td>
</tr>
<tr>
<td>Economic Performance</td>
<td>Domestic Economic Information (DEI)</td>
<td>0.7018</td>
<td>-0.4562</td>
</tr>
<tr>
<td></td>
<td>Government Efficiency (GE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>International Trade (IT)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Finance (FI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology Development</td>
<td>Technology Management (TM)</td>
<td>0.9798</td>
<td>-1</td>
</tr>
<tr>
<td></td>
<td>Technology Environment (TE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human Resource</td>
<td>Employees’ Competitiveness (EC)</td>
<td>0.8113</td>
<td>-0.3779</td>
</tr>
<tr>
<td></td>
<td>Turnover (TU)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Labor disputes or industrial disputes and union power (DUP)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management Capability</td>
<td>Innovation Capability (IC)</td>
<td>1.0414</td>
<td>-0.7174</td>
</tr>
<tr>
<td></td>
<td>Corporate Responsibility (CR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Managers’ Competence (MC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Culture (CL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intra-Industrial Integration (IDI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>International Operation (IO)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Productivity</td>
<td>Agriculture-related trade (AG)</td>
<td>1.1730</td>
<td>0.3229</td>
</tr>
<tr>
<td></td>
<td>Mining Industry (MI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manufacturing Industry (MA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Construction Industry (CI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Service Industry (SI)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
as well as the coefficient of correlation between achievement levels and those levels of perceived importance. In the Table 2, the category of productivity is determined according to the three-year-average TFPs of the five sectors in relation to those of Malaysia. In relation to Singapore, only three sectors, i.e., manufacturing, construction, and service, are referred to because the other two sectors can be ignored. Notably, the weighted average for economic performance relative to Singapore is the lowest, and the correlation coefficient of this category is -0.9151, due to its rating government efficiency with high importance and very low relative achievement level. Although the achievement levels and the perceived importance are consistent in technology development, the correlation coefficient is -1 because this category has only two primary subjects. It is noted that although Indonesia’s management capability in terms of the weighted average is better than that of Malaysia, the correlation coefficient of this category is -0.7174, indicating that some subjects’ the achievement levels and the perceived importance are inconsistent, such as innovation capability and international operation. Particularly, the weighted averages for productivity relative to Malaysia and Singapore are greater than one. From this perspective, Indonesia’s productivity would seem to be competitive in fostering economic growth.

To further investigate productivity, Table 3 lists labor productivity, capital productivity, and total factor productivity for the whole country and the five sectors from 1999 to 2001. Comparing the partial productivities with each other, capital productivity for each sector is greater than both labor productivity and total factor productivity in most cases, except in the case of the mining industry. This is especially prominent for agriculture-related trade. The reason is simply because labor is the main input of this sector (more than one-half of the labor force), i.e., it is a labor-intensive unit. By contrast, the mining industry has the largest labor productivity due to the large amount of capital inputs, such as equipments and tools. Owing to the economic cycle and recession in 2001, all productivity decreased between 1999 and 2001.

In addition to the relative achievement of each primary subject, this paper also analyzes the perceived differences between the importance rating and achievement levels of each primary subject in order to examine their consistency. To accomplish this, first the relative achievement levels of the primary subjects belonging to the same competitiveness category are standardized by dividing them by their sum so that the total is equal to 100%. Following this manipulation, the comparison of the importance and achievement levels can be made on the same basis. Figures 2 to 5 display the com-
Table 3 The Labor Productivities, Capital Productivities, and Total Factor Productivities of Each Sector from 1999 to 2001

<table>
<thead>
<tr>
<th>Sector</th>
<th>Year 1999</th>
<th>Year 2000</th>
<th>Year 2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nationwide Productivity</td>
<td>2.545</td>
<td>2.191</td>
<td>1.477</td>
</tr>
<tr>
<td>Labor Productivity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Productivity</td>
<td>8.197</td>
<td>6.849</td>
<td>5.882</td>
</tr>
<tr>
<td>Total Factor Productivity</td>
<td>1.942</td>
<td>1.66</td>
<td>1.181</td>
</tr>
<tr>
<td>Agriculture-related Trade</td>
<td>2.453</td>
<td>2.310</td>
<td>1.059</td>
</tr>
<tr>
<td>Labor Productivity</td>
<td>28.03</td>
<td>22.711</td>
<td>19.000</td>
</tr>
<tr>
<td>Capital Productivity</td>
<td>2.256</td>
<td>2.096</td>
<td>1.003</td>
</tr>
<tr>
<td>Total Factor Productivity</td>
<td>2.256</td>
<td>2.096</td>
<td>1.003</td>
</tr>
<tr>
<td>Mining Industry</td>
<td>18.225</td>
<td>24.403</td>
<td>6.679</td>
</tr>
<tr>
<td>Labor Productivity</td>
<td>6.993</td>
<td>5.821</td>
<td>5.020</td>
</tr>
<tr>
<td>Capital Productivity</td>
<td>5.054</td>
<td>4.700</td>
<td>2.866</td>
</tr>
<tr>
<td>Total Factor Productivity</td>
<td>5.054</td>
<td>4.700</td>
<td>2.866</td>
</tr>
<tr>
<td>Manufacturing Industry</td>
<td>8.525</td>
<td>7.194</td>
<td>4.538</td>
</tr>
<tr>
<td>Labor Productivity</td>
<td>6.993</td>
<td>5.821</td>
<td>5.020</td>
</tr>
<tr>
<td>Capital Productivity</td>
<td>3.842</td>
<td>3.218</td>
<td>2.383</td>
</tr>
<tr>
<td>Total Factor Productivity</td>
<td>3.842</td>
<td>3.218</td>
<td>2.383</td>
</tr>
<tr>
<td>Construction Industry</td>
<td>1.638</td>
<td>1.375</td>
<td>1.059</td>
</tr>
<tr>
<td>Labor Productivity</td>
<td>10.207</td>
<td>10.695</td>
<td>9.457</td>
</tr>
<tr>
<td>Capital Productivity</td>
<td>1.412</td>
<td>1.218</td>
<td>0.952</td>
</tr>
<tr>
<td>Total Factor Productivity</td>
<td>1.412</td>
<td>1.218</td>
<td>0.952</td>
</tr>
<tr>
<td>Service Industry</td>
<td>1.638</td>
<td>1.375</td>
<td>1.059</td>
</tr>
<tr>
<td>Labor Productivity</td>
<td>6.993</td>
<td>5.821</td>
<td>5.020</td>
</tr>
<tr>
<td>Capital Productivity</td>
<td>1.327</td>
<td>1.112</td>
<td>0.874</td>
</tr>
<tr>
<td>Total Factor Productivity</td>
<td>1.327</td>
<td>1.112</td>
<td>0.874</td>
</tr>
</tbody>
</table>

Comparisons of the importance and achievement levels for the subjects of the categories of economic performance, human resources, management capability, and productivity. Clearly, when we look at government efficiency (GE)
Figure 2 The Perceived Difference of Importance and Achievement Levels for the Primary Subjects of Economic Performance

Figure 3 The Perceived Difference of Importance and Achievement Levels for the Primary Subjects of Human Resource
in economic performance, we can see a great difference between perceived achievement and importance. The achievement levels of the other three subjects, IT, FI, and DE are larger than their importance. In technology develop-
ment, the associated perceived importance/achievement relative-to-Malaysia/achievement relative-to-Singapore of the subjects, TM and TE, are 50.96%/47.91%/49.72% and 49.04%/52.09%/50.28%, respectively. Obviously, TM and TE have almost consistent importance and achievement level.

However, in human resources, the perceived importance for the subject of “Turnover” (TU) apparently exceeds the perceived achievement levels, while the other two subjects are the opposite of this. For management capability, two subjects, CL and IO, have greater achievement levels, while three subjects, MC, CR, and IC have the opposite relation. The comparison of productivities is also performed by considering the five sectors as the subjects. The total factor productivities for each sector in the three years are both averaged and standardized as the achievement levels. Figure 5 shows the perceived importance and realized achievement levels of the total factor productivities in the five sectors. Agriculture-related trade is consistent in importance and achievement, while the mining and manufacturing industries have higher achievements, and construction and service industries have lower ones.

The analyses for the perceived difference of importance and achievements of primary subjects in each category of national competitiveness can provide policy makers with some useful suggestions. Since importance and achievement levels are standardized for each category, their comparisons can be made on a relative basis. If importance and achievement of some subjects are consistent, it demonstrates that their realizations meet the expectations relatively. From the viewpoint of resource allocation, the performance of these subjects is effective. However, when importance level is relatively greater than achievement level, this may be a signal that more efforts and resources are required to enhance the achievement. Larger differences may indicate a more urgent need for improvement. If, on the contrary, achievements of some subjects are more than expected, policy makers can move part of resources from those subjects to others with low achievements.

4. Conclusions

Determining the national competitiveness of a country means to measure its relative competitive performance in relation to others, so that the indices can be used by useful for policy makers to allocate resources and determine the direction of improvement. Indonesia was hit seriously by the economic crisis of 1997 because of several economic weaknesses. In exploring the national competitiveness of Indonesia, this paper investigates the differences in five national competitiveness categories, namely economic per-
formance, technology development, human resources, management capability, and productivity from the viewpoint of Indonesia. The achievements in some subject areas are better than those of Malaysia, such as technology management, corporate responsibility, managers’ competence, culture, intra-industrial integration, and international operation. Notably, the subject of culture is perceived as better than that of Malaysia and Singapore. However, it is also found that the achievements of a few subjects are lower than those of Malaysia and Singapore, such as domestic economic information, government efficiency, international trade, finance, technology management, employees’ competitiveness, turnover, Labor or industrial disputes and union power, and innovation capability. This indicates that sound political and economic strategies should be made by policy makers in Indonesia to foster economic recovery. In addition, the perceived difference of importance and achievements of subjects is also analyzed. The analyses can provide policy makers with useful information to reallocate resources and efforts for those subjects in which realization is less than expectation.

References


New York.


