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Asia Competitiveness Institute - World Scientific Series

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# **Annual Competitiveness Analysis and Impact Estimation of Exchange Rates on Exports from Sub-National Economies of Indonesia**

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*In 2019, ACI was ranked 12<sup>th</sup> globally, 2<sup>nd</sup> in Asia, and 1<sup>st</sup> in Singapore amongst 94 think tanks worldwide under the “Best University Affiliated Think Tank” category by the Think Tanks and Civil Societies Program at the University of Pennsylvania, USA.*

## About ACI

The Asia Competitiveness Institute (ACI) was established in August 2006 as a Research Centre at the Lee Kuan Yew School of Public Policy (LKYSPP), National University of Singapore (NUS). It aims to build the intellectual leadership and network for understanding and developing competitiveness in the Asia region. ACI seeks to contribute to the enhancement of inclusive growth, living standards, and institutional governance through competitiveness research on sub-national economies in Asia. It identifies mitigating issues and challenges for potential public policy interventions through close collaboration with regional governments, business corporations, policy think-tanks, and academics. ACI's three key research pillars include (I) Sub-national economies level competitiveness analysis and city-level liveability analysis; (II) Firm-level competitiveness analysis in 16 Asia economies; and (III) Singapore's long-term growth strategies and public policy analysis.

ACI's value propositions may be encapsulated in its acronym:

- A**nalytical inputs to initiate policies for policy-makers and business leaders in Asia
- C**apacity building to enable others through improvement in productivity and efficiency
- I**ntellectual leadership to create pragmatic models of competitiveness and inclusive growth

The institute's core research competencies can also be encapsulated in this acronym describing our evidence-based assessments conducted on public policies for **A**SEAN in the context of the rise of **C**hina and **I**ndia.

## Vision and Mission

- ACI's over-arching vision is to build up its research credibility with policy impact, contributing as a professional, world-class think-tank.
- ACI's mission is to establish our niche as a leading policy think-tank by identifying competitiveness trends, opportunities, and challenges, as well as promoting competition and synergizing complementarities amongst Asian economies and business corporations.
- ACI endeavours to articulate sound recommendations, entice discourse, and shape agenda in the arena of public policy amongst Asian governments.
- ACI undertakes evidence-based analysis of public policy issues and decisions, in order to provide assessment of their effectiveness as well as economic and societal impact.

## Research Initiatives and Collaborations

- I. Identify trends of competitiveness and policy analysis on trade and investment of ASEAN, within the regional context of competition and complementarities with China and India.
- II. Identify competitive strengths and conduct policy analysis on Singapore within the context of regional economies with international benchmarking.
- III. We are regularly releasing three indices on liveability ranking including 64 Global Cities, 100 Greater China Cities, and 17 Shandong Cities.
- IV. We have established an Ease of Doing Business (EDB) Index on Attractiveness to Investors, Business Friendliness, and Competitive Policies for 21 sub-national economies of India and 33 sub-national economies of Indonesia.
- V. We have signed Memoranda of Understanding (MoU) with The World Bank (2015), Enterprise Singapore formally known as SPRING Singapore (2014) and European Central Bank (2014). The MoU between The World Bank and National University of Singapore, coordinated through ACI, was signed in 2016.
- VI. We have signed MoUs with various institutions in Greater China economies, including Institute of Economics at Shanghai Academy of Social Sciences (2019), Institute of World Economics at Shanghai Academy of Social Sciences (2016), Shandong Academy of Social Sciences (2015), Chongqing Municipal

- People's Government (2015), China Institute for Reform and Development, Haikou (2015), Counsellors' Office of the People's Government of Guangdong Province (LOI, 2014), and Chung-Hua Institution for Economic Research, Taiwan (2015).
- VII. We have signed MoUs with seven Chief Ministers' Offices in Uttarakhand (2019), Andhra Pradesh (2018, 2017 & 2015), Bihar (2015), Chhattisgarh (2015), Madhya Pradesh (2015), Odisha (2015), and Punjab (2015).
- VIII. We have signed a MoU with Committee for Acceleration of Priority Infrastructure Delivery at Coordinating Ministry for Economic Affairs, Indonesia (2016), Indonesia Investment Coordinating Board (2014), Indonesian Agency for Agricultural Research and Development at Ministry of Agriculture (2014), Indonesian President's Delivery Unit for Developing Monitoring and Oversight (2013), and Employer's Association of Indonesia (2013).
- IX. We have signed MoUs with Asian think-tanks and institutions, including Institute of Economic Growth, India (2018), Vietnam Chamber of Commerce and Industry, Vietnam (2016), Centre for Strategic and International Studies, Indonesia (2015), Institute of Strategic & International Studies, Malaysia (2015), Philippine Institute for Development Studies, the Philippines (2015), Thailand Development Research Institute, Thailand (2015), and Central Institute for Economic Management, Vietnam (2015).

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## About ACI's Research Pillars

ACI has consciously engaged in economic research that has significant relevance to Singapore and the Asian region. Over the years, ACI has focused on our expertise in quantitative competitiveness analysis and simulation, spinning off volumes of research output in the applications of our methodology and regional insight. At this stage, ACI has identified three core research pillars that will guide and define its research efforts moving forward. The three research pillars are as follows:

### **Pillar I. Sub-national Economies Competitiveness Analysis**

ACI engages in systematic and methodical competitiveness analyses of the sub-national economies by using an evidence-based, empirical approach involving a comprehensive list of relevant indicators, which are categorised under multiple layers called the 'environments'. A number of our projects, including competitiveness analyses of Greater China, ASEAN-10, India, and Indonesia, as well as other thematic research projects, were conducted by adopting this common methodology, with potential variations in the specific environments and indicators. ACI's competitiveness analysis of Asian economies goes beyond the usual ranking to offer constructive policy recommendations on how individual member states can improve their rankings vis-à-vis their sub-national or regional peers through the application of the 'what-if' simulation, which provides the projected improvements of each state's ranking whereby the bottom one-fifth of its indicators are enhanced.

### **Pillar II. Micro-based Firm Level Competitiveness Analysis**

Micro-based firm level competitiveness analysis is ACI's second research pillar that has been developed in view of the intrinsic importance of firm-level competitiveness in terms of productivity, efficiency, and governance. In the context of globalisation, mobility of economic activities, and blurring of borders, an understanding of the determinants and dynamics of firm-level competitiveness is paramount, in order for policy makers to adjust and prepare their industries for an increasingly competitive economic landscape. To this end, ACI has partnered with the European Central Bank to carry out research in this area, possessing a solid foundation in firm-level productivity research in the form of European Competitiveness Network database and methodology. ACI envisaged the expansion of Competitiveness Research Network (CompNet) into Asia, thereby pioneering the Asia's CompNet in encompassing 16 economies in Asia.

### **Pillar III. Singapore's Long-term Economic Growth Strategies and Public Policies Analysis**

The third and imminent research pillar focuses on Singapore's long-term economic growth strategies in the context of changing circumstances, future trends, and emerging opportunities for Singapore in the decades ahead. In particular, ACI will take on the task of critically examining Singapore's public policy strengths and areas of improvement by assessing policy successes of the past, identifying new issues to address and the current policy gaps, through a systematic and evidence-based research inquiry using quantitative methodology and empirical data, leveraging on our network of policy experts.

## **Founding Patron and International Advisory Panel**

### **Founding Patron**

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Visiting Scholar, Lee Kuan Yew School of Public Policy, National University of Singapore & Former Minister of Foreign Affairs, Singapore

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## **Asia Competitiveness Institute**

### **Co-Directors:**

**Associate Professor Tan Khee Giap (2011 till now)**

**Professor Tan Kong Yam (2011 till now)**

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In the tradition of the Asia Competitiveness Institute (ACI) at the Lee Kuan Yew School of Public Policy, National University of Singapore (NUS), our research publications make a distinctive contribution to the understanding of economic development in Asia. These books, first published in 2013, in the Asia Competitiveness Institute - World Scientific Series evaluate and track competitiveness for the sub-national economies of China, India, Indonesia and ASEAN annually through combining leading-edge methodologies with an extensive dataset. The study covers four environments of competitiveness: (1) Macroeconomic Stability, (2) Government and Institutional Setting, (3) Financial, Businesses and Manpower Conditions, and (4) Quality of Life and Infrastructure Development. It also conducts “what-if” policy simulations to propose policy suggestions.

### 2018

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by Tan Khee Giap, Nursyahida Ahmad, S Shalini Sivakrishnan & Doris Liew Wan Yin (Lee Kuan Yew School of Public Policy, NUS, Singapore)

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Asia Competitiveness Institute - World Scientific Series

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**ANNUAL COMPETITIVENESS ANALYSIS AND IMPACT ESTIMATION OF EXCHANGE RATES ON EXPORTS FROM SUB-NATIONAL ECONOMIES OF INDONESIA**

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## Foreword

The year 2018 marks the sixth year of collaboration between the Indonesian Employers' Association (APINDO) and the Asia Competitiveness Institute (ACI). Since 2012, APINDO has supported one of ACI's flagship research projects on the annual study of Indonesia's sub-national competitiveness. Such localised study requires empirical data from the ground, which is gathered through field trips and interaction with the local stakeholders. With provincial chapters across all provinces, APINDO is proud to have once again collaborated with ACI by providing coordination support, thus enabling the research team to interact with local business owners and operators who are APINDO members in all 34 provinces of Indonesia.

Given the expansiveness of Indonesia, economic conditions in one province greatly differ from another. The ACI competitiveness study helps to identify the key strengths and weaknesses of each province. More importantly, the ACI study benchmarks these provinces to one another, thus promoting desirable healthy competition which will not only boost an individual province's competitiveness but also Indonesia's competitiveness as a whole.

Against this backdrop, APINDO extends its support for the release of the *Annual Competitiveness Analysis and Impact Estimation of Exchange Rates on Exports from Sub-National Economies of Indonesia*. Various important value additions can be drawn from this current edition. In particular, this year's thematic chapter discusses exports as an important driver of growth for Indonesia. Apart from national and regional efforts to ease the flow of trade within and beyond Indonesia, exports are also dependent on national-level policies such as that on exchange rates. The research finding on the impact of exchange rate fluctuations on exports from Indonesia's sub-national economies is thus an important and beneficial one not just for academics and policymakers but also as a reference to business owners to craft their trade and business strategy in the presence of exchange rate dynamics. This edition also continues to provide rich insights on individual provinces through the commentaries on recent developments in the 34 Indonesian provinces as well as snapshots of the competitiveness profile for each province.

To sum up, ACI's continued efforts to enrich its research with useful analysis and information are a testament to the institute's dedication in producing rigorous and meaningful research. I commemorate ACI for its insightful analysis and hope to continue the collaboration with the institute in future projects.

Hariyadi Sukamdani  
Chairman  
Indonesian Employers' Association (APINDO)

## Preface

As the largest economy and most populous nation in Southeast Asia, Indonesia has the potential to be an economic powerhouse in the broader Asian region alongside China and India. Under President Joko Widodo's administration, various economic reforms have been implemented to accelerate economic development and industrialisation.

Despite the progress to date, Indonesia's quest for more broad-based and sustainable growth is not without challenges. To illustrate, concrete achievements for the 12 special economic zones that have been proposed to spur growth across the nation are yet to be fully realized, as only four zones are operational, while others appear to still be under development. Indonesia also faces formidable economic challenges, including periodic balance of payment vulnerabilities, massive infrastructure gaps, as well as significant disparities across the various provinces.

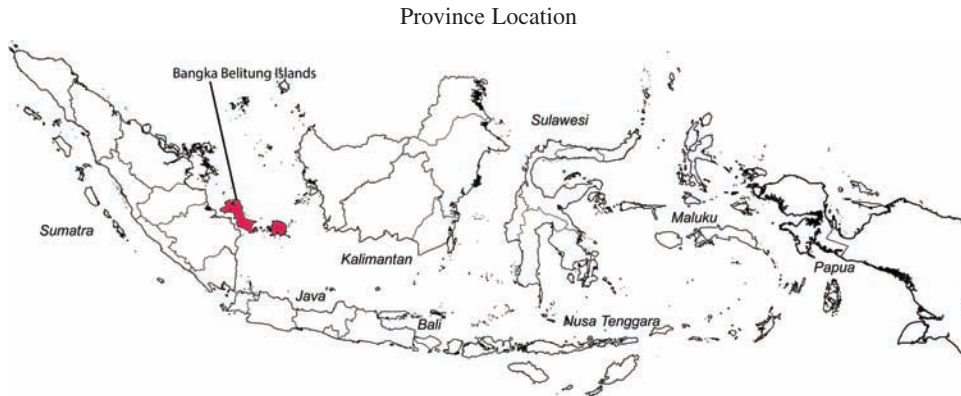
While most competitiveness studies are undertaken at the national level, the Asia Competitiveness Institute (ACI) at Lee Kuan Yew School of Public Policy (LKYSPP), National University of Singapore (NUS) has conducted an empirical study to analyse and rank the competitiveness of Indonesia's six regional and 34 provincial economies. The information and findings from this study ought to assist policymakers in better understanding the strengths and weaknesses of each province and to fortify competitiveness at the provincial and regional levels. Increasing competitiveness at these sub-national levels ought to engender more growth engines beyond the region of Java and aid in the country's aim in developing more balanced growth across provinces.

Currently in its sixth iteration, ACI also includes a timely empirical analysis of the impact of exchange rates on exports from the provinces of Indonesia. I expect that ACI's annual competitiveness study on Indonesia will continue to serve as an important tool for policymakers to constructively hone Indonesia's strengths and assist in moving the country closer towards realising its formidable economic potential.

Ramkishen S. Rajan  
Vice Dean (Research) and Professor  
Lee Kuan Yew School of Public Policy  
National University of Singapore

## 5.4 Commentary on Recent Developments in Bangka Belitung Islands, 2016–2018

By: Eddy Jajang Jaya Atmaja, Agus Hartoko and Ghiri Basuki Putra  
Universitas Bangka Belitung



Source: ACI.

### 5.4.1 Economic Conditions

The economy of Bangka Belitung Islands has been growing from 4.11 percent in 2016 to 4.51 percent in 2017. The same rate of 4.51 percent persists until the second quarter of 2018, which was mainly contributed by sectors outside mining. Agriculture, forestry, and fisheries sectors are the major contributors to the growth figure at 8.71 percent, which was then dampened by the contraction of  $-3.67$  percent in the mining sector. The positive aggregate growth albeit the negative growth of mining indicates that the government's policies to reduce Bangka Belitung Islands' economic dependency from mining are working.

The GRDP (constant) of Bangka Belitung Islands in 2017 is Rp 50.01 trillion, and the per capita GRDP in the same year is Rp 48.9 million. In terms of export, the value of export from Bangka Belitung Islands in 2017 is US\$173.1 million, which was an increase of 65.31 percent from the previous year. This is mainly caused by the increase in the value of lead export that increased by 90.22 percent compared to the previous year. Investment in 2017 for both foreign and domestic is mainly on agriculture, food industry, energy and water, and service industry.

### 5.4.2 Social Conditions and Development

During 2016–2018, HDI in Bangka Belitung Islands continues to increase, with 69.55 in 2016, 69.99 in 2017 and 70.67 in 2018. The upward trend was mainly caused by the positive trend in three components: life expectancy, average year of schooling, and per capita expenditure.

Within this period, the life expectancy in Bangka Belitung Islands has increased from 69.92 years in 2016 to 70.18 years in 2018. Average years of schooling for a child of seven years old today increased from 11.71 years in 2016 to 11.87 years in 2018. Mean years of schooling has also increased from 7.62 years in 2016 to 7.84 years in 2018. Per capita expenditure was used as a proxy to indicate the well-being of the people. The value itself has been increasing since 2016. From the value of Rp 11.96 million in 2016, it increases to Rp 12.67 million in 2018.

### 5.4.3 Provincial Government Policies

The government of Bangka Belitung has issued Regional Legislation No. 5, 2017 on Incentive and Ease of Investment, one of the factors contributing to the large number of domestic and foreign investments. The synergy between the administration and the parliament has also resulted in the issuance of Provincial Legislation No. 7, 2016 on the Masterplan of Tourism Development, Legislation No. 2, 2017 on Marine and Fisheries Management, and Legislation No. 13, 2017 on Cooperatives and Small Enterprises among other Regulations.

In addition to new regulations, the government has also carried out infrastructure developments, such as the improvement of road, airport and seaport, and power plant development. Furthermore, the development of a Special Economic Zone (SEZ) in Tanjung Kelayang, Belitung has begun as well.

### 5.4.4 Local Political Scene

Bangka Belitung Island is led by Dr H Erzaldi Rosman Djohan MM and Abdulah Fatah who won the 2017 elections by acquiring 38.94% of the votes over three other candidates. They were supported by the coalition of Gerindra, Nasdem, and PKB.

The Regional Parliament (DPRD) comprises representatives from PDI-P (10 seats), Golkar (seven seats), PPP (six seats), Gerindra (five seats), PKS (four seats), Demokrat (three seats), and PAN (three seats). In the Provincial Parliament, there is no coalition of opposition party because each representative carries the idea proposed by the regional and central committee of their respective parties. Even

Key Economic Indicators, 2016	
<b>Land Area (km<sup>2</sup>)</b>	16,424
<b>Population</b>	
Total Population	1,401,800
Urban Population (%)	53.20
Poverty Rate (%)	5.04
Labour Force	705,173
Labour Force Participation Rate (%)	50.30
<b>Gross Regional Domestic Products (GRDP) — 2010 prices</b> Rupiah (million)	
GRDP	47,850,820
GRDP (Non-minerals)	41,360,000
GRDP per Capita	34.14
GRDP per Capita (Non-minerals)	29.50
<b>Economic Composition</b> % of GRDP	
Primary Sector	32.62
Secondary Sector	30.85
Tertiary Sector	36.53
<b>Trade — 2010 prices</b> Rupiah (million)	
Exports	11,647,135
Imports	1,191,195
Top-3 exports: tin products; animal and vegetable fat and oils; coffee, tea and spices	
Top-3 imports: nuclear reactors, boilers and mechanical appliances; mineral fuels and mineral oil products; ships and floating structures	
<b>Infrastructure</b>	
Paved Roads (km)	4,259
Domestic Air Traffic (passengers)	2,786,056
International Air Traffic (passengers)	0
Domestic Cargo at Seaport (tons)	8,296,056
International Cargo at Seaport (tons)	779,020

Source: BPS Indonesia compiled by ACI.

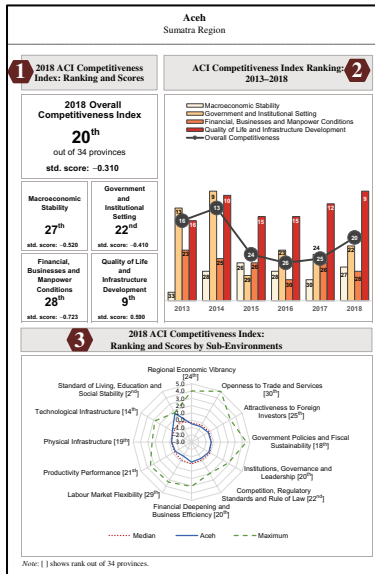
with an upcoming election contest, the political environment of Bangka Belitung Islands is generally peaceful.

# Appendix 5

## 2018 Competitiveness Profile of Indonesian Provinces

Appendix 5 provides a summary of the competitiveness results for each Indonesian province, based on ACI's 2018 Annual Update on Competitiveness Analysis of Indonesian Provinces.

Each profile consists of five sections, each presenting various components of the ACI Competitiveness Index:



### 1 2018 ACI Competitiveness Index: Ranking and Scores

This section presents the province's ranking and standardised scores for Overall Competitiveness as well as the four environments of competitiveness.

### 2 ACI Competitiveness Index Ranking: 2013–2018

The bar-line chart depicts the five-year trend of the province's Overall Competitiveness ranking (line) and the ranks of the four environments of competitiveness (bars) since the beginning of ACI's analysis in 2013.

### 3 2018 ACI Competitiveness Index: Ranking and Scores by Sub-Environments

This web chart indicates the province's ranking and standardised scores for the 12 sub-environments of competitiveness relative to the median and maximum scores of the 34 provinces of Indonesia.

### 4 2018 ACI Competitiveness Index: Top-20 Percent Strongest and Weakest Indicators

For each province, the table on the left lists the top-20 indicators with the *highest* standardised scores while the table on the right lists the bottom-20 indicators with the *lowest* standardised scores among 105 indicators.

### 5 2018 ACI Competitiveness Index: What-if Simulation Ranking and Scores

This table shows the province's competitiveness rankings and standardised scores before and after the *what-if* simulation for Overall Competitiveness and the four environments. The scores are derived by improving the province's top-20 percent weakest indicators (listed in the table on the right in Section 4).



**Bangka Belitung Islands**  
Sumatra Region

**2018 ACI Competitiveness Index: Ranking and Scores**

**2018 Overall Competitiveness Index**

**26<sup>th</sup>**

out of 34 provinces

**std. score: -0.714**

**Macroeconomic Stability**

**29<sup>th</sup>**

std. score: -0.695

**Government and Institutional Setting**

**28<sup>th</sup>**

std. score: -1.037

**Financial, Businesses and Manpower Conditions**

**15<sup>th</sup>**

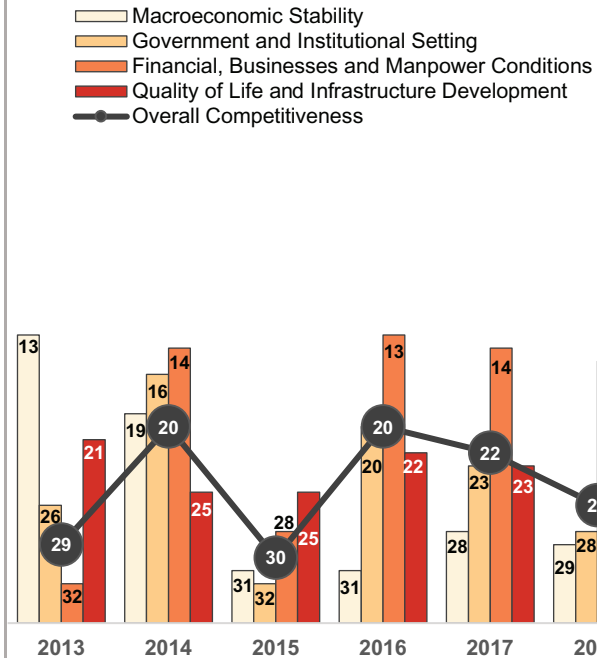
std. score: -0.047

**Quality of Life and Infrastructure Development**

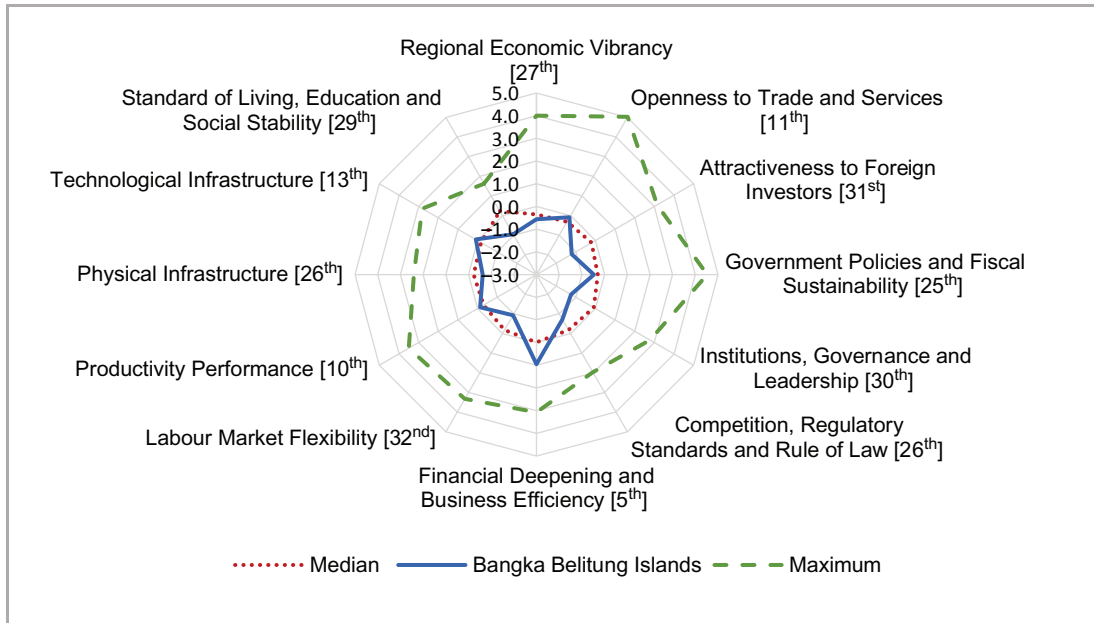
**27<sup>th</sup>**

std. score: -0.673

**ACI Competitiveness Index Ranking: 2013–2018**



**2018 ACI Competitiveness Index: Ranking and Scores by Sub-Environments**



Note: [ ] shows rank out of 34 provinces.

**Bangka Belitung Islands**  
Sumatra Region

**2018 ACI Competitiveness Index: Top-20% Strongest and Weakest Indicators**

Rank	20% Strongest Indicators	Std. Score	Envmt.	Rank	20% Weakest Indicators	Std. Score	Envmt.
1	Firms' equipment capacity	3.034	FBMC	85	Student-teacher ratio (senior high)	-0.858	QLID
2	Firms' performance	2.337	FBMC	86	Vibrancy of competition and collaboration	-0.956	GIS
3	Gini ratio	2.103	QLID	87	Student-teacher ratio (primary)	-0.977	QLID
4	Internet access in handphone	1.475	QLID	88	Internet access at school	-1.030	QLID
5	Internet access at home	1.444	QLID	89	Minimum wage per month	-1.067	FBMC
6	Lack of corruption	0.955	GIS	90	Net school enrolment rate (senior high)	-1.153	QLID
7	Firms' application of IT	0.953	FBMC	91	Regulatory governance	-1.234	GIS
8	Openness to trade	0.922	MS	92	Government progress and expectation	-1.253	GIS
9	Ease of acquiring property	0.830	QLID	93	Rule of law	-1.315	GIS
10	Security	0.761	GIS	94	Government inclusiveness	-1.316	GIS
11	Households with state electricity services	0.689	QLID	95	Households with pipe water services	-1.549	QLID
12	Population growth	0.680	QLID	96	Quality of physical infrastructure	-1.668	QLID
13	Handphone ownership	0.575	QLID	97	Student-teacher ratio (junior high)	-1.750	QLID
14	Population per number of bank branches/offices	0.573	FBMC	98	Quality of technological infrastructure	-1.802	QLID
15	Crime rate	0.550	GIS	99	Investment promotion and management	-1.898	MS
16	Environmental quality index	0.496	QLID	100	Quality of education	-1.943	QLID
17	Population per medical worker	0.424	QLID	101	Quality of healthcare	-2.011	QLID
18	Adult illiteracy rate	0.404	QLID	102	Government efficiency	-2.147	GIS
19	Fatalities due to natural disaster	0.386	QLID	103	Labour relations	-2.344	FBMC
20	Urban population	0.364	QLID	104	Government auditor opinion	-2.408	GIS
21	Non-performing loans	0.360	FBMC	105	Affordability and accessibility of goods	-2.410	QLID

*Note:* MS: Macroeconomic Stability; GIS: Government and Institutional Setting; FBMC: Financial, Businesses and Manpower Conditions; QLID: Quality of Life and Infrastructure Development.

**2018 ACI Competitiveness Index: What-if Simulation Ranking and Scores**

Overall Competitiveness					
		Before		After	
Rank		26		17	
Score		-0.714		0.001	
Macroeconomic Stability			Government and Institutional Setting		
		Before	After		
Rank		29	23	Rank	
Score		-0.695	-0.418	Score	
				Before	After
Rank				28	17
Score				-1.037	-0.213
Financial, Businesses and Manpower Conditions			Quality of Life and Infrastructure Development		
		Before	After		
Rank		15	9	Rank	
Score		-0.047	0.200	Score	
				Before	After
Rank				27	13
Score				-0.673	0.433

*Note:* Ranking and scores after simulation are derived by improving the province's top-20% weakest indicators.