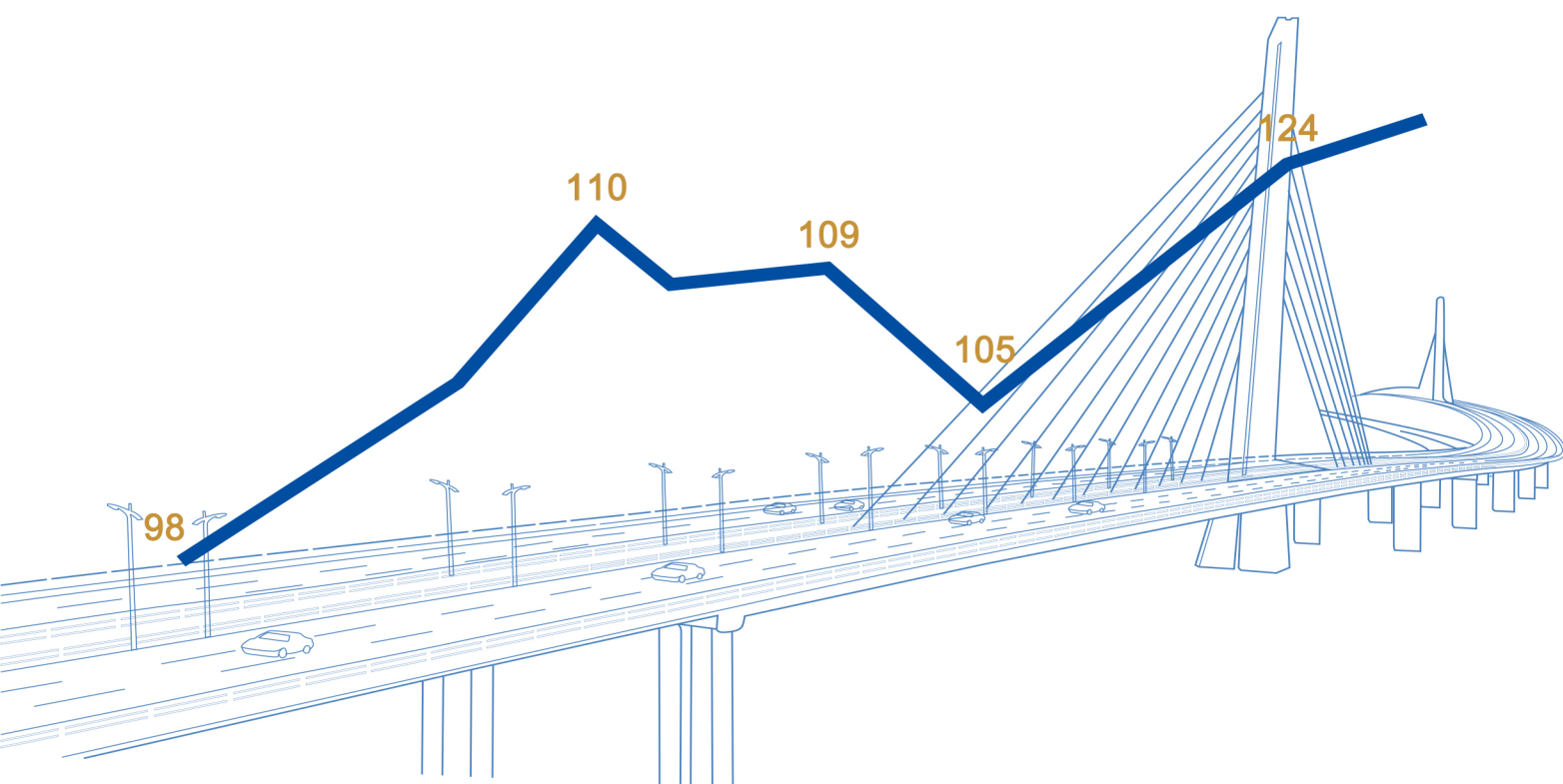


“一带一路” 国家基础设施 发展指数报告2018

The Belt and Road Infrastructure
Development Index Report 2018



 **中国对外承包工程商会**
CHINA INTERNATIONAL CONTRACTORS ASSOCIATION

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前言

当前，全球经济缓慢复苏，区域经济发展分化态势增强，国际多边投资贸易规则酝酿深刻调整，各国在迎来发展机遇的同时也面临诸多挑战。“一带一路”倡议提出 5 年来，随着多双边政策协定和具体合作项目的落地，“一带一路”沿线国家要素流动和资源配置更加高效、国际及区域市场融合不断深化，为各国共同打造开放、包容、均衡、普惠的国际经济合作新架构提供了强劲支撑。

5 年来，国际基础设施互联互通作为落实“一带一路”倡议的优先领域取得优异的发展成绩。中泰铁路、土耳其东西高铁、匈塞铁路等一批重大项目正加快推进，雅万高铁开工建设，中国 - 东盟信息港进展顺利，瓜达尔港正式开航，一个又一个镌刻着“一带一路”印记的项目从南到北、从东到西次第落成，使得全球基础设施互联互通不断加强，为各国基础设施投资者、建设者及各相关方创造了巨大商机。

由于“一带一路”沿线国家发展情况各异，跨国基建参与者的投资决策往往需要考虑诸多挑战和不确定因素。为深入研究国际基础设施发展趋势，应对潜在的风险和挑战，给国内外跨国基建参与者提供更加翔实可靠的分析预测，助力全球基础设施发展，中国对外承包工程商会携手大公国际信用评级集团有限公司共同开展了“‘一带一路’国家基础设施发展指数”研究，并于 2017 年 6 月在第八届澳门“国际基础设施投资与建设高峰论坛”上首次发布。这是国际基础设施投资与建设领域的第一个综合发展指数，赢得跨国基建参与者的广泛关注，被誉为“一带一路”基础设施合作的“晴雨表”。

在首期指数研究基础上，研究团队继续立足于影响一国基础设施发展的三大因素，从环境、潜力、趋势的维度评判未来 2-3 年基础设施发展前景。一年来，研究团队不仅更新和扩充了数据来源，而且对指数模型和编制方法进行了优化，力求指数结果更加客观公正、指数分析更加具体明确。目前，2018 年指数报告已经完成，希望为全球的跨国基建参与者提供参考。

本报告共分为五部分：第一部分阐述 2018 年指数结果揭示出的“一带一路”沿线各国基础设施发展总体特点；第二部分从发展环境、潜力、趋势三个子指数的角度分析各国基建未来发展前景；第三部分对交通、能源、建筑和公用事业等四个行业情况进行分析；第四部分重点分析部分代表性国别的基础设施发展走势；第五部分对各国政府、金融机构及企业提出相关建议。

由于研究水平有限，时间紧迫，本指数研究和报告仍存在诸多疏漏和不足之处，敬请广大读者批评指正，我们将在未来的研究和报告撰写中不断加以完善。

目 录

第一章 “一带一路” 国家基础设施发展总体特点	1
一、国际基础设施发展总体向好	1
二、东南亚地区发展势头依然强劲,西亚部分国家排名下滑	2
三、交通业与能源业将继续为国际基础设施发展提供支撑	4
四、新政策、新金融、新技术为基础设施发展提供新动能	5
五、跨国基建新签合同额上涨,项目热度持续提升	5
第二章 “一带一路” 国家基础设施发展子指数分析	6
一、发展环境指数有所提升,政治环境和金融环境明显改善	6
二、发展潜力指数强劲,基础设施发展需求继续扩大	20
三、发展趋势指数逐渐上升,跨国基建项目热度持续提高	12
第三章 “一带一路” 国家基础设施行业分析	17
一、交通业规模持续扩大,未来有望平稳增长	17
二、建筑业继续增长,园区建设等非居民建筑成为热点	20
三、能源业兼具发展速度与项目热度,存在较大发展空间	22
四、公用事业产值快速增长,电信与水处理领域前景较好	24
第四章 “一带一路” 典型国家基础设施发展指数分析	26
一、典型国别指数分析——印度尼西亚	26
二、典型国别指数分析——巴基斯坦	27
三、典型国别指数分析——巴西	29
四、典型国别指数分析——土耳其	30
五、典型国别指数分析——哈萨克斯坦	32
六、典型国别指数分析——伊朗	33

第五章 发展建议35

 一、各国政府应做好顶层设计和政策沟通 ,深化基础设施合作35

 二、金融机构应加强创新 ,通过绿色金融引导跨国基建可持续发展35

 三、企业应把握一带一路 “晴雨表” ,探索符合自身的发展道路35

附录 1 关于指数 37

 一、发展指数的含义和范围37

 二、发展指数的模型38

 三、发展指数的特点39

附录 2 2018 年 “一带一路” 国家基础设施发展指数排名40

 表 1 “一带一路” 国家总指数40

 表 2 “一带一路” 国家发展指数40

 表 3 葡语国家基础设施发展指数42

 表 4 发展环境排名 (TOP15)42

 表 5 发展潜力排名 (TOP15)43

 表 6 发展趋势排名 (TOP15)43

第一章 “一带一路” 国家基础设施发展总体特点

为促进“一带一路”倡议的实施，为中国“走出去”企业和全球投资、建设和运营商参与跨国基础设施项目提供决策参考，帮助各方把握趋势、发现机遇、规避风险，在澳门贸易投资促进局的支持下，中国对外承包工程商会（简称“承包商会”）与大公国际信用评级集团有限公司（简称“大公国际”）携手开发了“一带一路”国家基础设施发展指数（The Belt and Road Infrastructure Development Index，简称“发展指数”、“本指数”）。

本指数所关注的“发展”并非一国基础设施的现状，而是该国未来2-3年基础设施发展的前景。研究团队从基础设施发展环境、发展潜力、发展趋势三个维度构建指数分析模型，收集了“一带一路”沿线国家和葡语国家2007-2017年间超过20万项数据，以2008年分析模型各项指标的平均值为基准，测算形成了71个国家¹2008-2018年的年度指数矩阵，为读者提供包括发展总指数、国家指数、行业指数等在内的系列指数研究成果。

基于2018年发展指数的最新测算结果，“一带一路”国家基础设施发展呈现如下总体特点：

一 国际基础设施发展总体向好

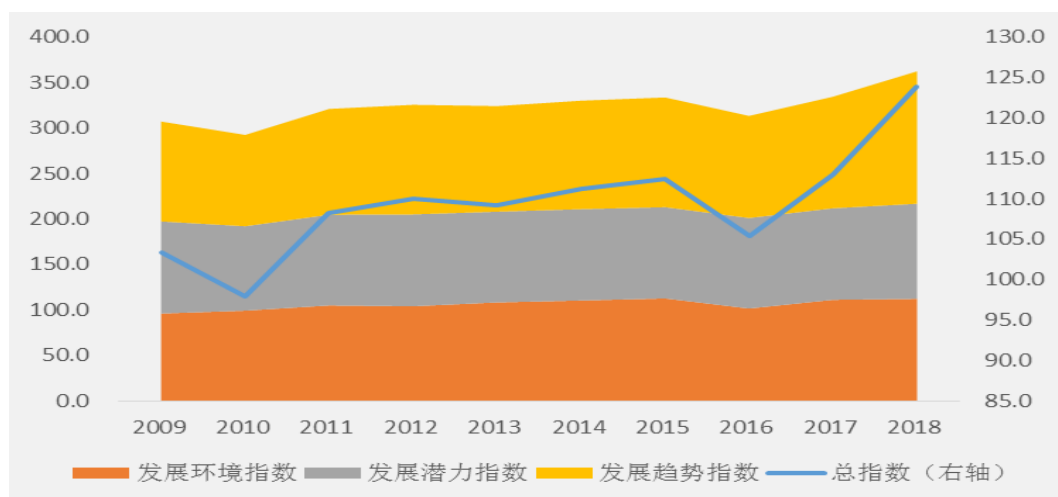
随着“一带一路”倡议国际影响力的提升，相关国家在基础设施互联互通领域的合作日渐紧密，为国际基础设施投资建设行业发展提供了广阔的发展空间。

本年度指数测算结果显示，“一带一路”沿线国家基础设施发展总指数本年度达到124，创出新高。

“一带一路”沿线国家基础设施发展整体向好，发展环境逐步改善，发展潜力依然巨大，基础设施发展速度不断攀升，跨国基建项目热度进一步提高，为跨国基建参与者带来不错的投资机遇，预计未来三年基础设施发展指数将会延续稳步增长的态势。

1.2018年指数研究的国家范围包括“一带一路”沿线63国：蒙古、新加坡、马来西亚、印度尼西亚、缅甸、泰国、老挝、柬埔寨、越南、文莱、菲律宾、伊朗、伊拉克、土耳其、约旦、黎巴嫩、以色列、沙特阿拉伯、也门、阿曼、阿联酋、卡塔尔、科威特、巴林、希腊、塞浦路斯、埃及、哈萨克斯坦、乌兹别克斯坦、土库曼斯坦、塔吉克斯坦、吉尔吉斯斯坦、印度、巴基斯坦、孟加拉、阿富汗、斯里兰卡、马尔代夫、尼泊尔、不丹、波兰、立陶宛、爱沙尼亚、拉脱维亚、捷克、斯洛伐克、匈牙利、斯洛文尼亚、克罗地亚、波黑、黑山、塞尔维亚、阿尔巴尼亚、罗马尼亚、保加利亚、马其顿、俄罗斯、乌克兰、白俄罗斯、格鲁吉亚、阿塞拜疆、亚美尼亚、摩尔多瓦；葡语国家8国：安哥拉、巴西、佛得角、几内亚比绍、莫桑比克、葡萄牙、圣多美和普林西比、东帝汶。

图 1.1 “一带一路” 沿线国家基础设施发展总指数 (2009-2018)



二 东南亚地区发展势头依然强劲，西亚部分国家排名下滑

本年度指数结果显示，“一带一路”沿线国家基础设施发展差异明显，印度尼西亚、新加坡、巴基斯坦、俄罗斯、越南、巴西、波兰、土耳其、马来西亚和印度等国位居指数排行榜前 10 位。其中印度尼西亚指数得分 158.2，连续两年排名榜首，其发展环境、发展潜力和发展趋势指数均排名前列；新加坡以 141.7 分排名第二，其发展环境指数突出，分值最高；巴基斯坦排名大幅上升 11 位，跃居本年度榜单第 3 位，其基础设施增长速度和跨国基建项目热度排名前列，受到越来越多跨国基建参与者的青睐。在葡语国家中，巴西指数表现良好，居总榜单第 6 位，巨大的市场需求和丰富的生产要素资源使其在发展潜力指数得分名列第三。

图 1.2 部分国家基础设施发展指数 (2009-2018)

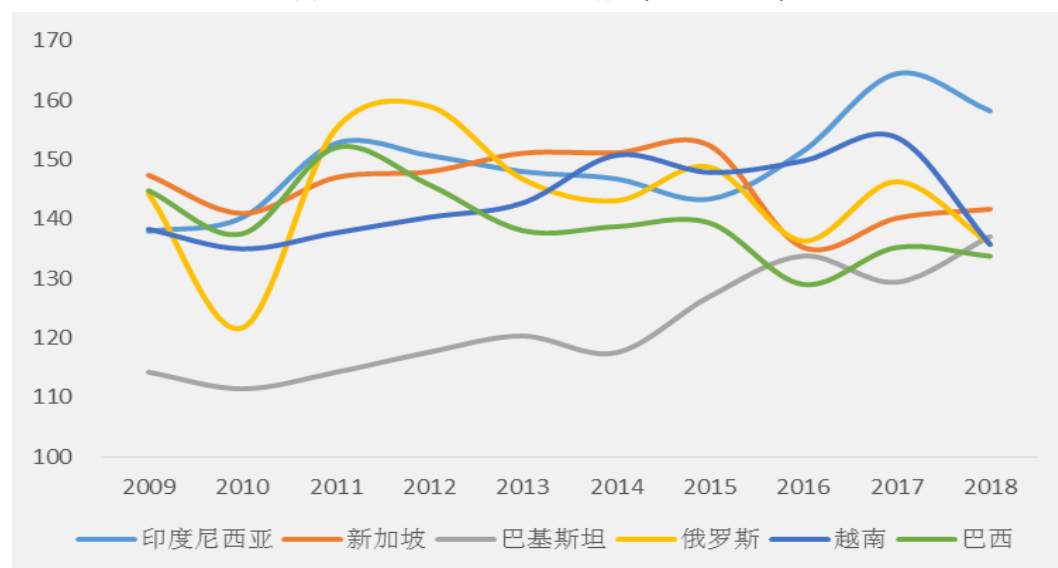


表 1.1 2018 年国家指数排名及变动 (TOP20)

国 家	2018 年 指数	2018 排名	排名变动	国 家	2018 年 指数	2018 排名	排名变动
印度尼西亚	158.2	1	持平	卡塔尔	129.4	11	↓ 1
新加坡	141.7	2	↑ 5	阿联酋	128.6	12	↓ 4
巴基斯坦	137.1	3	↑ 11	菲律宾	127.4	13	↓ 1
俄罗斯联邦	135.8	4	↓ 1	捷克	126.5	14	↑ 1
越南	135.7	5	↓ 3	沙特	124.2	15	↓ 9
巴西	133.8	6	↑ 3	罗马尼亚	123.9	16	↑ 2
波兰	133.7	7	↑ 10	泰国	118.4	17	↓ 4
土耳其	131.3	8	↑ 11	哈萨克斯坦	115.1	18	↑ 15
马来西亚	131.1	9	↑ 2	柬埔寨	115.0	19	↑ 4
印度	129.9	10	↓ 6	巴林	114.4	20	↑ 6

从区域排名情况来看，东南亚继续保持强劲增长势头，连续两年位居第一；葡语国家综合实力快速发展，排名提升两位；而西亚区域指数排名出现明显下降，由去年第二位下滑至第六位。

表 1.2 “一带一路” 国家区域指数排名及变动

地 区	2018 排名	2017 排名	排名变动	地 区	2018 排名	2017 排名	排名变动
东南亚	1	1	持平	葡语国家	5	7	↑ 2
中东欧	2	4	↑ 2	西亚	6	2	↓ 4
南亚	3	3	持平	东亚	7	6	↓ 1
中亚	4	5	↑ 1				

由于庞大的人口数量，东南亚国家基础设施投资建设需求持续旺盛，区域内各国在能源、交通、公用事业、建筑等领域的投资建设市场空间巨大。在东南亚 10 个国家中，有 7 个国家的指数得分位列本年度排行榜前 20 位。市场需求指标得分较高，使东南亚国家指数普遍处于高位。

表 1.3 2018 年东南亚地区国家指数排名

东南亚	2018 排名	2018 指数	发展环境	发展潜力	发展趋势
印度尼西亚	1	149.9	4	4	1
新加坡	2	141.7	1	38	9
越南	5	135.7	3	7	5
马来西亚	8	131.1	30	22	6
菲律宾	12	127.4	37	11	11
泰国	16	118.4	48	5	8
柬埔寨	18	115.0	28	19	41
老挝	23	110.3	44	40	28
缅甸	32	103.2	39	12	25
文莱	41	94.1	26	63	32

注：色阶分布从绿色到红色，颜色越红排名越低

西亚区域指数得分排名在本年度出现较大幅度下滑，区域内各国指数得分排名差异较大。其中，卡塔尔、阿联酋、沙特阿拉伯、伊朗等国受地缘政治及国际油价波动影响，跨国基建项目数量明显减少，国家指数得分出现不同程度下降。地处亚欧交接地区的土耳其凭借在发展趋势指数方面的优异表现，年度排名快速上升，跃居指数排行榜第 8 位。需要注意的是，西亚石油出产国政府财政实力雄厚，发展基础设施意愿强烈，

虽然区域指数排名下降，但相关国家在基础设施建设方面的发展潜力不容忽视。

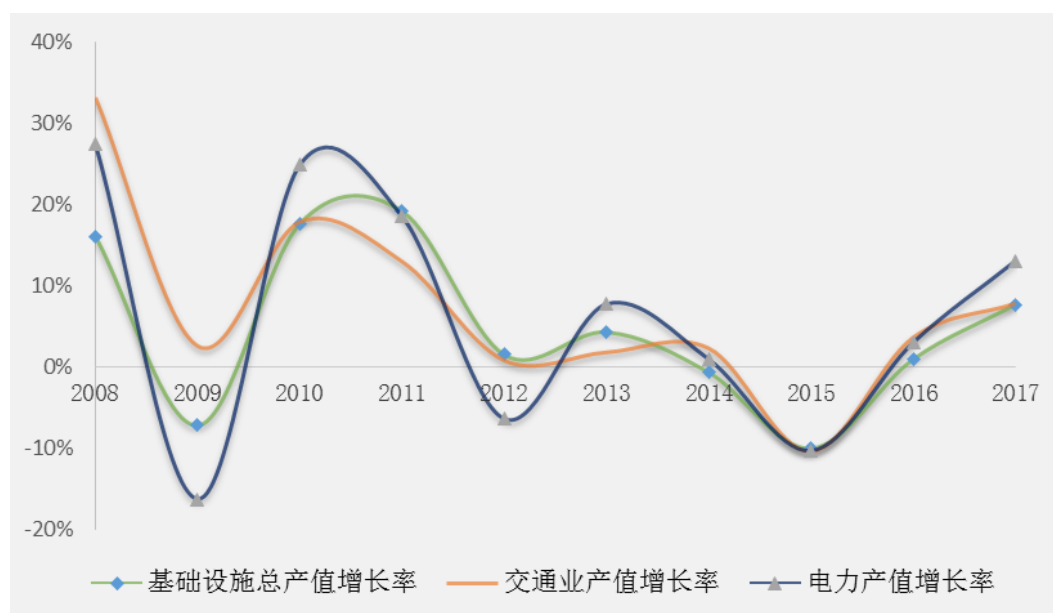
得益于巴西指数得分上升的拉动，本年葡语国家在区域指数排行榜中排名有所提升，由上年的第7名提升至第5名。葡萄牙和安哥拉分别凭借优越的发展环境和较大的发展潜力受到跨国基建投资者的关注。

三 交通业与能源业将继续为国际基础设施发展提供支撑

交通业是促进“一带一路”沿线各国设施联通、贸易畅通、民心相通不可或缺的重要纽带和桥梁，也是助推国际基础设施发展的最主要动力来源。本年度交通业指数受到规模与增速指标的拉动平稳增长，由上年109.9上升至113.8。具体来看：2017年“一带一路”沿线国家交通业产值为2321.5亿美元，较上年上升16.9亿美元，增长率7.9%，增速高于基础设施总产值增长率。5年来，“一带一路”沿线交通运输业发展取得了积极成果，一批境内外铁路、公路、港口、机场和跨境桥梁等基础设施项目相继开工建设，国际道路、海运、航空、快递等运输服务网络逐步完善，不仅促进了设施联通，而且为推动“一带一路”全面建设发挥了先行和基础作用。

以电力基础设施建设为核心的能源业同样为国际基础设施发展提供了重要支撑，各国工业、商业和居民用电增加以及电气化进程的加快使得能源业指数得分连续两年上升，2018指数达到135.7。具体来看：2017年“一带一路”电力行业产值为2177.8亿美元，较上年增加25.3亿美元，增长率为13.1%，明显高于基础设施总产值增长率。“一带一路”倡议与中巴经济走廊、俄罗斯欧亚经济联盟、蒙古草原之路、哈萨克斯坦光明之路计划、欧盟容克投资计划等战略对接，将为电力行业的发展带来新的市场机遇。预计未来交通业和电力基础设施仍然保持快速增长的趋势，从而引领各国基础设施的发展。

图 1.3 “一带一路”国家交通业、电力与基础设施总产值增长率
数据来源：BMI



四 新政策、新金融、新技术为基础设施发展提供新动能

从本年指数研究发现，“一带一路”倡议背景下的国际基础设施发展模式正出现新的变化，新政策、新金融、新技术的出现为“一带一路”跨国基建发展注入了新动能。

从政策环境方面来看，相关国家和地区先后通过“新政策”以加强国际合作、激发增长潜力，推动跨国基建业务向纵深发展。中国政府在构建具体行业的国际标准、打造国际合作新平台、营建“丝路明珠”等方面着力部署，积极推动“一带一路”项目建设；中东欧国家通过“16+1 合作”规划，将深化基础设施和互联互通合作明确作为今后一个时期的发展目标；俄罗斯明确提出“冰上丝绸之路”概念，积极推动北极航道与“一带一路”倡议的对接；波海三国签署《波海铁路项目协议》，并以此为契机带动区域经济转型发展，进一步丰富了“一带一路”跨国基建发展的内涵。

从金融环境方面来看，由于“一带一路”沿线国家多为财政和金融实力有限的发展中国家，金融环境的变化对相关国家基础设施投资和建设的影响至关重要。2017 年以来，国际多边金融机构、各国央行及商业银行，积极拓宽“一带一路”基础设施建设融资路径，为改善“一带一路”跨国基建业务发展金融环境做出了重要贡献。其中，亚洲基础设施投资银行通过主权担保融资、非主权担保融资等有竞争力的产品，为基础设施互联互通提供融资支持。2017 年，瑞士、俄罗斯等国央行同中国央行签署双边本币互换协议，降低汇率风险，保障了跨国基础设施项目的资金安全。

从技术环境方面来看，为更好地满足“一带一路”跨国基建需求，一批具有国际领先水平的技术正以跨国基建项目为依托，服务于“一带一路”沿线国家的发展。其中，以特高压直流输电技术、高铁集成技术为代表的工程建筑类技术的应用，为相关跨国基建项目的顺利建成打下基础。

五 跨国基建新签合同额上涨，项目热度持续提升

近两年，跨国基建参与者对“一带一路”沿线国家的投资热情显著提高，“一带一路”沿线国家发展趋势指数快速上升。具体来看，2017 年“一带一路”沿线国家跨国基建项目新签合同额同比增长 6.1%，新签合同额达 4307 亿美元，稳定维持较高增长速率；“一带一路”沿线国家跨国基建项目热度指数 217.4。其中，印度、巴基斯坦、孟加拉等南亚国家项目热度指数较高，或将在 2018 年成为引领“一带一路”沿线国家跨国基建业务发展的热点市场。

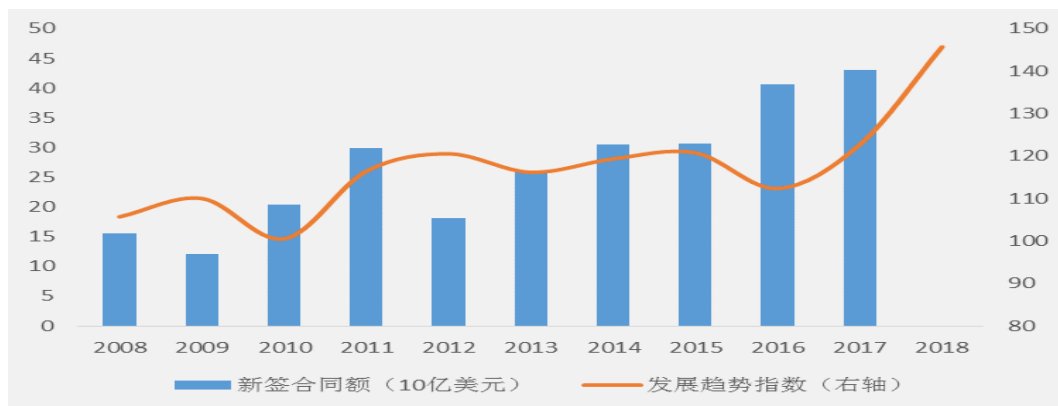


图 1.4 “一带一路”国家跨国基础设施项目新签合同额与发展趋势指数
数据来源：根据商务部合作司公布的数据，BMI

第二章 “一带一路”国家基础设施发展子指数分析

“一带一路”沿线国家基础设施发展子指数包括发展环境指数、发展潜力指数、发展趋势指数三个维度，分别从一个国家基础设施发展的背景和基础、动力和保障、惯性与热度等多个方面对其基础设施发展环境进行分析。

本年度指数结果显示，2018年“一带一路”沿线国家基础设施发展环境指数和发展潜力指数呈小幅上升态势，分别由去年的111.1和100.8增长至112.2和104.6；而发展趋势指数得益于“一带一路”沿线国家基础设施产值增长与跨国基础设施项目热度的拉动出现了较大幅度的提升，由去年的122.7升至145.7，成为影响“一带一路”沿线国家基础设施发展总指数上升的重要因素。

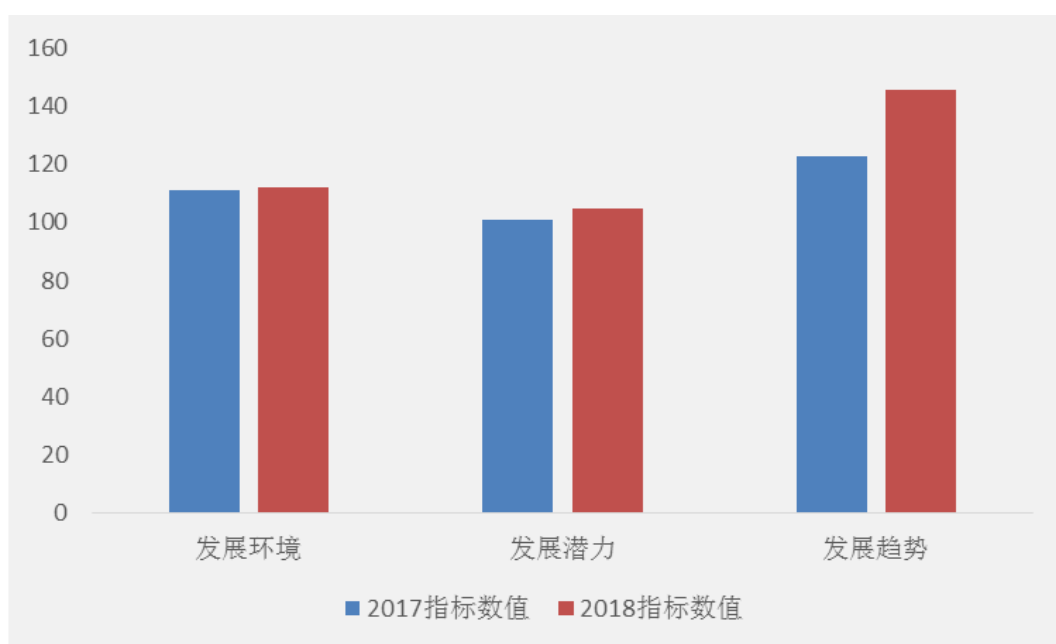


图 2.1 “一带一路”沿线国家基础设施发展指数一级指标变化情况

一 发展环境指数有所提升，政治环境和金融环境明显改善

发展环境指数主要考察政治、社会、金融和营商环境四个方面的指标要素。从指数结果来看，2018年“一带一路”沿线国家基础设施发展环境指数为112.2，与2017年111.1相比略有提升，各国基础设施发展环境总体向好，政治环境和金融环境有所改善，营商环境相对稳定，社会环境水平略有下降。同时，由于部分国家存在政局动荡、社会治安恶化、偿债风险显著提升等潜在风险，2018年度“一带一路”沿线国家基础设施发展环境所蕴含的风险因素也应当引起跨国基建参与者的重视。

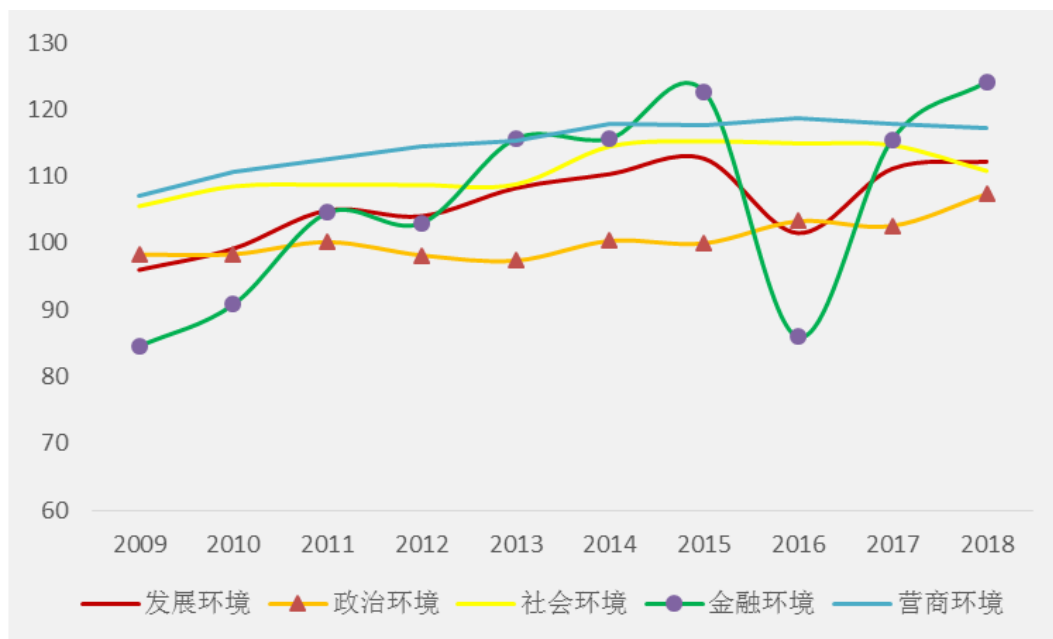


图 2.2 “一带一路” 国家发展环境指数趋势

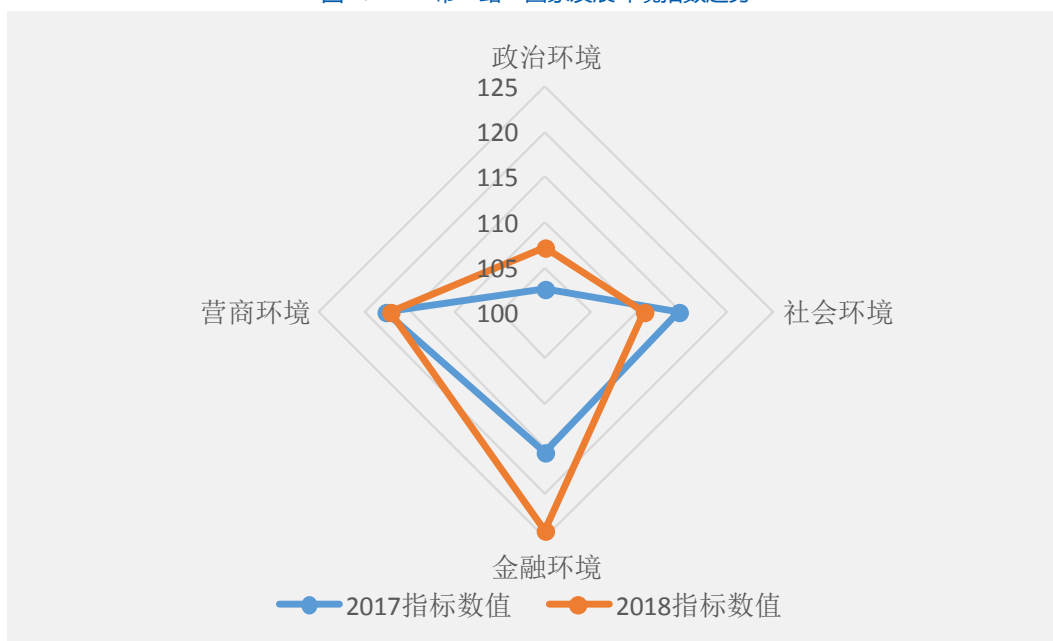


图 2.3 “一带一路” 沿线国家基础设施发展环境二级指数变化情况

表 2.1 “一带一路” 沿线国家 2018 年发展环境指数 (TOP10)

排名	国家	2018 指数	排名	国家	2018 指数
1	新加坡	197.1	6	葡萄牙	149.0
2	捷克	175.9	7	卡塔尔	147.6
3	越南	157.7	8	斯洛伐克	133.7
4	印度尼西亚	150.1	9	保加利亚	133.1
5	阿联酋	149.3	10	沙特阿拉伯	132.9

1. 政治环境持续改善，部分国家仍政局动荡

政治环境主要从政局稳定性、基建战略发展清晰度、政策连续性、国际关系友好度和基建行业开放度等角度对“一带一路”沿线国家基础设施发展政治环境进行考察。从指数结果来看，得益于国际关系友好度、政策连续性等指标的改善，2018年政治环境指数为107.3，与2017年102.6相比有所上升，“一带一路”沿线国家政治环境总体得到进一步改善。

2017年以来，国际社会积极响应“一带一路”倡议，联合国安理会和世界卫生组织分别通过第2344号决议与《关于“一带一路”卫生领域合作的谅解备忘录》，呼吁通过“一带一路”建设等加强交流与合作。“一带一路”沿线各国争相出台有利于基础设施发展的新政策，全面促进跨国基建合作，积极推动“一带一路”倡议背景下的国际基础设施投资合作深入发展，如埃及、中国、捷克、巴西、葡萄牙等国家。

表 2.2 2017 年“一带一路”相关新政策一览表

国家	政策名称
韩国	新北方经济政策
埃及	中埃关于加强“网上丝绸之路”建设合作促进信息互联互通的谅解备忘录
中国	中国环保部、外交部、国家发展改革委关于推进绿色“一带一路”建设的指导意见
新西兰	关于加强“一带一路”倡议合作的安排备忘录
中国	标准联通共建“一带一路”行动计划（2018-2020）
中国、俄罗斯等	中国、白俄罗斯、德国、哈萨克斯坦、蒙古、波兰、俄罗斯等7国铁路部门签署的《关于深化中欧班列合作协议》
希腊	中希重点领域2017-2019年合作计划
捷克	中捷关于共同协调推进“一带一路”倡议框架下合作规划及项目实施的谅解备忘录
菲律宾	菲中经贸合作六年计划
泰国	泰国东部经济走廊（EEC）支持超级群集（Super Cluster）建设构架
巴西	巴西对外国投资的政策优惠
中国、葡萄牙等	中国-葡语国家经贸合作论坛（澳门）关于推进产能合作的谅解备忘录

数据来源：各政府网站，研究团队整理

值得注意的是，受到印巴矛盾再次升温、卡塔尔遭遇“塌方式”断交风暴等事件的冲击，2018年南亚和西亚地区政治环境指数表现较差，区域冲突与潜在的政治与经济风险上升将成为制约上述地区跨国基建业务发展的重要因素。

2. 金融环境逐渐好转，部分国家偿债风险仍然较高

金融环境主要从汇率稳定度、物价稳定度、资本项目开放度、国家债务安全度、政府财政实力等方面对“一带一路”沿线国家基础设施发展金融环境进行考察。从指数结果来看，得益于“一带一路”国家资本项目开放度的改善，2018年金融环境指数为124.2，与2017年115.5相比有所上升。

根据联合国贸易和发展组织发布的《全球投资趋势监测报告》，2017年全球外国直接投资（FDI）从

2016 年的 1.8 万亿美元下降至约 1.5 万亿美元，降幅达 16%；而与此形成鲜明对照的是，“一带一路”国家 FDI 流入量逆势上扬，从 2016 年的 5600 亿美元增长至 5790 亿美元，涨幅近 3.4%。受此影响，“一带一路”沿线国家资本项目开放度、国家债务安全度、物价稳定度和汇率稳定度等指标得分均有不同程度上升。

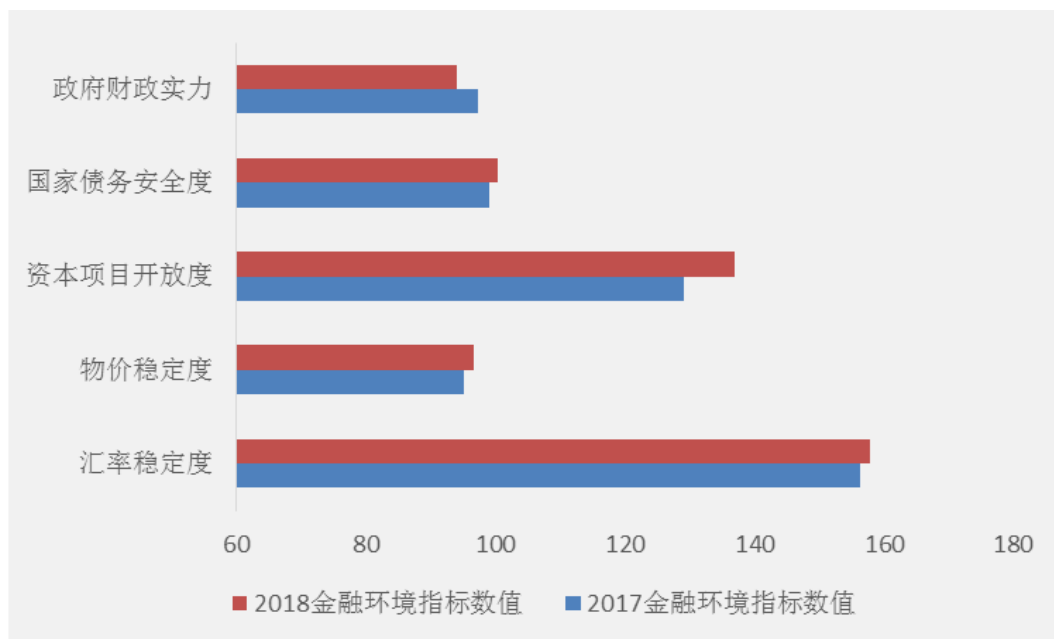


图 2.4 “一带一路”国家金融环境指数变化

从相关金融机构的实践来看，2017 年国际多边金融机构和各国商业银行积极推动“一带一路”倡议背景下的金融创新，着力降低金融风险。在亚投行、丝路基金等多边金融机构的带动下，多国（地区）央行与中国签署了总规模为 6350 亿元人民币的双边本币互换协议，进一步降低了跨国基建业务的汇率与利率风险，提高了相关资金的安全性。在商业银行方面，花旗银行与“一带一路”沿线各国深入在投融资方面合作，与中国财富 500 强中 80% 的企业建有业务联系，并在“一带一路”沿线的 58 个国家提供金融服务；汇丰银行在波兰首都华沙设立“中国企业海外服务部”，将辐射周边的捷克、斯洛伐克、匈牙利和罗马尼亚等“一带一路”沿线国家，帮助中资和当地企业开拓经贸合作商机；渣打银行先后参与 50 多项“一带一路”相关交易，积累了丰富的项目操作经验。

表 2.3 2017 年“一带一路”沿线国家与中国人民银行签定双边本币互换协议一览表

境外机构	协议规模	有效期
蒙古银行	150 亿元人民币 / 5.4 万亿蒙古图格里克	3 年
卡塔尔央行	350 亿元人民币 / 208 亿里亚尔	3 年
香港金管局	4000 亿元人民币 / 4700 亿港元	3 年
俄罗斯央行	1500 亿元人民币 / 13250 亿卢布	3 年
泰国央行	700 亿元人民币 / 3700 亿泰铢	3 年

数据来源：各央行网站，研究团队整理

在看到“一带一路”沿线国家金融环境逐渐好转的同时，跨国基建参与者也应清醒地认识到，现阶段部分国家也存在着财政状况不良、负债压力较大、外汇储备不足等金融风险，一些国家主权信用评级依然较低，相关国家的偿债能力值得关注。综合考虑本年度指数研究结果和大公国际资信评级集团对于“一带一路”沿线国家所做的主权信用评级，研究团队认为跨国基建参与者应在 2018 年更加关注巴基斯坦、希腊、也门、安哥拉、佛得角等国的金融和偿债风险。

表 2.4 “一带一路”沿线国家主权信用评级排名（投资级以下）

区域	国家	时间	本币长期	本币展望	外币长期	外币展望
东南亚	菲律宾	2016.01	BB-	负面	BB-	负面
南亚	孟加拉	2015.11	BB-	稳定	BB-	稳定
中东欧	克罗地亚	2017.11	BB+	稳定	BB+	稳定
西亚	土耳其	2016.09	BB	负面	BB-	负面
东南亚	越南	2016	B+	稳定	B+	稳定
东亚	蒙古	2017.07	B	负面	B	负面
南亚	斯里兰卡	2017.02	B+	稳定	B+	稳定
中东欧	塞尔维亚	2017.01	B+	稳定	B+	稳定
中东欧	波黑	2016.10	B	稳定	B	稳定
东南亚	柬埔寨	2017.05	B	稳定	B	稳定
西亚	埃及	2016.09	B-	稳定	B-	稳定
西亚	黎巴嫩	2015	B-	负面	B	负面
南亚	巴基斯坦	2016.06	CCC	正面	CCC	正面
中东欧	希腊	2017.11	CCC	正面	CCC	正面
西亚	也门	2015.06	CC	稳定	CC	稳定

数据来源：大公国际信用评级集团

3. 营商环境保持平稳，纠纷解决时间²略有上升

营商环境主要从经济法律完善度、商业便利度、行政效率、支付结算便利度、税收负担等角度对“一带一路”沿线国家基础设施发展营商环境进行考察。从指数结果来看，得益于“一带一路”沿线国家在相关法律环境、税率水平、业务开展便利性等方面条件的改善，2018 年营商环境指数为 117.2，与 2017 年 117.8 相比略有下降，“一带一路”沿线国家整体营商环境保持平稳。

在行政效率方面，新加坡和葡萄牙表现良好，缴税所需时间和注册公司所需时间不断缩短，在“一带一路”沿线国家中表现突出。在商业便利度方面，除印尼、泰国等少数国家外，其他国家纠纷解决时间均有所上升，商业纠纷的处理与解决将耗费更多的精力与成本。在税收负担方面，沙特阿拉伯和新加坡税负较低；但由于海湾国家于 2017 年先后出台新增值税法规，2018 年相关国家税负表现或将出现新的变化。

此外还应关注的是，2017 年“一带一路”沿线国家纠纷解决时间指标继续维持了连续 8 年的上升态势，纠纷解决时间上升至 681 天，同比增长 0.9%，与上年相比增速有所加大。这在一定程度上对跨国基建业务发展造成潜在风险，需要引起跨国基建参与者应有的重视。

2. 纠纷解决时间指解决两家公司之间商业纠纷所需的时间。

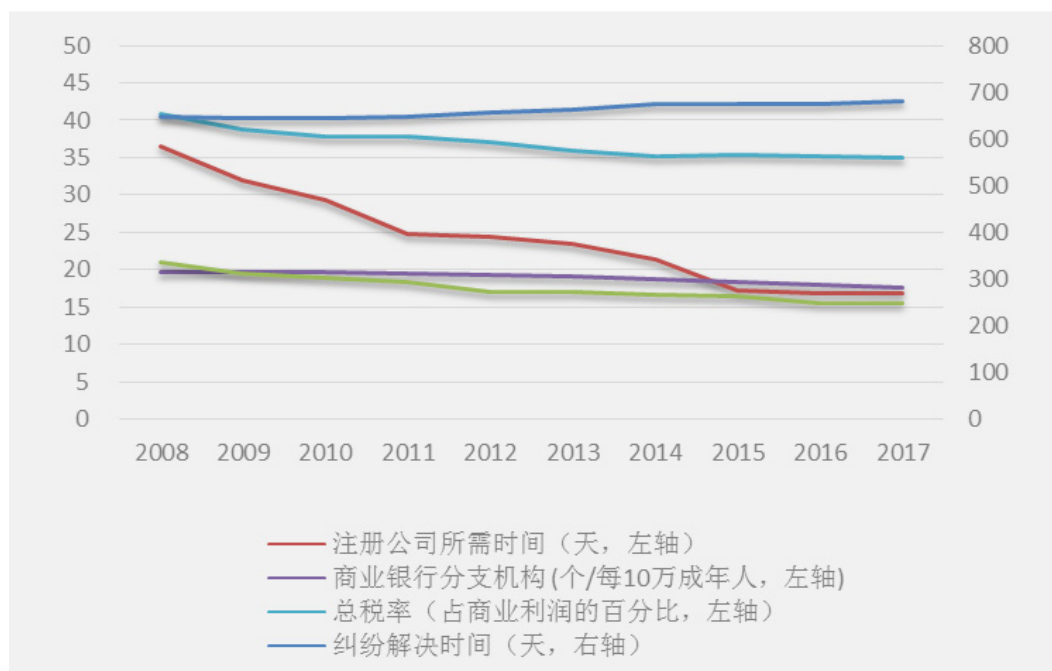


图 2.5 “一带一路”沿线国家营商环境部分指标平均值表现情况

数据来源：世界银行、BMI

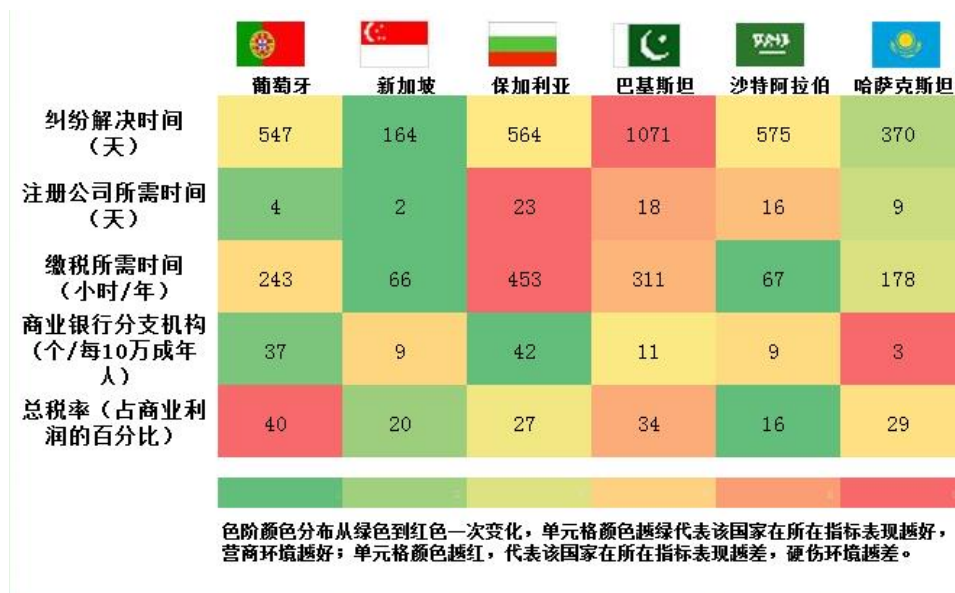


图 2.6 部分国家营商环境数据

数据来源：世界银行、BMI

4. 社会环境水平略有下降，南亚、中亚地区社会环境有待改善

社会环境指数主要从社会治安、医疗卫生、出入境便利度等角度对“一带一路”沿线国家基础设施发展社会环境进行考察。从指数结果来看，由于部分地区 2017 年社会冲突和矛盾的加剧，2018 年社会环境指数由 2017 年的 114.6 下降至 110.8。可以说，“一带一路”沿线国家在保持社会环境基本稳定的同时，部分地区面临较高的风险隐患。

从区域社会环境指数表现来看，中东欧和西亚区域社会环境指数得分较高，分别以 167.8 和 106.4 位列区域社会环境排行榜第一和第二位。而南亚和中亚区域社会环境指数得分较低，以克什米尔地区和叙利亚、埃及等国为代表的部分南亚和中亚国家（地区）民族、宗教、文化等方面的冲突不断，局部冲突的爆发或将对周边国家产生较强的风险外溢效应，其社会环境风险相对较高。

二 发展潜力指数强劲，基础设施发展需求继续扩大

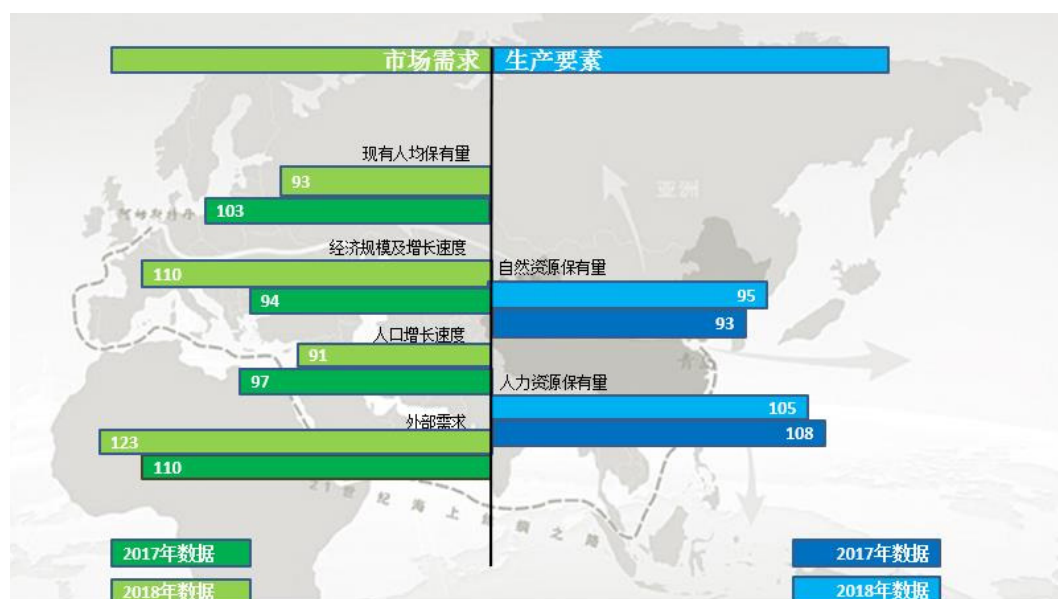


图 2.7 “一带一路”沿线国家发展潜力二级指标

发展潜力指数主要考察市场需求和生产要素两个要素。从指数结果来看，2018 年“一带一路”沿线国家基础设施发展潜力指数为 100.8，与 2017 年的 99.6 相比略有上升。各国对基础设施建设的刚性需求和相对充足的跨国基建资源成为推动 2018 年“一带一路”沿线国家发展潜力指数上升的关键因素。

此外，由于各国市场需求和生产要素水平的不同，“一带一路”沿线国家间发展潜力差别较大。根据本年度指数结果，泰国、印度尼西亚、越南、俄罗斯、巴西、土耳其等国跨国基建发展潜力更大，而部分西亚和中亚则因经济发展乏力、生产要素资源不足等问题在跨国基建发展潜力方面表现相对落后。

表 2.5 “一带一路” 沿线国家 2018 年发展潜力指数 (TOP10)

排名	国家	2018 指数
1	俄罗斯	172.4
2	印度	161.5
3	巴西	153.9
4	印度尼西亚	146.9
5	泰国	145.2
6	土耳其	141.5
7	越南	133.1
8	沙特阿拉伯	132.3
9	伊朗	130.3
10	罗马尼亚	127.1

1. “一带一路” 沿线国家基础设施刚性需求持续增长

市场需求指标主要从现有人均保有量、经济规模与增长速度、人口增长速度和外部需求等角度对 “一带一路” 沿线国家基础设施发展市场需求进行考察。从指数结果来看，由于各国现有人均保有量和人口增长速度指标有所下降，而经济规模、增长速度及外部需求指标有所提升；2018 年市场需求指数由 2017 年的 100.8 小幅上升至 105.9，“一带一路” 沿线国家市场需求指数总体保持了稳中有升的良好发展态势。

由于 “一带一路” 沿线国家多为经济发展及人口增长压力较大的发展中国家，相关各国对基础设施投资建设的刚性需求较为强劲。随着东南亚区域一体化进程的推进，相关国家对交通、通讯等领域的基础设施建设需求不断增加；科威特、塞浦路斯等西亚国家经济的复苏和增长，有效地释放了当地基础设施发展潜力；俄罗斯、乌克兰等独联体区域国家不断简化外资手续、调低准入门槛，大量外资的融入激发了当地的基础设施投资建设活力。

从各区域基础设施市场需求指数表现来看，东南亚国家市场需求指数为 123.3，居各区域之首；中东欧国家市场需求指数较为稳定，为 100.3，名列第 2 位；西亚、中亚、南亚国家市场需求指数分别为 69.5、68.5 和 97，较上年略有回落。

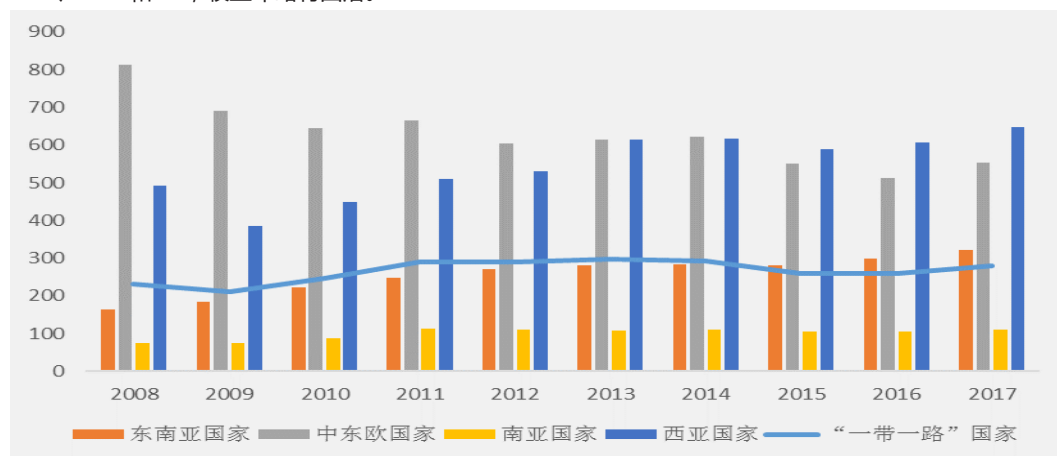


图 2.8 区域人均基础设施产值 (单位：美元)

数据来源：世界银行、BMI

2. 多数国家基建资源充足，国家间发展潜力存在明显差异

生产要素指数主要从社会治安、医疗卫生、出入境便利度等角度对“一带一路”沿线国家基础设施发展市场需求进行考察。从指数结果来看，本年度“一带一路”沿线国家相关指标得分与上年度基本持平，2018年生产要素指数为100.5，继续维持2017年的指数水平。相关国家基建资源相对充足，但不同国家间的资源禀赋差异较大。

在自然资源保有量方面，“一带一路”沿线国家2018年自然资源保有量指标得分为95.1，较2017年小幅上升，多数国家自然资源较为丰富，钢材、水泥等基础性建材供应充足。其中，印度、俄罗斯、越南、巴西、土耳其、伊朗、印度尼西亚等国水泥产量居于全球前10位；乌克兰、俄罗斯、土耳其、印度等国在全球钢铁出口方面表现较好，相对充足的建材资源为相关各国开展“一带一路”跨国基建项目创造了有利条件。

在人力资源保有量方面，“一带一路”沿线国家2018年自然资源保有量指标得分为105.8，较2017年略有下降。具体来看，各国劳动力年均增长率维持在0.7%左右，并呈缓慢下降态势；失业率稳定在9.0%左右，其中东盟地区失业率最低为3.8%，中东欧地区失业率较高为13.1%，东南亚地区劳动力市场制度建设尚未健全，员工工资薪酬普遍处在较低水平，劳动力成本较低、人力资源优势较大。

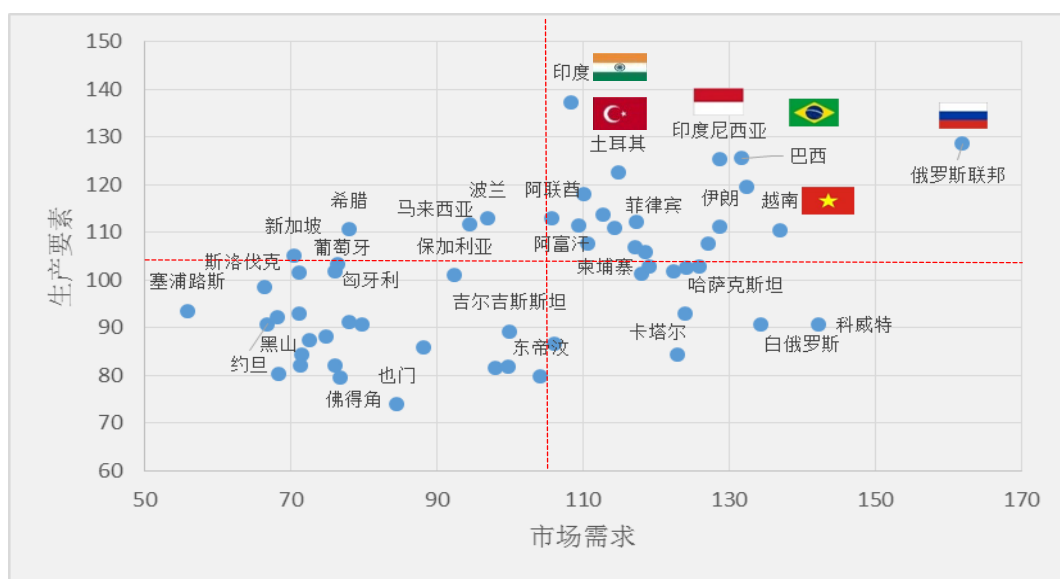


图 2.9 “一带一路”沿线国家市场需求指数和生产要素指数分布图

三 发展趋势指数逐渐上升，跨国基建项目热度持续提高

发展趋势指数主要考察投资规模与增速和跨国基建项目热度两个方面的指标要素。从指数结果来看，2018年“一带一路”沿线国家基础设施发展趋势指数为145.7，与2017年122.7相比大幅提升，各国基础设施规模与增速快速增长，项目热度稳步提升，“一带一路”国家基础设施发展趋势总体呈现良好态势。从发展趋势指数排名来看，印度尼西亚、越南等国基建增速较快，土耳其、马来西亚等国跨国基建热度较高，未来或成新增长点。

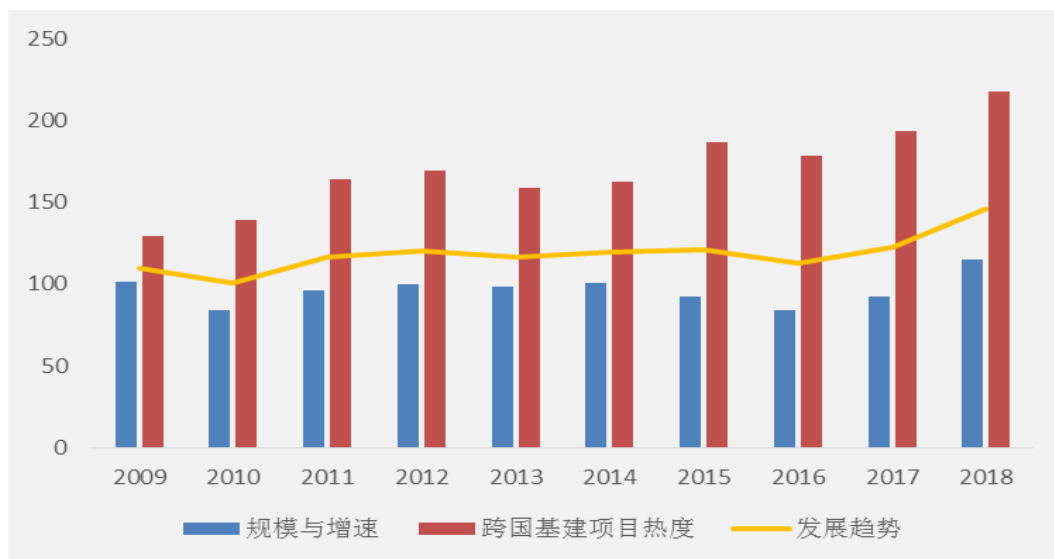


图 2.10 “一带一路” 沿线国家基础设施发展趋势指数变化情况

表 2.6 “一带一路” 沿线国家 2018 年发展趋势指数 (TOP10)

排名	国家	2018 指数
1	印度尼西亚	187.1
2	印度	184.4
3	土耳其	182.7
4	俄罗斯	177.7
5	越南	164.4
6	马来西亚	163.3
7	巴西	159.4
8	泰国	156.6
9	新加坡	155.5
10	卡塔尔	153.0

1. 基础设施总产值稳中有升，跨国基建新签合同额持续增长

规模与增速指数主要从“一带一路”沿线国家基础设施行业产值和增长速度等角度来进行考察；跨国基建项目热度主要从“一带一路”沿线国家基础设施行业新签合同额的角度来进行考察。从指数结果来看，本年度“一带一路”沿线国家相关指标表现与上年度基本持平，2018 年规模与增速指数为 115，较 2017 年增长了 22.5。2018 年项目热度指标为 217.4，与 2017 年相比增长了 24.1。

“一带一路”沿线国家基础设施行业产值总体呈上升趋势，2017 年为 9792.3 亿美元，同比增长 7.7%。从区域产值分布来看，中东欧地区基础设施产值普遍涨幅较高，其中波兰、爱沙尼亚、匈牙利、克罗地亚等国表现突出；东盟地区的印度尼西亚、越南产值增幅较大。

近年来，跨国基建企业参与“一带一路”沿线国家基础设施建设项目热度稳步上升，跨国基建项目数量和新签合同额逐年增长。2017 年新签合同额达到 4307.3 亿美元，同比增长 6.1%。其中，合同金额较大的项目主要有：土耳其锡诺普核电站项目，合同金额 220 亿美元，建成后将减少对俄罗斯和伊朗的电力

依赖；马来西亚新海岸铁路项目，合同金额 126.6 亿美元，将有助于打通东南亚贸易通道；泰国的中泰铁路项目，合同金额 106.4 亿美元，建成后将成为泰国第一条标准轨高速铁路。

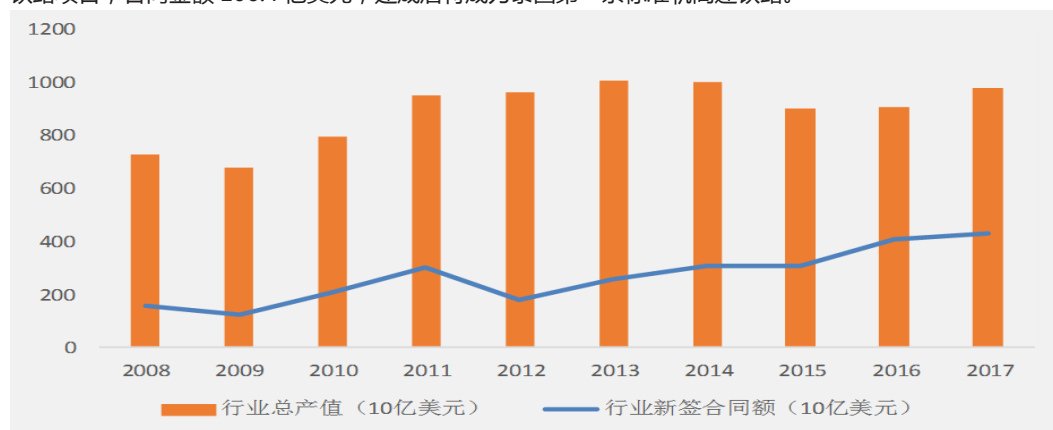


图 2.11 “一带一路”国家基础设施总产值及跨国基建项目新签合同额

数据来源：根据商务部合作司公布的数据，BMI

2. 印度尼西亚、印度、马来西亚、土耳其、俄罗斯等国基础设施市场备受青睐

从项目热度与发展速度指标的现象分布图来看，不同国家的基础设施发展趋势差异明显。未来基础设施发展速度较快的国家有：印度尼西亚、印度、土耳其、俄罗斯等国，其基础设施发展速度和基建项目热度均处于较高水平。2017 年这些国家基础设施产值及基础设施新签项目合同额均有突出表现，未来仍将延续较快发展态势。部分国家如马来西亚、越南、泰国、巴西、新加坡等国，其基础设施发展速度和基建项目热度均处于中上水平，表明这些国家基础设施建设处于稳步发展阶段。未来，基础设施发展潜力较大的国家有：孟加拉、科威特、安哥拉、伊拉克、老挝等国，基建项目热度较高，但基础设施发展速度较慢，这些国家基础设施发展水平较低，存在较大的投资空间，可作为跨国基建参与者的重点关注对象。

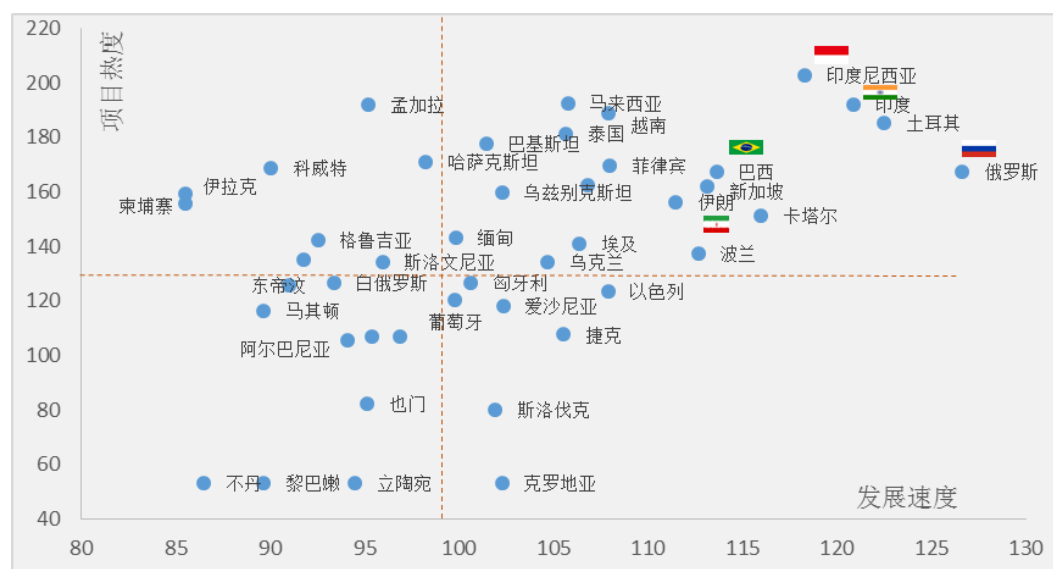


图 2.12 “一带一路”沿线国家基础设施发展趋势分布图

第三章 “一带一路” 国家基础设施行业分析

指数结果能够反映“一带一路”沿线国家基础设施各行业发展情况，并对不同区域间跨国基建热点进行预测。结合本年度指数结果来看，“一带一路”沿线国家基础设施行业指数呈现增长态势，但不同行业之间差异显著。其中，交通业发展指数平稳上升，未来有望持续增长；建筑业发展指数快速上涨，规模与增速指标逆转了该行业逐年递减的趋势；能源业发展指数波动上升，电力领域依然是各国关注和发展的重点，清洁能源和可再生能源项目将更受欢迎；公用事业发展指数涨幅最大，电信建设增长势头迅猛，通信与水处理领域发展空间巨大。

一 交通业规模持续扩大，未来有望平稳增长

“一带一路”沿线国家交通业发展指数连续多年维持平稳上升趋势，2018 年交通业指数为 113.8，较 2017 年的 109.9 略有增长。其中项目热度指标略有下降，行业指数的提高主要受到规模与增速指标上升拉动的影响。

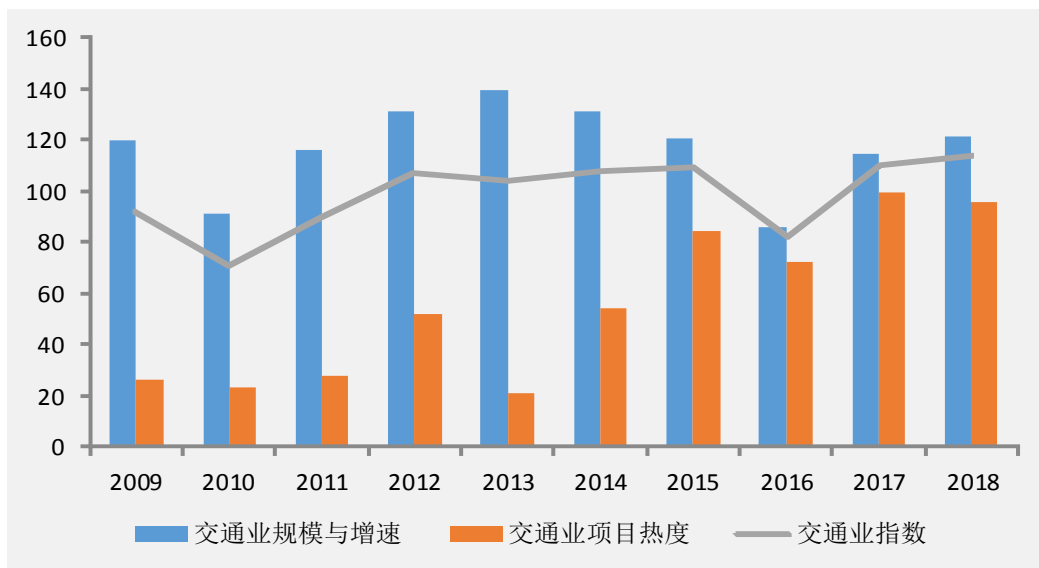


图 3.1 “一带一路” 国家交通业指数

1. 交通业规划布局长远，公路、铁路建设备受关注

据《工程新闻记录》（Engineering News-Record 简称“ENR”）报告显示，交通业历来在基础设施建设领域占据较大市场份额，全球 2.5 万亿美元的基础设施投资中，1.15 万亿美元用于交通基础设施建设。结合本年度研究数据来看，2008-2017 年间“一带一路”国家交通业产值持续上升，由 2008 年的 1606.5 亿美元增长至 2017 年的 2321.5 亿美元，平均年增长率为 7.3%。其中，公路、铁路基础设施建设作为支撑“一带一路”沿线国家交通业持续发展的重点领域备受关注，其在“一带一路”沿线国家交通业中的产值占比

由 2008 年的 81.5% 上升至 2017 年的 86.8%，并或将继续提升。

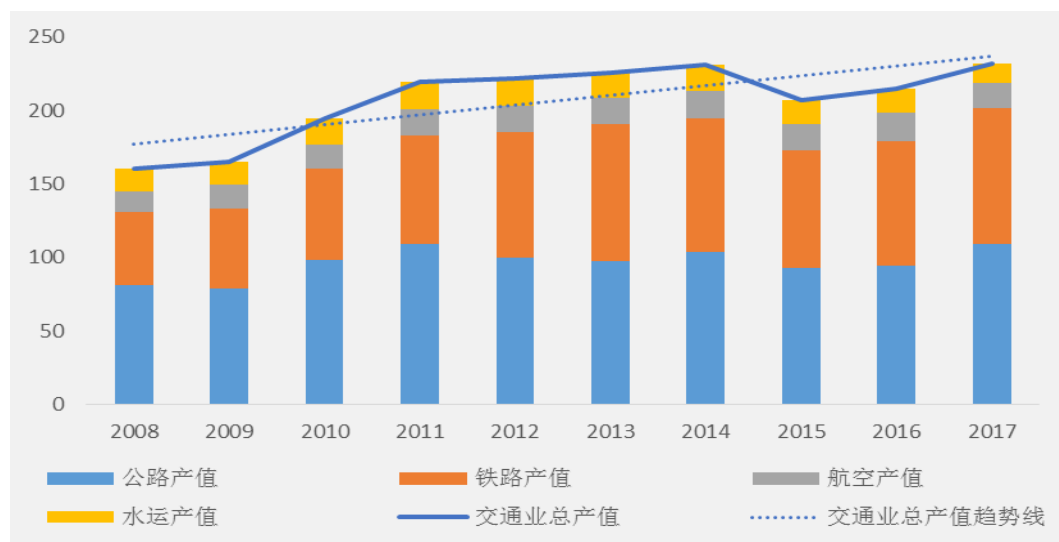


图 3.2 “一带一路”国家交通业产值（10 亿美元）
数据来源：BMI

作为“一带一路”建设的优先领域，多数国家在中长期发展战略上高度重视交通基础设施建设。巴基斯坦、印度、波兰、土耳其、印度尼西亚和伊朗等国先后在高速铁路和公路网络建设及升级改造方面制定了相应的发展规划。其中巴基斯坦更是在《中巴经济走廊远景规划（2017-2030 年）》中确立了“使铁路成为国家主要运输形式、运输系统逐渐盈利、有力促进国家经济发展”的目标，为该国铁路网中长期发展建设指明了方向。

表 3.1 重点国家交通行业发展规划

国家	类型	发展规划
巴基斯坦	公路	在 2010—2020 年内全面扩建公路网络，提高公路密度和道路运输速度，降低车辆运营成本 and 道路故障。
波兰	公路	根据 2014-2023 年国家道路建设方案，波兰政府将花费 1070 亿兹罗提用于建设 3900 公里的高速公路和 57 条新的环形路。
印度	铁路	政府计划以公私合营的方式对全国 22 个主要火车站进行现代化改造，并计划到 2020 年新增铁路 25000 公里。
马来西亚	铁路	计划到 2020 年投资约 500 亿美元推动铁路项目开发。
土耳其	公路	计划建设 1775 公里高速公路和 1.5 万公里多车道公路。
	铁路	发展以安卡拉为中心的高速铁路网络，包括伊斯坦布尔—安卡拉—锡瓦斯、安卡拉—阿菲永—卡拉黑塞尔—伊兹密尔、安卡拉—孔亚等三条高铁线。
	航空	投资 1.6 亿美元，建设一个空中交通导航控制中心；投资 9.37 亿美元，在 5 个国际机场建设接待能力超过 5000 万人次/年的 6 个航站楼；投资 221.52 亿欧元，建设伊斯坦布尔第三机场。
印度尼西亚	公路	2014—2019 年内，印尼政府将建设 2650 公里长的公路和 1000 公里的高速公路，维修全长 46770 公里的现有公路。
	铁路	2014—2019 年内，印尼政府将新建 3258 公里的铁路网。
	航空	印尼交通运输部计划在 2019 年之前新建 15 个机场。
	水运	2014—2019 年内将兴建 24 个大型港口项目。

国家	类型	发展规划
伊朗	公路	预计六五规划（2016—2021 年）末伊朗高速通车里程将超过 7000 公里。
	铁路	伊朗 20 年发展计划（2005—2025 年），2025 年伊朗铁路总长达到 25000 公里。

资料来源：商务部《对外投资合作国别（地区）指南》

从细分行业来看，“一带一路”沿线国家铁路运输建设如火如荼。相关各国相继启动诸如蒙内铁路、雅万高铁、莫斯科喀山高铁、德黑兰马什哈德铁路高速改造等一系列铁路网和高铁建设项目，在为区域经贸融合度和自身物流服务能力提高奠定基础的同时，也为相关国家基础设施建设行业发展注入了强劲动力。在公路网建设方面，中吉乌公路、塔乌公路修复改造项目、塞尔维亚泽蒙博尔察大桥等大型互联互通项目进展顺利，为促进“一带一路”沿线国家经贸合作和跨国基础设施建设发挥了重要推动作用。在港口建设方面，近年来全球港口建设的重心已由新建港口转变为港口自动化改造升级，以斯里兰卡汉班托塔港、卡塔尔多哈新港码头、几内亚巴塔港等为代表的自动化程度较高的港口改建项目正成为促进跨国港口基建业务发展的主要动力。

2. 东南亚、中东欧等地区交通基础设施发展迅速

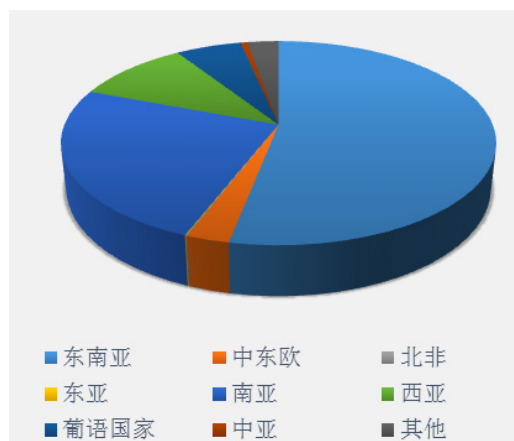


图 3.3 2017 年交通业新签合同额区域分布

数据来源：BMI

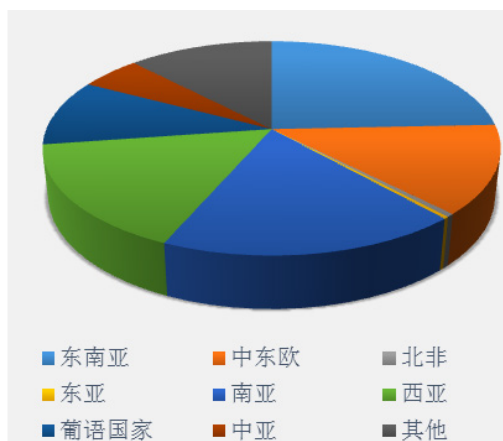


图 3.4 2017 年交通业产值区域分布

数据来源：BMI

从区域交通业发展情况来看，东南亚、中东欧等地区交通基础设施发展迅速。在交通业产值方面，2017 年，东南亚交通业产值 564.9 亿美元，占“一带一路”沿线国家交通业总产值的 24.3%；中东欧交通业产值 309.4 亿美元，占 13.3%。其中，印度尼西亚交通业产值 349.4 亿美元，在“一带一路”沿线国家产值排名位列第一。在新签合同额方面，2017 年东南亚交通业新签合同额 916.7 亿美元，占“一带一路”沿线国家交通业新签合同总额的 53.1%；中东欧交通业新签合同额 46.7 亿美元，占 2.7%。欧盟东扩促进了中东欧经济的发展，铁路基础设施更新改造市场前景广阔。匈塞铁路塞尔维亚段正式开工建设，中东欧“16+1”合作实现良好开局，黑山、塞尔维亚等国的铁路修复改造项目进展顺利。预计未来这两个区域交通业基础设施将会有更大的发展空间。

二 建筑业继续增长，园区建设等非居民建筑成为热点

“一带一路”沿线国家建筑业发展指数稳步增长，2018 年建筑业指数为 158.1，较 2017 年 130.0 有较大幅度的提升。“一带一路”沿线国家建筑业发展规模与增速指标一改 2012 年以来逐年递减的趋势大幅回升，成为带动建筑业发展指数上涨的最主要因素。

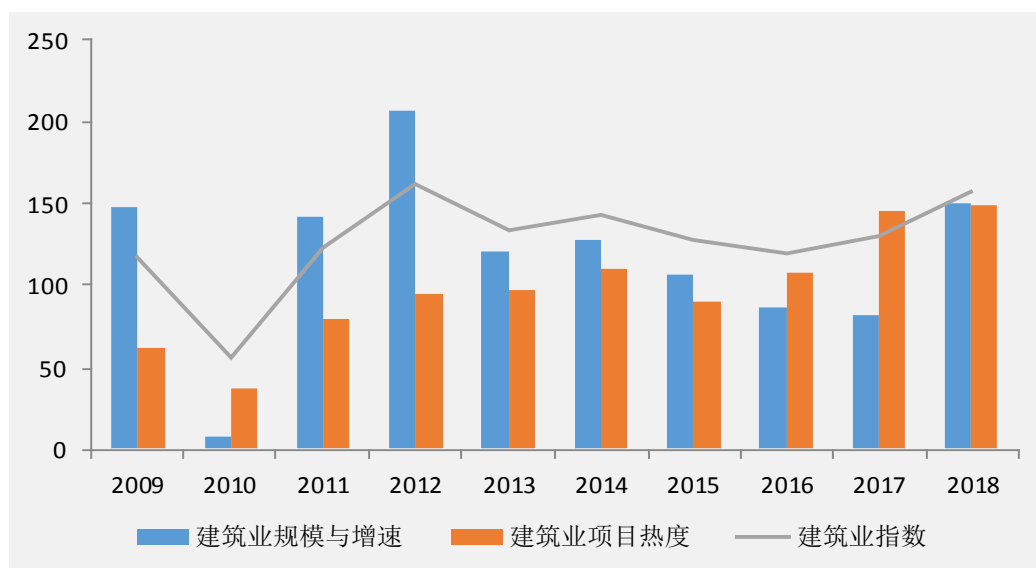


图 3.5 “一带一路”沿线国家建筑业指数

1. 建筑业发展规划清晰，非居民建筑成为发展重点

2017 年“一带一路”沿线国家建筑行业发展平稳，行业总产值逐年上升，2017 年建筑业产值为 5570 亿美元，同比增长 5.19%，其中非居民建筑产值占比 60%，居民建筑产值占比 40%。值得一提的是，各国对于工商业建筑的重视程度不断提高，非居民建筑产值所占比重有望持续增加。

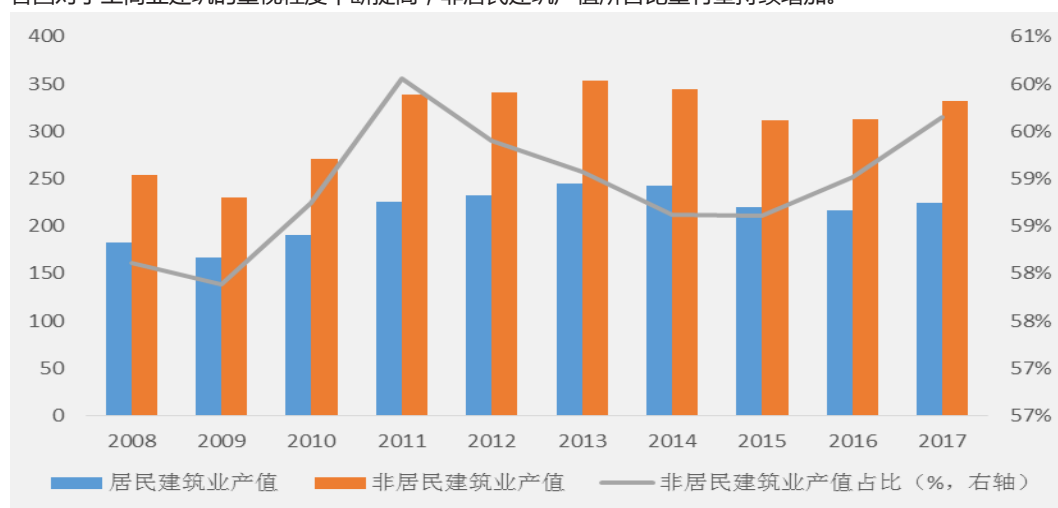


图 3.6 “一带一路”沿线国家建筑业产值
数据来源：BMI

“一带一路”沿线国家非居民建筑主要集中在工业园区、会展中心、酒店、医院、体育场馆建设方面。随着非洲、亚洲和中东地区新兴市场的兴起，相关各国工业化和城市化进程加快，各国对城市中心商务区的建设需求不断提高，非居民建筑业务正成为“一带一路”沿线国家重点支持的跨国基建合作领域。其中，埃及政府以苏伊士经贸合作区为重点推动相关非居民建筑业发展，着力打造“产业+生活”的国际化产业基地和现代化新城；新加坡政府推动丹戎巴葛地区新城建设，提出用10年时间将该地区打造成为集商务、旅游、休闲、居住于一体的滨海新城；阿曼政府提出投资建设杜库姆经济特区和南巴提奈省物流区的开发计划，计划于2020年前完成相关基础设施建设项目；菲律宾总统签署了2017-2019年投资优先计划(IPP)，基础设施预算中用于学校、医院等非居民建筑升级改造的资金规模大幅上升。

在居民建筑方面，“一带一路”沿线国家以改善型住房建设为重点，积极推动以埃及伊斯梅利亚市新住宅项目、马来西亚斯里丹荣坪住宅项目为代表的相关基础设施项目建设。特别值得一提的是，由于缅甸、沙特阿拉伯对改善型住房建设的政策支持和市场需求较大，国际基建参与者可重点关注上述两国的居民建筑市场动态。

2. 东南亚作为规模最大的国际建筑业市场，发展前景广阔

2017年，东南亚建筑业产值高达1134.1亿美元，占“一带一路”沿线国家建筑业总产值的20.35%，位于区域建筑业排名第2位；从建筑业新签合同额来看，东南亚地区国家2017年新签建筑业合同589.8亿美元，同比增长14.6%，占“一带一路”沿线国家建筑业总合同额的56.7%，是“一带一路”沿线国家吸引国际投资规模最大的建筑业市场。具体来看，印度尼西亚、马来西亚、越南、柬埔寨的建筑业新签项目合同额均位于“一带一路”沿线国家建筑业排名前10位，四国合计占比50.66%，超过“一带一路”沿线国家建筑业新签项目合同额的一半。

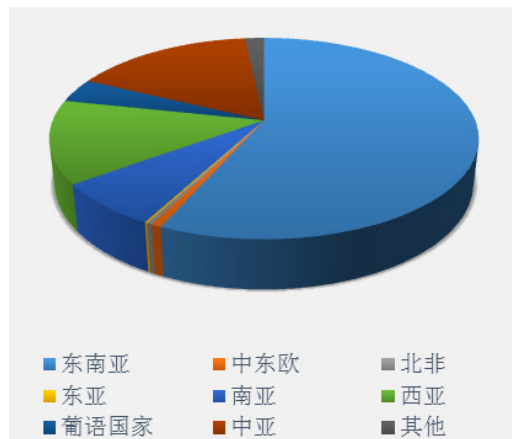


图 3.7 2017 年建筑业新签合同额区域分布
数据来源：BMI



图 3.8 2017 年建筑业产值区域分布
数据来源：BMI

印度尼西亚以413.60亿美元的新签合同额位列“一带一路”沿线国家建筑业新签合同额排名首位。得益于日本为巴厘岛海岸建设提供的6.5亿美元贷款和亚投行为整顿和改造印尼贫民窟提供的2.16亿美元低息贷款，印尼建筑业基础设施发展势头强劲，国际资金的大量流入为其发展提供了新的动力。此外，本年度越南建筑业也保持了较快的增长势头，受到该国中低档住房销售市场的拉动，产值同比增长19.2%。

柬埔寨 2017 年建筑业总投资额达 64.29 亿美元，在建建筑业基础设施项目 3052 个，市场活跃度较高。菲律宾政府积极推动克拉克新城项目建设，其 2017 年至 2021 年的建筑业平均增长率或将维持在 11.2%，有望成为全球增长最快的建筑业市场。

三 能源业兼具发展速度与项目热度，存在较大发展空间

近年来，“一带一路”沿线国家能源业发展指数呈现波动上升态势，能源业规模与增速指标自 2011 年后有所放缓，并于 2016 年在能源业项目热度指标的推动下逐步回暖。2018 年能源业指数为 135.7，较 2017 年的 112.4 增长了 20 个百分点，提升幅度较大。

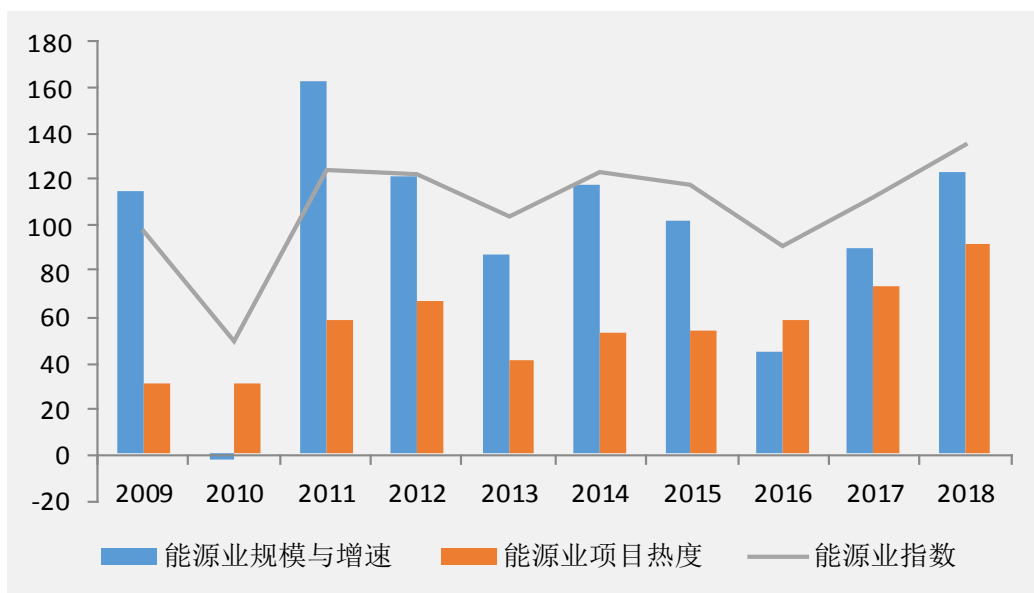


图 3.9 “一带一路”沿线国家能源业指数

1. 电力行业刚性需求大，新能源成为未来发展重点

近些年，随着全球经济格局的深刻调整、能源技术创新、环境保护和应对气候变化的不断推进，全球能源发展格局正在经历一场深刻的变革。太阳能、风能、地热能、生物能等再生资源的开发与利用已成为全球焦点，传统化石能源向新能源转型成为趋势。

各国对电力基础设施建设尤为重视，解决电力短缺问题不仅能够促进相关国家经济持续增长，也将有利于改善各国居民生活水平。2017 年“一带一路”沿线国家电力行业总产值约为 1089 亿美元，占能源行业的 72%。全球电力投资持续增长，预计到 2030 年全球累计电力投资规模约 6.0 万亿美元，“一带一路”沿线国家约占全球电力投资总额的 40% 左右。面对持续增长的电力需求，各国积极出台电力发展规划，如印度“十二五”规划中强调，政府追加电力投资 1 万亿美元，实现全国总发电量超过 1 亿千瓦。

随着低碳发展理念的深入人心，各国开始关注可再生能源和清洁能源的发展，新能源建设逐渐成为各国能源行业的发展方向。2017 年，全球可再生能源投资总额增长了 2%，达到 2800 亿美元，可再生能源的增长幅度也超过了石油等化石能源的增长幅度。阿联酋由于地理位置优越、日照充足，将大力发展太阳

能等新能源行业；印度尼西亚不断加大地热能资源的开发力度，拨款 3 亿美金用于 2018 年度的勘探工作；2017 年，巴西在太阳能、风能、生物燃料等可再生能源方面的投资额达到 60 亿美元；葡萄牙风能、水力、生物能与光伏等可再生能源发电量在葡萄牙全部电力消耗的占比已达 44%。土耳其制定了《可再生能源法》，扩大新能源种类，加强对太阳能、风能、地热能、核能等的利用。

表 3.2 重点国家能源行业发展规划示例

国家	类型	发展规划
印度	核能	政府计划开发 22 个反应堆，增加 40GW 发电能力，预计 2050 年印度四分之一的电力总量由核电供应。
俄罗斯	清洁能源	俄罗斯天然气公司已确定 2016-2020 年改造天然气管道综合计划。工程改造计划包括压缩机站、管道管线、天然气分配站、供热供暖设施和防范设施等。
印度尼西亚	电力	为满足国内日益增长的电力需求，印尼政府启动新一期电力发展规划，计划在未来 5 年内建设 3500 万千瓦电站项目，并发展 4 万公里的电网。
伊朗	电力	1. 在 2025 年以前，计划新建 9 座核电站； 2. 投资 500 亿美元，在 20 年内新建 800 个能源工程。
波兰	可再生能源	欧盟要求波兰 2020 年可再生能源占最终能源消费比例不低于 15%，发展可再生能源成为方向之一。波兰提出到 2020 年交通领域燃料 10% 实现生物质能。

资料来源：商务部《对外投资合作国别（地区）指南》

在石油能源基础设施建设方面，2017 年“一带一路”沿线国家石油天然气基础设施产值较去年增长 3.7%，其中俄罗斯、土耳其、伊朗、印度等国家凭借丰富的资源储备和较为便利的开采条件，在该领域增长最迅速。此外，为推动石油能源基础设施建设发展，俄罗斯积极开展油气管道建设，其近 5 年的油气管道工业平均生产总值高达 202 亿美元；伊朗提出 10 年天然气规划，预计到 2025 年将其天然气产能提高 71%，天然气管线长度从目前的 3.6 万公里增加至 2025 年的 4.5 万公里。

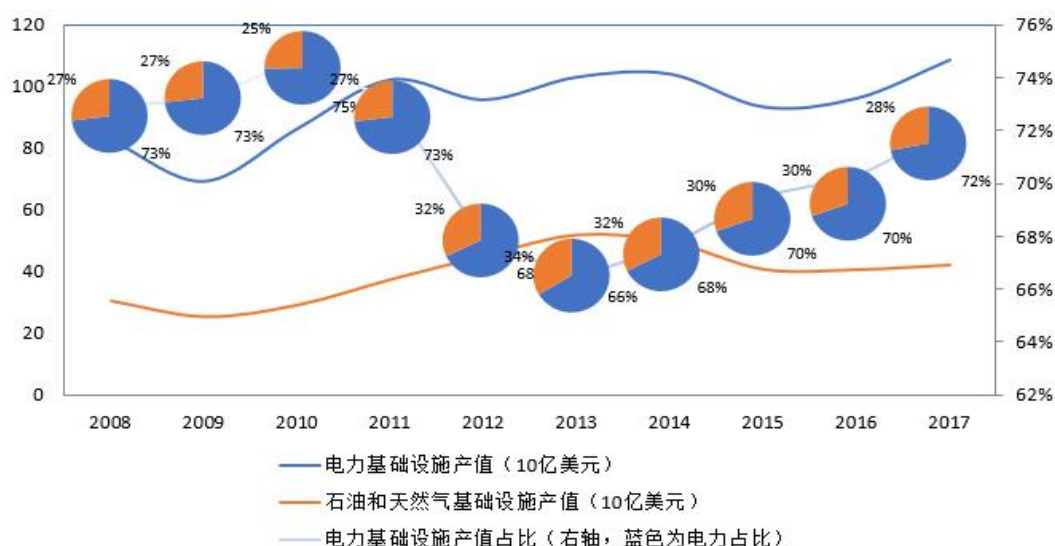


图 3.10 “一带一路”沿线国家电力基础设施和石油、天然气基础设施产值对比
数据来源：BMI

2. 南亚能源业发展迅猛，印度、巴基斯坦、孟加拉表现抢眼

从区域分布来看，2017 年，南亚能源业产值 344.8 亿美元，占“一带一路”沿线国家能源业总产值的 22.8%，新签合同额 501.6 亿美元，占“一带一路”沿线国家能源业新签合同总额的 36.2%，均处于最高水平。本区域内印度能源业产值处于领先水平，2017 年总产值约为 329.4 亿美元，占“一带一路”沿线国家总额的 21.8%，且保持上升趋势。

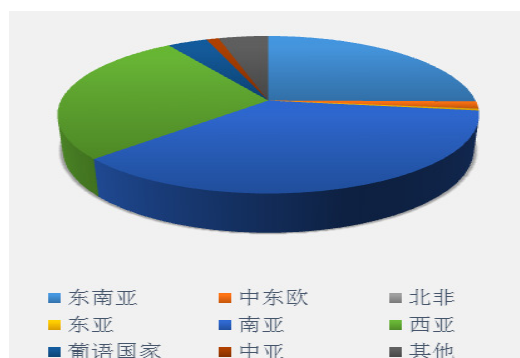


图 3.11 2017 年能源业新签合同额区域分布

数据来源：BMI

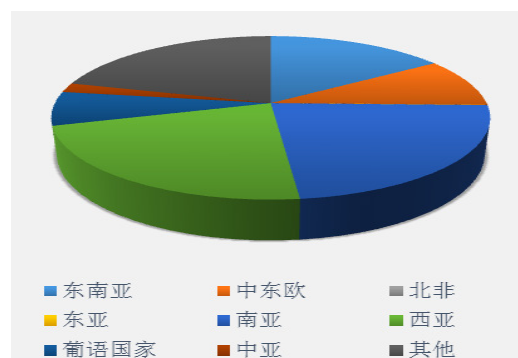


图 3.12 2017 年能源业产值区域分布

数据来源：BMI

南亚能源业市场中，孟加拉国际能源项目合同额占比高达 42%；巴基斯坦和印度均占 28%，并列第二位。2017 年，渣打银行为孟加拉基建项目提供融资支持，助力于电站、铁路公路等项目实施。亚洲基础设施投资银行将为孟加拉 Bhola 南部地区 220 兆瓦联合循环电厂项目提供融资支持，项目建成后每年约提供 1300 亿瓦小时的发电量。日本将向孟提供 18.3 亿美元优惠贷款，用于资助孟加拉发展电力。巴基斯坦已建成一批具有影响力的水电项目，如夏洛特项目、N-J 水电项目等。2017 年，中国国家开发银行为主的银行联合体通过了对 1320 兆瓦胡布水电站 15 亿美元的融资方案。

四 公用事业产值快速增长，电信与水处理领域前景较好

近年来，“一带一路”沿线国家公用事业发展指数稳步提升，2018 年公用事业项目热度指标小幅增长，规模与增速指标提升显著。2018 年公用事业指数为 170.7，较之 2017 年的 113.4 实现快速增长。

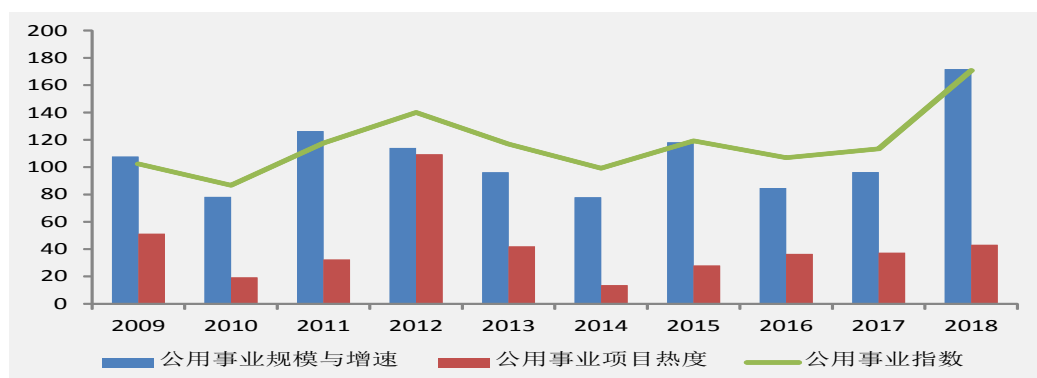


图 3.13 “一带一路”沿线国家公用事业指数

公用事业是保障民生的重要行业，尤其是在电信通讯领域，各国积极出台相关政策，致力于改善人民生活水平。

表 3.3 重点国家公用事业发展规划例示

国家	类型	发展规划
巴西	电信	1. 到 2019 年，投入 18.5 亿雷亚尔（约合 5.29 亿美元），拥有光纤网络的城镇数量由 53% 提升至 70%，宽带网络覆盖 95% 的人口； 2. 建设 6 条海底光缆，连接巴西与欧洲、非洲和美国； 3. 约 3 万所城市和农村公立学校开通宽带、无线网，并建立多媒体中心。
马来西亚	电信	加快高速宽带互联网络建设。
印度	供水	供水和卫生系统投入 3 万亿卢比，保障 50% 的农村人口用上自来水。
	电信	电信部门投入 9 万亿卢比，实现农村地区电话覆盖率 70%。
波兰	可再生能源	欧盟要求波兰 2020 年可再生能源占最终能源消费比例不低于 15%，发展可再生能源成为方向之一。波兰提出到 2020 年交通领域燃料 10% 实现生物质能。
蒙古国	通讯	1. 建设完善的通讯和互联网网络； 2. 到 2021 年，实现固定和移动通讯网络覆盖全国 95% 领土和全体国民。
捷克	电信	各城镇的互联网至少达到 30 兆带宽。
波兰	电信	到 2020 年底，普通互联网速度在 30Mb/s 以上，50% 以上家庭互联网用户可以获得速度在 100Mb/s 以上的互联网服务。
伊朗	电信	全国光纤总长度增加 12000 公里。

资料来源：商务部《对外投资合作国别（地区）指南》

近年来，多数“一带一路”沿线国家不断放开电信市场的管制，电信业建设增长迅猛，通讯设施和用户数量不断增加，政府私有化进程持续推进，跨国运营商和国际资本的增加，吸引了多国电信企业参与市场竞争，如 China Mobile、Movistar、Telkom Indonesia、Orange 等。

菲律宾、波兰、马来西亚、以色列、卡塔尔等国通信基础设施发展较好，移动网络覆盖面广，且处于不断扩建中。多数国家以“一带一路”倡议为契机，重视改善固定线路和移动数据传输服务、通讯网络等基础设施的投资和建设。但也有部分国家不断提高通讯行业的进入壁垒，如印度、印度尼西亚、土耳其、以色列等国家将通讯行业列入限制投资行业，规定外商投资电信服务业的投资比例上限，投资许可门槛高，申请手续繁杂。

随着可持续发展观念的深入人心，“一带一路”沿线国家对污水处理的重视程度不断提高。2007 年至 2017 年间欧盟向埃及水处理项目提供资助总额超过 4 亿欧元，埃及政府计划斥资 40 亿美元修建污水处理厂；土耳其斥资 4.46 亿元人民币建设污水处理厂，每天可以处理 200 万居民产生的污水量；安哥拉本格拉 RED 项目两座污水处理厂封顶，将极大提升巴亚法塔和洛比托两个地块的生活污水处理能力。印度、捷克、卡塔尔等国家重视污水治理设备的投入和污水生物技术的提升，如捷克的 R-AN-D-N 技术解决了污水处理过程中长期以来存在的硝化不足问题，作为环保工艺新技术已得到广泛应用。

第四章 “一带一路”典型国家基础设施发展指数分析

结合本指数，研究团队还将撰写涉及 71 个国家的《“一带一路”国家基建发展指数报告 / 国别篇》（以下简称《国别报告》），从各国指数表现、发展展望、行业特点等方面进行分析，针对不同国家市场形势给出发展建议、提示风险信息、推荐热点行业。《国别报告》将于今年下半年陆续推出，并于“一带一路”国家基础设施发展指数信息服务平台（www.bridi-research.com）开放下载。

本报告选取印度尼西亚、巴基斯坦、巴西、土耳其、哈萨克斯坦、伊朗等六个典型国家³，分析其在指数表现、影响因素、热点行业方面的具体情况，为跨国基建参与者业务开展提供参考。

一 典型国别指数分析——印度尼西亚

1. 指数表现

印度尼西亚本年度基础设施发展指数为 158.2，在“一带一路”沿线国家中排在首位，较上年排名无变化。从一级指数得分来看，印度尼西亚发展趋势指数保持上升，发展环境和发展潜力指数有所下降。从一级指数排名来看，发展环境指数和发展潜力指数较上年排名无变化，发展趋势指数上升 1 名。总体来看，本年度印度尼西亚国家总指数在“一带一路”沿线国家中排名第一，其具有吸引力的投资环境使印度尼西亚与其他国家相比有着更大的竞争优势。

表 4.1 基础设施发展总指数与子指数结果及排名变化

印度尼西亚	2017 年		2018 年		排名变化
	指数	排名	指数	排名	
基础设施发展指数	164.5	1/71	158.2	1/71	不变
发展环境指数	152.7	4/71	150.1	4/71	不变
发展潜力指数	150.8	4/71	146.9	4/71	不变
发展趋势指数	182.6	2/71	187.1	1/71	↑ 1

2. 影响因素分析

从发展环境指数变化来看，本年度印度尼西亚在政治环境、社会环境等方面保持稳定，金融环境略有下降，营商环境有所上升。结合三级指标来看，国家债务安全度的降低影响到印度尼西亚的金融环境，进而导致金融环境指标得分下降。据世界银行报告称，汇率疲软使得印度尼西亚国债风险上升。2017 年，印尼盾币对美元汇率急剧下降，从 13308 盾跌破至 14286 盾兑 1 美元。与此同时，印尼国内政治因素也遏制盾币汇率走强，并可能提升债务风险。

3. 印度尼西亚为本年度指数得分最高的国家，巴西为葡语国家中指数得分最高的国家，巴基斯坦、土耳其、哈萨克斯坦为本年度指数得分上升较高的国家，伊朗为指数排名下滑较大的国家。

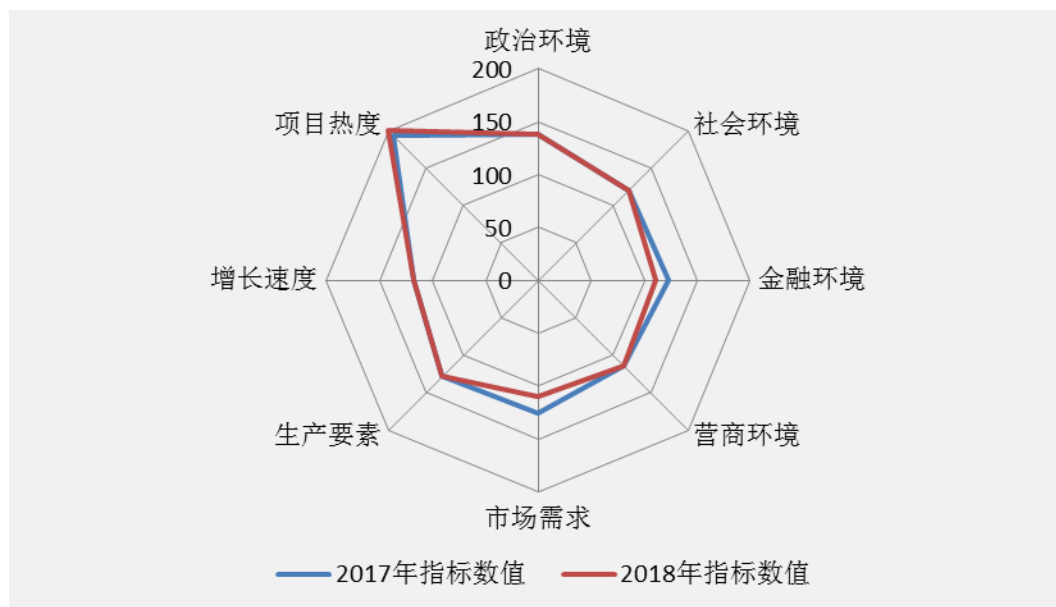


图 4.1 印度尼西亚基础设施发展指数二级指标

从发展趋势指数来看，受到基础设施项目热度略有上升的影响，发展趋势指数小幅上升。近年来，印尼与他国签署的多项基建项目备忘录将为本国基建领域带来新的增长点，包括：印尼与韩国签署了总额达19亿美元的基建项目谅解备忘录；印尼与中国签署了促进合作建设区域综合经济走廊的谅解备忘录以及关于建设 Jenelata 大坝和 Riam Kiwa 水库项目设计的谅解备忘录。

3. 热点行业分析

从印度尼西亚四个行业的指数结果来看，建筑业和交通业正成为该国基础设施发展的主要领域。

建筑业方面，2017年，印度尼西亚建筑业产值503亿美元，增长9.35%，新签合同额414亿美元，包括Kupang水泥厂项目、Balongan炼油厂项目等。

交通业方面，印尼交通业产值349亿美元，增长9.80%，新签合同额153亿美元。据《印尼政府2015-2019年中期发展规划》，印尼政府将建设2650公里长的公路和1000公里的高速公路，维修全长46770公里的现有公路；还要加快瓜拉丹绒国际枢纽港口、瓜拉纳穆国际机场等辅助基础设施的建设。

综合考虑印度尼西亚指数表现，研究团队认为，近期印度尼西亚将在建筑、交通业有较大的发展空间，投资者应引起重视。

二 典型国别指数分析——巴基斯坦

1. 指数表现

巴基斯坦本年度基础设施发展指数为137.1，在“一带一路”沿线国家中排名第3位，较2017年上升11名。从一级指数来看，发展环境指数和发展趋势指数有所上升；从一级指数排名来看，发展环境指数较上年上升11位，发展潜力指数不变，发展趋势指数较上年下降1位。总体来看，本年度巴基斯坦国家总指数在“一带一路”沿线国家中位居前列，其发展环境与其他国家相比更具竞争优势。

表 4.2 基础设施发展总指数与子指数结果及排名变化

巴基斯坦	2017 年		2018 年		排名变化
	指数	排名	指数	排名	
基础设施发展指数	129.4	14/71	137.1	3/71	↑ 11
发展环境指数	115.7	28/71	128.2	17/71	↑ 11
发展潜力指数	125.3	15/71	122.0	15/71	稳定
发展趋势指数	142.3	13/71	148.4	14/71	↓ 1

2. 影响因素分析

从发展环境指数变化来看，本年度巴基斯坦社会环境、营商环境、金融环境保持稳定，政治环境有所改善。结合三级指标来看，政治环境指标上升的主因在于基建行业开放度、政策连续性和基建发展战略清晰度等指标均有明显上升。2017 年 12 月 18 日，巴基斯坦计划发展部发布《中巴经济走廊远景规划（2017—2030 年）》，规定中巴两国重点合作领域包括互联互通、能源领域、经贸及产业园区领域、农业开发与扶贫、旅游、民生领域合作和民间交流、金融领域合作。中巴经济走廊是中巴两国战略合作的重要体现，通过走廊合作，巴经济发展已步入快速增长轨道，巴基斯坦总体发展环境指数显著提高。

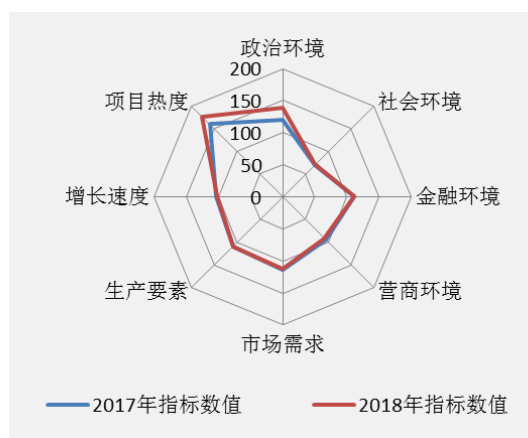


图 4.2 巴基斯坦基础设施发展指数二级指标

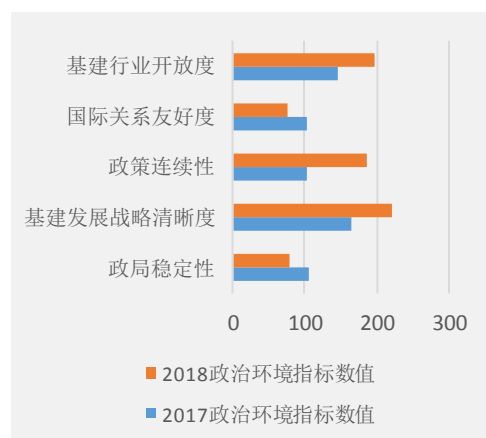


图 4.3 巴基斯坦政治环境指标

3. 热点行业分析

从巴基斯坦四个基础设施行业的指数结果来看，能源业和建筑业正成为该国基础设施投资与建设的主要领域。

2017 年，巴基斯坦能源业新签合同额 142.25 亿美元，比 2016 年大幅增长 7.6 倍。2018 年初，巴基斯坦政府向电力和天然气出口商提供补贴以刺激出口的政策进入最后审议阶段；同时，也将降低工业部门电力和天然气价格，并向出口商提供退税。相关措施有望使能源业实现 20% 至 25% 的出口增长。

2017 年，巴基斯坦建筑业新签合同额增长迅猛，达到了 3.73 亿美元。巴基斯坦新签订的一批建筑业项目中木尔坦工党住宅小区、中国经济特区、波斯尼亚工业园区等项目不仅推动了巴基斯坦建筑业的发展，同时拉动了当地的就业，为跨国基础设施项目的深入发展奠定了基础。巴基斯坦建筑发展者协会主席杰瓦

表示，建筑行业在巴国家经济发展过程中扮演着至关重要的作用，目前巴基斯坦每年房屋建筑需求在 80 万套左右，为满足这一需求，政府应制定建筑行业的发展措施。

综合考虑巴基斯坦的指数表现，研究团队认为，巴基斯坦能源业和建筑业应成为基建参与者重点关注的方向。

三 典型国别指数分析——巴西

1. 指数表现

通过测算，巴西 2018 基础设施发展指数为 133.8，在“一带一路”沿线国家中排名第 6 位，较 2017 年上升 3 位。从指数结果来看，发展环境指数和发展趋势指数略有下降，发展潜力指数略有上升；从指数排名来看，发展环境指数排名上升 1 名，发展潜力指数和发展趋势指数排名稳定。总体来看，本年度巴西总指数在“一带一路”沿线国家中排名靠前，表明巴西对投资者的吸引力较其他国家具有较强的竞争优势。

表 4.3 基础设施发展总指数与子指数结果及排名变化

巴西	2017 年		2018 年		排名变化
	指数	排名	指数	排名	
基础设施发展指数	135.2	9/71	133.8	6/71	↑ 3
发展环境指数	83.8	58/71	83.1	57/71	↑ 1
发展潜力指数	153.2	3/71	153.9	3/71	稳定
发展趋势指数	130.3	7/71	129.7	7/71	稳定

2. 影响因素分析

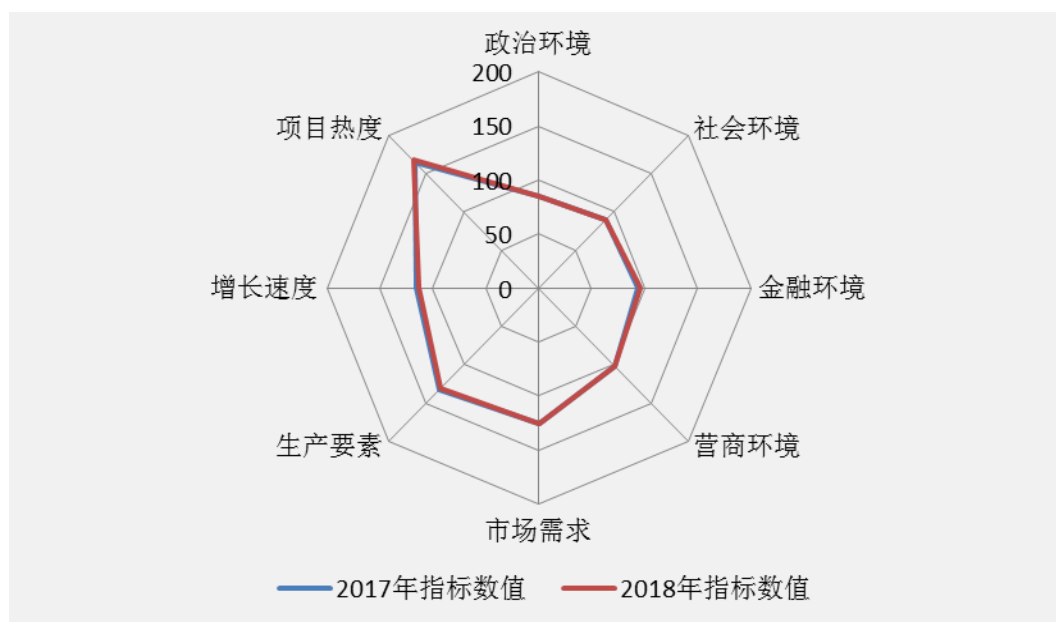


图 4.4 巴西基础设施发展指数二级指标

从发展环境指数变化来看,本年度巴西政治环境、营商环境稳定,社会环境下降,金融环境略有好转。结合三级指标来看,巴西社会环境的下降主因在于奥运周期结束后社会治安有恶化倾向。金融环境指标上升的原因在于物价稳定度的上升。据巴西地理统计局公布的数据,2017年巴西通胀率为2.95%,比2016年的6.29%明显回落,创19年新低,通胀率降至较低水平表明巴西的货币贬值、物价上涨已得到了有效控制,有利于跨国基础设施项目的实施与行业的长远发展。

从发展潜力指数来看,与2017年指数相比,巴西发展潜力指数上升的主要原因在于市场需求、经济规模及增长速度的上升。据巴西地理统计局公布数据,巴西经济2015年和2016年分别萎缩3.5%和3.6%,而2017年增长1%,是连续两年衰退后首次实现增长,标志着巴西经济已步入增长轨道。根据世界银行发布的《全球经济展望》报告,预计巴西经济在2018年将增长2%,2019年增长2.3%。

从发展趋势指数来看,与2017年指数相比,巴西发展趋势指数下降主要是受到基础设施项目增速放缓的影响。由于巴西大幅压缩政府投资,一大批重要交通基础设施项目陷入停滞,2017年巴西交通业增速明显下降。如计划投资6.8亿雷亚尔(约合2.1亿美元)建设的南大河州瓜伊巴大桥项目,因后续资金不能到位而被迫停工;101国道巴伊亚洲段扩建工程,原计划2014年动工,因启动资金未落实,至今尚未开工。

3. 热点行业分析

从巴西四个基础设施行业的指数结果来看,能源行业成为支撑该国基础设施发展的主要力量。2018年巴西能源行业指数为123.4,较2017年有明显上升,主要得益于可再生能源的快速发展。在拉丁美洲,巴西是继智利之后第2个光伏装机容量超过1吉瓦的国家。根据巴西太阳能协会数据,2017年巴西光伏累计装机容量达到1099.6兆瓦,其中935.3兆瓦为大型地面光伏电站,164.3兆瓦为分布式光伏(低于5兆瓦)。值得注意的是,在2016年底巴西的大型地面光伏电站装机仅为24兆瓦,在2017年这1年内就有大约910兆瓦投入运行,且未来六年巴西能源领域将有望吸引投资82亿美元。

综合考虑巴西指数表现,研究团队认为,未来巴西可再生能源领域的基建需求将持续高涨。

四 典型国别指数分析——土耳其

1. 指数表现

土耳其本年度基础设施发展指数为131.3,“一带一路”沿线国家中排名第8,较上年上升11位。从一级指数得分来看,土耳其发展环境指数与发展趋势指数均显著上升,而发展潜力指数则小幅下降。从一级指数排名情况来看,发展环境指数上升19位,发展趋势指数上升9位,而发展潜力指数排名则与上年持平。发展环境的改善与发展趋势的向好使土耳其与其他国家相比更具竞争优势。

表 4.4 基础设施发展总指数与子指数结果及排名变化

土耳其	2017 年		2018 年		排名变化
	指数	排名	指数	排名	
基础设施发展指数	123.6	19/71	131.3	8/71	↑ 11
发展环境指数	70.4	62/71	100.9	43/71	↑ 19
发展潜力指数	143.3	6/71	141.5	6/71	持平
发展趋势指数	149.1	12/71	182.7	3/71	↑ 9

2. 影响因素分析



图 4.5 土耳其基础设施发展指数二级指标

从发展环境指数变化来看，本年度土耳其在社会环境、营商环境、金融环境方面保持稳定，政治环境大幅提升。结合三级指标来看，政局稳定性与国际关系友好度指标的回升改善了土耳其的社会环境。2016年土耳其军事政变的负面影响在逐步消退，国家社会环境恢复稳定。

从发展趋势指数变化来看，受基础设施项目热度和增长速度双双上升的影响，发展趋势指数显著提升。2017年，土耳其新签合同额达到272亿美元，是上一年的6倍，反映出跨国基建参与者对本国基础设施市场的认可。

3. 热点行业分析

从行业指数结果来看，土耳其交通业指数为140.2，在“一带一路”国家排名第五；能源业指数为159.0，排名第三。这两个行业正成为支撑该国基建行业发展的主要力量。

在交通领域，多个项目的建设将为土耳其交通业的持续发展提供保障。伊斯坦布尔新机场第一阶段建设将于2018年10月启动，建成后每年可接纳乘客9000万人次；所有建设阶段有望于2028年完工，届时机场年客运量将达到2亿人次；位于达达尼尔海峡的恰纳卡莱大桥与马尔卡拉—恰纳卡莱公路近期获得23亿欧元融资，预计2023年完工。

在能源领域，可再生能源项目的建设将强力支撑土耳其能源业的发展。按照土耳其政府的电力发展规划，到2023年前，土耳其全国电力总装机容量将达到12.5万兆瓦，其中可再生能源份额将提升至30%。为实现这一目标，2018年位于土耳其梅尔辛省（Mersin Province）的4.8千兆瓦阿克库由核电厂项目将正式启动。第一台机组预计于2023年上线运行，其余的机组预计于2026年开始运营。电厂运行后将满足土耳其10%的能源需求。

综合考虑土耳其指数表现与大型项目情况，研究团队认为，近期土耳其交通业与能源业将保持快速发展势头。

五 典型国别指数分析——哈萨克斯坦

1. 指数表现

哈萨克斯坦 2018 基础设施发展指数为 115.1，在“一带一路”沿线国家中排名第 18 位，较上年上升 15 位。从一级指数得分情况来看，2018 年，哈萨克斯坦发展环境指数无明显变化，发展潜力指数小幅下滑，发展趋势指数上升幅度较大。从一级指数排名情况来看，哈萨克斯坦发展环境指数排名较上年上升 2 位，但排名仍然靠后；发展潜力指数排名略微下降；发展趋势指数排名大幅提升，由上一年度的第 30 位上升至第 16 位。总体来看，2018 年，哈萨克斯坦国家总指数在“一带一路”沿线国家中排名上升较大，但不容乐观的发展环境仍在一定程度上制约着其基础设施的进一步发展。

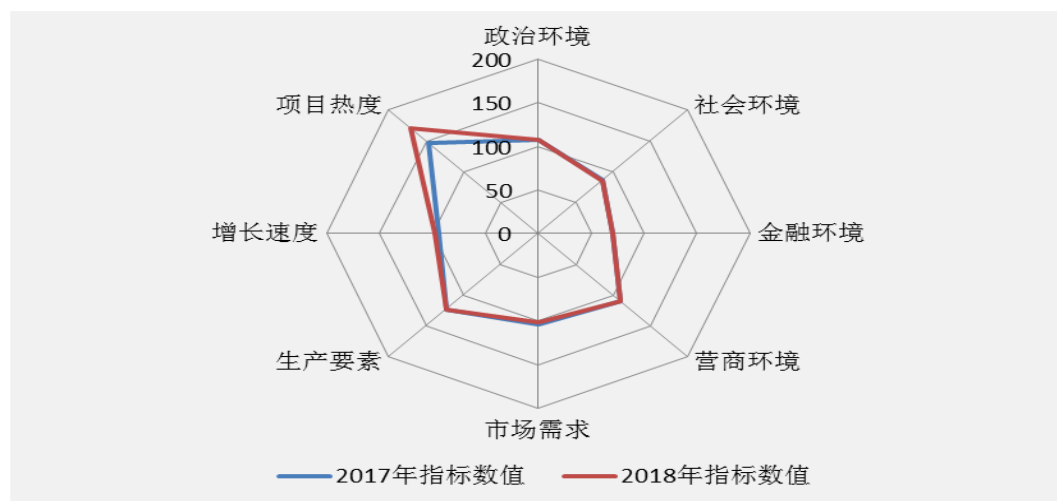
表 4.5 基础设施发展总指数与子指数结果及排名变化

哈萨克斯坦	2017 年		2018 年		排名变化
	指数	排名	指数	排名	
基础设施发展指数	108.3	33/71	115.1	18/71	↑ 15
发展环境指数	86.6	56/71	86.4	54/71	↑ 2
发展潜力指数	116.2	23/71	112.9	25/71	↓ 2
发展趋势指数	118.7	30/71	140.0	16/71	↑ 14

2. 影响因素分析

从发展趋势指数来看，本年度哈萨克斯坦基础设施新签合同额由上年的 25.39 亿美元上升到 120 亿美元，基础设施项目热度大幅上升，进而成为带动本国基础设施发展总指数上升的主要因素。阿斯塔纳轻轨项目总投资 18 亿美元，一期工程线路全长 22.4 公里，将成为哈萨克斯坦乃至中亚地区最具技术代表性的城市交通项目。另外，哈萨克斯坦国家公路公司提出 9000 公里重点公路的新建与改造计划，借助中国进出口银行提供的 26 亿美元的优惠出口买方信贷，境内的 5 条国家级公路改造项目已经开始实施。

图 4.6 哈萨克斯坦基础设施发展指数二级指标



3. 热点行业分析

从哈萨克斯坦各行业指数结果来看，交通业正成为支撑该国基础设施投资建设行业发展的关键领域。2018 年交通行业指数是 101.3，较 2017 年明显上升。

哈萨克斯坦制定了《2020 年前哈萨克斯坦发展战略规划》，其中交通设施建设方面是规划的重点。2020 年前，计划建成 1400 公里新铁路，将老化铁路、陈旧的车辆和设备的占比降低至 40%，铁路电气化比率达到 40% 以上，形成五个以上独立的铁路公司。2020 年前，15 个机场将进入国际民航组织（ICAO）登记管理；形成空运市场的竞争机制；形成四个具有“枢纽”站功能的国际机场，中转运输量提高一倍以上。2020 年前，哈萨克里海港口的年过货能力计划提高至 4800 万吨。

综合考虑哈萨克斯坦指数表现，研究团队认为，随着哈萨克斯坦基础设施发展规划的落实，交通领域将进入快速发展阶段。

六 典型国别指数分析——伊朗

1. 指数表现

伊朗本年度基础设施发展指数为 110.8，“一带一路”沿线国家中排名第 23 名，较上年下降 18 位。从一级指数得分来看，伊朗发展环境指数、发展潜力指数和发展趋势指数均出现了不同程度的下滑。从一级指数排名来看，伊朗发展环境指数下降明显，由 15 名下降至 41 名，发展潜力指数下降 1 位，发展趋势指数排名下降 8 位，总体来看，本年度伊朗国家总指数在“一带一路”沿线国家排名处于中位，其不确定性较强的发展环境为该国基础设施行业发展带来不利影响。

表 4.6 基础设施发展总指数与子指数结果及排名变化

伊朗	2017 年		2018 年		排名变化
	指数	排名	指数	排名	
基础设施发展指数	144.6	5/71	110.8	23/71	↓ 18
发展环境指数	129.2	15/71	100.6	41/71	↓ 26
发展潜力指数	135.4	8/71	130.3	9/71	↓ 1
发展趋势指数	162.4	4/71	149.8	12/71	↓ 8

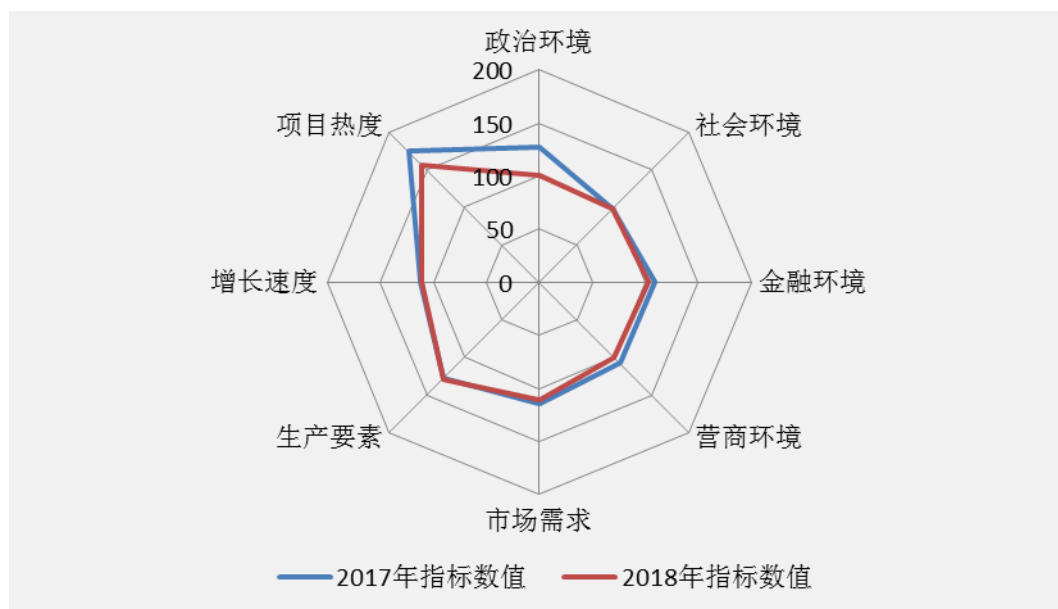
2. 影响因素分析

从发展环境指数变化来看，本年度伊朗社会环境保持稳定，政治环境、金融环境、营商环境方面均有所下降。具体结合三级指标来看，国际关系友好度、政府财政实力指标下降明显。2018 年 5 月，美国总统特朗普宣布退出伊核协议，恢复对伊朗的制裁，为伊朗贸易设置障碍，这将直接影响伊朗的国际关系友好度。在此情况下，多国银行对伊朗停止贷款，政府财政实力也受到影响。

从发展潜力指数变化来看，本年度伊朗在市场需求和生产要素指数方面保持稳定。从发展趋势指数来看，发展速度指标保持不变，项目热度指标有所下降。从三级指标来看，2018 年伊朗跨国基建项目新签合同额 49 亿美元，与 2017 年 148.5 亿美元相比下降了 67%，其中能源业新签合同额降幅最大。从长期来看，考虑可能发生的连带制裁，伊朗存量基建项目的推进也将遭遇困难。

3. 热点行业分析

图 4.7 伊朗基础设施发展指数二级指标



从伊朗四个行业的指数结果来看，能源业是支撑该国基础设施投资建设的关键力量。2018 年能源业发展指数为 122.7，在“一带一路”国家中排名第 7 位。2017 年，挪威萨伽能源（Saga Energy）与伊朗国有公司阿明能源（Amin Energy）签署 25 亿欧元合同，计划在未来五年建设 2GW 太阳能电站。丹麦公司计划投资 10 亿美元在伊朗建设新能源电站项目。英国投资者克库斯公司（Quercus）计划投资 5 亿欧元在伊朗建设 600 MW 太阳能电站项目。

综合考虑伊朗行业指数表现，研究团队认为，跨国基建参与者可重点关注伊朗的能源业。但是，因美国恢复制裁，伊朗政治环境前景不明朗，因此需重点关注其政治风险。

第五章 发展建议

通过对指数的分析，我们建议政府、金融机构与项目参与者充分考虑市场发展趋势，结合自身特点与优势，把握机遇，深化合作，实现共赢。

一 各国政府应做好顶层设计和政策沟通，深化基础设施合作

“一带一路”倡议得到了世界上越来越多的国家和国际组织的认同与积极响应，已经转变为全球共识。2018年“一带一路”沿线国家政治环境指数总体得到改善，但在基建战略发展清晰度和基建行业开放度方面存在较大的提升空间。建议各国政府加大在“一带一路”基础设施建设中的规划和引领作用，加强政策沟通，做好顶层设计，明确基础设施发展目标和合作框架，为国际金融机构及项目参与者提供参考。同时，适当降低基础设施市场准入门槛，优化基础设施国际合作的市场环境，共同推动“互联互通”重大项目的实施，让“一带一路”跨国基础设施建设更好地造福各国人民。

二 金融机构应加强创新，通过绿色金融引导跨国基建可持续发展

金融是国际基建发展的重要因素。2018年“一带一路”沿线国家金融环境有所好转，但全球基建市场仍然面临诸多资金瓶颈，多边金融机构和商业银行应进一步创新金融产品，构建绿色、长效融资机制与多元化融资体系。积极推动在“一带一路”沿线国家发行绿色债券、建立绿色基金，为可持续跨国基建项目提供长期的资金支持，引导资金向清洁能源、绿色交通、绿色建筑等跨国基建项目倾斜。通过双边本币互换，降低跨国基建企业的交易成本，通过支付清算体系的合作与普惠金融的推广，促进金融市场的开放互联。

三 企业应把握一带一路“晴雨表”，探索符合自身的发展道路

作为国际基础设施建设的核心力量，企业应把握市场发展走势，从公司发展战略、风险防范、模式创新、合规经营等方面着手，增强企业竞争力，实现可持续发展。

1. 依据细分行业与区域，制定有针对性发展战略

“一带一路”市场环境复杂多变，企业在制定发展战略时，要审慎研究细分行业与细分区域，积极探寻市场机遇。在交通行业，国际干道基建项目应该得到更多关注；在能源领域，可再生能源与核电项目需求将不断提升；在建筑领域，东南亚、南亚及中东等新兴市场发展环境持续利好；在公共事业领域，技术革新以及政府财政支持的加大将为电信与污水处理等业务的发展提供更加广阔的空间。

2. 增强风险识别和危机处理能力，特别关注地缘政治风险和国家主权信用风险

“一带一路”沿线国家偿债能力与主权信用风险不容忽视。建议跨国基建参与者在项目规划之前熟悉当地法律与风俗，提高风险意识，做好每一个具体项目除商业、财务、法律风险之外的国别风险与地缘政

治风险的战略性评估，增强风险识别能力与危机处理能力。同时，跨国基建参与者应密切关注国家主权评级变动，防范由于当地货币贬值等因素对基础设施收益产生侵蚀。加强境外安全咨询，与专业保险机构合作，搭建事前、事中、事后的全过程境外安全风险管理体系，为自身境外安全风险管控提供有力保障。

3. 以新动能作为着力点，努力创新业务模式

项目投融资、建营一体化和跨界合作将成为推动国际工程业务发展的新引擎。越来越多的外国政府和业主要求国际工程企业能够有效整合利用政策性、商业性和开发性资金，为项目提供全产业链的综合服务方案，并在规划、设计、咨询、运营、维护和管理等方面提供集成化服务；承包商定位应由单一项目建设者转向综合开发服务商，并在实现自身业务发展的同时，更好的拉动东道国产业升级和经济发展，持续推进业务的转型升级将成为今后相当长一段时期内行业发展的“新常态”。跨国基建参与者应根据自身的融资能力、总承包能力、企业实力灵活选择各类模式。同时，面对日益复杂的市场环境，跨国基建参与者可以组建战略联盟，按照“共同建设、利益共享、风险共担”的原则，降低市场风险，推进整个基建行业的快速发展。

4. 按照国际标准和项目所在国要求，依法依规持续经营

近年来，国际基建行业逐渐走向成熟，行业竞争秩序面临重新调整，合规经营成为企业能否可持续发展的重要因素。能否按照国际通行规范和标准、项目所在国要求以及合同约定规范、标准参与市场竞争，不仅对企业自身发展举足轻重，而且对其所属国家的全球形象也会产生重要影响。跨国基建企业应在此大背景下，加强合规管理，依法依规经营，加强与东道国政府、社会组织和企业交流与合作，融入当地社区，积极履行社会责任，实现可持续发展。

附录 1 关于指数

为促进“一带一路”倡议的实施，为中国“走出去”企业和全球投资、承建、运营商参与跨国基础设施项目提供决策参考，帮助相关方把握趋势、发现机遇、规避风险，中国对外承包工程商会（简称“承包商会”）与大公国际信用评级集团有限公司（简称“大公国际”）携手开发了“‘一带一路’国家基础设施发展指数”（The Belt and Road Infrastructure Development Index，简称“发展指数”、“本指数”或 BRIDI）。

在对已有其它指数模型和国际基础设施发展因素进行反复研究的基础上，研究团队明确了发展指数的研究范畴，构建了指数研究模型。

一 发展指数的含义和范围

通常来讲，“基础设施”是指对产出水平或生产效率有直接或间接提高作用的经济项目⁴。参考世界银行和国际商业观察（Business Monitor International，BMI）对基础设施的分类，本指数研究将基础设施划分为交通、能源、公用事业、建筑四大领域。其中，交通业包括公路、铁路、机场、港口等项目；能源业主要研究石油天然气与电力行业；公用事业涵盖水利工程与通信网络；建筑业包括民用建筑与工商业建筑。

本指数研究着眼于目标国基础设施的“发展”，此“发展”不是对该国基础设施现状的描述，而是对其发展前景的评价。因此，发展指数是基于对一国基础设施发展的几大影响因素的分析，显示对该国未来2-3年基础设施发展前景的判断的指数。国家发展指数是本指数研究的基础和主体，此外，研究团队还对“一带一路”国家基建发展总指数和一些分项指数进行了测算和分析。

本指数中的“一带一路”国家涵盖了除中国以外的其他的63⁵个国家。另外，葡语国家与“一带一路”沿线国家在基础设施建设的资源、技术和市场等方面具有很强的互补性，双方在交通运输、电力、石油化工等领域的合作已经取得了初步进展，未来合作空间巨大。为配合在澳门召开的“国际基础设施投资与建设高峰论坛”，研究团队将相关8个葡语国家纳入研究范围，以进一步提升澳门在发展与葡语国家商贸合作方面的平台作用。因此，本指数2018年的研究共选定71个国家和地区（以下简称“‘一带一路’国家”）作为研究对象。随着越来越多的国家积极响应与参与“一带一路”倡议，后续指数研究的国家范围将不断扩大。

4.《经济百科全书》1982年版，McGraw-Hill book Company

5.“一带一路”沿线国家中，巴勒斯坦和叙利亚由于数据缺失严重而未作为指数研究对象。

本指数（2018年）研究范围	
“一带一路”沿线共63国	蒙古、新加坡、马来西亚、印度尼西亚、缅甸、泰国、老挝、柬埔寨、越南、文莱、菲律宾、伊朗、伊拉克、土耳其、约旦、黎巴嫩、以色列、沙特阿拉伯、也门、阿曼、阿联酋、卡塔尔、科威特、巴林、希腊、塞浦路斯、埃及、哈萨克斯坦、乌兹别克斯坦、土库曼斯坦、塔吉克斯坦、吉尔吉斯斯坦、印度、巴基斯坦、孟加拉、阿富汗、斯里兰卡、马尔代夫、尼泊尔、不丹、波兰、立陶宛、爱沙尼亚、拉脱维亚、捷克、斯洛伐克、匈牙利、斯洛文尼亚、克罗地亚、波黑、黑山、塞尔维亚、阿尔巴尼亚、罗马尼亚、保加利亚、马其顿、俄罗斯、乌克兰、白俄罗斯、格鲁吉亚、阿塞拜疆、亚美尼亚、摩尔多瓦
葡语国家	安哥拉、巴西、佛得角、几内亚比绍、莫桑比克、葡萄牙、圣多美和普林西比、东帝汶

二 发展指数的模型

影响基础设施发展前景的既有基础设施行业外部的因素，也有基础设施行业本身发展动力和趋势的因素。经过对各因素的梳理、对比和分析，本指数从基础设施发展环境、发展潜力、发展趋势三个维度构建“国家基础设施发展指数”分析模型并测算了上述3个子指数，同时3个子指数下设8个二级指标和33个三级指标。

1. 发展环境是跨国基础设施建设的首要影响因素，是实际开展跨国基础设施投资或建设的主要风险来源。

发展环境指数下设政治环境、社会环境、金融环境、营商环境4个二级指标。政治环境考察影响基础设施建设的政治因素，包括政局稳定性、基础设施发展战略清晰度、政策连续性、国际关系友好度、基建行业开放度等指标。社会环境考察治安、文化等社会因素能否保障基础设施项目顺利进行。金融环境考察跨国基建项目资金运转的可持续性 & 资金回收难易程度，包括汇率、物价、资本项目开放度、国家债务安全度等指标。营商环境考察跨国基建投资企业经营效率的影响因素，包括经济法律完善度、行政效率、商业便利度、税收负担等指标。

2. 发展潜力用来衡量一国基础设施发展的长期驱动力。

发展潜力指数下设市场需求和生产要素资源2个二级指标。市场需求考察国内人均基础设施保有量、经济发展水平和国际交往状况对基础设施发展的需要。生产要素资源考察跨国基建项目中土地、原材料、人力、资金等要素资源的供给情况。

3. 发展趋势反映了基础设施建设的动态，预示基础设施行业短期内发展走向。

发展趋势指数下设基础设施增长速度与跨国基建项目热度2个二级指标。基础设施增长速度考察各国基础设施细分行业增长情况，考察指标包括基础设施各行业年产值和行业投资形成额增长率；跨国基建项目热度考察各国基建市场受跨国工程承包商青睐程度，具体考察跨国基础设施建设项目新签合同状况。

国家基础设施发展指数以前一年上述各指标的数据和信息为依据，依指数模型测算得出，每年发布一次。2018年为第二次研究，为准确把握基础设施发展趋势和脉络，研究团队集中收集了2007年至2017

年的数据和信息，并选取各指标在 2008 年的平均值作为基准值，然后通过模型计算得出 2009 年至 2018 年 71 国基础设施发展指数矩阵。在各国年度发展指数的基础上，进一步测算了年度“一带一路”国家基础设施发展总指数。

三 发展指数的特点

基于指数编制思路和测算结果，本指数具有如下特点：

1. 纵向与横向比较相结合

综合评估“一带一路”国家基础设施发展状况。通过对近多年发展指数的纵向比较，可总结出“一带一路”国家基础设施建设的总体发展趋势；通过对各国指数的横向比较，可明确具体国家和地区基建发展在“一带一路”国家中的排位。

2. 内因与外因相结合

多层次研究“一带一路”国家基础设施发展影响因素。通过对发展环境、发展潜力、发展趋势三个维度的分析，综合衡量各国影响基建发展的内部与外部驱动力和风险，深入挖掘各国发展机遇与制约发展的原因。

3. 现状与趋势分析相结合

前瞻性揭示“一带一路”国家基建发展机遇与风险。通过对表现各国基建发展现状、动因、增速等当前数据的考察，揭示基础设施发展的前景，帮助跨国基建各参与方制定战略规划和策略。

附录 2 2018 年“一带一路”国家基础设施发展指数排名⁶

表 1 “一带一路”国家总指数

国家	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
总指数	103	98	108	110	109	111	113	105	113	124

表 2 “一带一路”国家发展指数

国家	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
印度尼西亚	138	140	153	151	148	147	143	151	164	158
新加坡	147	141	147	148	151	151	152	135	140	142
巴基斯坦	114	111	114	118	120	118	127	134	129	137
俄罗斯	144	122	155	159	147	143	149	136	146	136
越南	138	135	138	140	143	151	148	150	154	136
波兰	111	120	132	131	120	125	138	125	124	134
土耳其	126	112	137	132	125	132	132	126	124	131
马来西亚	128	118	128	136	130	131	137	131	134	131
印度	142	138	147	155	139	142	144	142	145	130
卡塔尔	131	125	131	132	129	142	140	128	135	129
阿联酋	133	130	131	131	113	136	120	137	136	129
菲律宾	111	116	122	118	128	133	125	125	131	127
捷克	126	109	141	125	125	130	133	125	129	126
沙特阿拉伯	139	138	142	149	149	147	152	142	142	124
罗马尼亚	134	94	108	127	117	122	126	115	124	124
泰国	118	122	121	126	133	129	118	129	130	118
哈萨克斯坦	114	106	120	119	125	121	120	115	108	115
柬埔寨	99	102	108	106	122	111	113	109	121	115
巴林	108	109	103	112	112	108	109	105	113	114
科威特	111	106	116	125	125	117	127	120	127	113
伊朗	136	132	140	143	133	135	133	133	145	111
阿曼	98	106	114	113	128	113	112	118	105	111
老挝	90	96	103	100	113	105	104	108	102	110
格鲁吉亚	82	88	90	92	83	105	97	91	103	110
埃及	111	117	116	113	119	113	125	118	123	110
孟加拉国	110	107	116	111	111	130	110	119	121	110

6. 本指数于 2017 年正式公布，其中 2009-2016 年数据通过对往年历史数据整理测算得出，并于 2017 年首次对外公布。

国家	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
马尔代夫	87	83	87	84	87	89	93	94	97	108
爱沙尼亚	77	65	84	99	105	87	82	78	94	108
以色列	95	103	121	122	93	118	121	120	116	107
保加利亚	98	108	95	106	109	100	109	98	105	107
希腊	110	87	92	94	97	92	101	96	112	105
缅甸	110	114	118	116	120	114	116	116	121	103
匈牙利	103	80	95	102	94	94	92	84	109	102
吉尔吉斯斯坦	94	83	84	91	97	100	91	90	90	101
波黑	73	72	74	75	74	89	94	69	89	99
乌兹别克斯坦	108	97	104	104	112	113	103	104	109	98
约旦	103	102	118	97	87	114	116	116	120	98
斯洛文尼亚	107	79	80	97	104	85	87	101	106	97
白俄罗斯	107	83	112	103	92	111	102	96	90	96
阿尔巴尼亚	111	90	106	96	97	119	98	94	100	96
文莱	85	89	103	96	89	101	90	94	102	94
马其顿	64	64	70	69	72	73	88	76	86	93
斯洛伐克	93	104	93	103	90	107	108	103	112	93
斯里兰卡	103	107	86	105	94	101	112	97	100	92
克罗地亚	88	81	71	94	78	99	104	94	105	91
土库曼斯坦	106	99	115	111	109	110	117	98	111	90
塞尔维亚	85	87	92	106	92	105	102	101	100	89
佛得角	85	85	85	80	86	83	89	78	94	88
尼泊尔	87	89	97	96	99	91	98	96	105	86
阿富汗	78	101	89	88	84	98	79	76	73	85
蒙古	95	88	97	101	102	103	96	104	100	85
乌克兰	107	88	122	112	107	97	78	85	94	84
拉脱维亚	72	67	69	78	80	79	94	79	102	83
塔吉克斯坦	96	86	89	92	95	98	90	92	87	83
立陶宛	79	88	87	78	81	90	98	91	103	82
阿塞拜疆	101	112	116	109	116	107	110	91	84	81
亚美尼亚	89	80	76	83	98	88	74	70	93	80
伊拉克	79	88	100	102	111	105	107	100	97	79
黑山	72	67	84	78	80	95	98	84	86	79
塞浦路斯	103	75	91	93	76	74	77	75	82	75

国家	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
黎巴嫩	67	87	69	76	85	83	68	69	83	73
不丹	75	68	91	68	87	63	85	69	73	69
摩尔多瓦	70	70	74	75	87	79	84	84	72	61
也门	85	81	89	85	90	91	92	68	71	56

表 3 葡语国家基础设施发展指数

国家	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
巴西	145	138	152	146	138	139	139	129	135	134
安哥拉	113	108	106	116	121	111	114	115	111	112
葡萄牙	108	102	107	107	105	92	122	92	103	108
圣多美和普林西比	86	104	107	85	100	105	117	126	102	101
东帝汶	99	95	94	97	91	82	98	97	96	96
佛得角	85	85	85	80	86	83	89	78	94	88
莫桑比克	88	94	93	92	101	103	106	101	97	84
几内亚比绍	47	54	60	65	58	56	59	54	63	69

表 4 发展环境排名 (TOP15)

国家	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
新加坡	179	186	197	185	202	209	197	184	196	197
捷克	157	162	180	167	173	181	164	160	176	176
越南	142	140	136	132	144	152	155	147	159	158
印度尼西亚	115	119	120	125	125	119	118	125	153	150
阿联酋	139	144	143	137	147	154	159	155	148	149
葡萄牙	137	126	130	136	139	120	149	128	149	149
卡塔尔	116	119	119	126	128	140	144	126	129	148
斯洛伐克	101	105	107	115	122	118	117	117	117	134
保加利亚	108	128	123	121	136	121	129	111	131	133
沙特阿拉伯	138	141	144	137	156	148	153	146	133	133
土库曼斯坦	104	108	116	117	119	118	121	102	132	133
波兰	120	120	135	131	105	111	133	125	126	131
科威特	100	108	119	109	127	125	137	120	132	130
以色列	118	128	127	126	119	130	135	124	134	130
马尔代夫	113	122	117	98	96	125	124	120	115	130

表 5 发展潜力排名 (TOP15)

国家	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
俄罗斯	164	162	173	176	179	179	175	168	173	172
印度	151	158	163	160	159	161	166	168	169	161
巴西	157	153	165	163	160	162	161	151	153	154
印度尼西亚	143	144	150	150	151	151	150	150	151	147
泰国	136	133	145	141	149	146	143	146	148	145
土耳其	133	132	145	145	141	143	144	143	143	142
越南	128	127	129	132	133	135	136	137	138	133
沙特阿拉伯	131	120	123	133	130	127	129	126	125	132
伊朗	127	128	133	132	126	130	132	128	135	130
罗马尼亚	118	103	108	111	109	112	112	114	117	127
菲律宾	119	117	124	122	126	128	128	128	131	127
缅甸	122	122	126	118	120	122	124	126	126	124
埃及	133	131	133	128	131	130	132	133	134	124
阿联酋	136	123	127	131	133	131	130	129	128	123
巴基斯坦	116	119	119	121	122	122	123	124	125	122

表 6 发展趋势排名 (TOP15)

国家	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
印度尼西亚	152	153	179	170	162	165	158	172	183	187
印度	178	166	181	203	171	176	174	173	185	184
土耳其	147	125	170	162	147	162	168	156	149	183
俄罗斯	168	120	185	190	157	145	171	151	164	178
越南	142	137	145	152	148	161	151	161	161	164
马来西亚	146	130	143	151	141	145	153	152	156	163
巴西	180	167	192	184	165	165	165	153	161	159
泰国	118	132	114	132	126	125	122	140	135	157
新加坡	163	145	137	155	151	145	158	126	128	156
卡塔尔	141	132	141	144	143	165	155	140	155	153
菲律宾	121	133	140	135	145	141	144	144	151	153
伊朗	143	134	148	155	147	152	143	143	162	150
孟加拉国	112	105	126	121	121	164	111	131	139	149
巴基斯坦	138	128	131	129	140	132	140	151	142	148
沙特阿拉伯	144	149	154	168	156	159	167	151	161	147

Preface

As the world economy slowly rebounds, growing disparities are observed across regions. Profound changes are brewing in multilateral trade rules. The Belt and Road countries are facing both opportunities and challenges. Since the launch of the Belt and Road Initiative in 2013, the factor flow and resource allocation have become more efficient along the Belt and Road countries through the implementation of bilateral and multilateral agreements and specific cooperation programs. International and regional markets are integrated in greater depth than ever before, enabling all the countries to build an open, inclusive, balanced and broadly beneficial framework of regional economic cooperation.

The recent five years have seen marked progress in promoting international infrastructure connectivity – a priority of the Belt and Road Initiative. While China-Thailand railway, Turkish East-West high-speed rail, Hungary-Serbia railway and other key projects made fast headway without a hitch, Jakarta-Bandung high-speed rail started to break ground. China-ASEAN Information Port began to shape up; Gwadar Port was formally operational and open to the world... Bearing the mark of the Belt and Road Initiative, one project was completed after another. Running from south to north and east to west, they are like building blocks on a global picture of connectivity and will open up tremendous opportunities for infrastructure investors, contractors and all related parties.

However, the Belt and Road countries are not all the same. International infrastructure investors and contractors must take into consideration the challenges and uncertainties in their decision-making process. To develop a thorough understanding of international infrastructure development trend, address potential risks and difficulties, offer solid analysis and forecasts for domestic and overseas international infrastructure investors and contractors, and promote global infrastructure development, China International Contractors Association (hereinafter referred to as “CHINCA”) has joined hands with Dagong Global Credit Rating Group (hereinafter referred to as “Dagong Global”) and developed “The Belt and Road Infrastructure Development Index” (hereinafter referred to as “BRIDI”). As the first comprehensive development index in the field of international infrastructure investment and construction, BRIDI made its first debut at the 8th International Infrastructure Investment and Construction Forum in June 2017, and is now

attracting widespread interests as a barometer for Belt and Road infrastructure cooperation.

Built on the success of the first BRIDI release, the research team has assessed the outlook of infrastructure development in the coming two or three years from the perspectives of environment, potential and trend. This year, the research team updated and diversified the data sources, and optimized index analysis model and calculation methodology to improve the objectivity, fairness and pertinence of BRIDI. The 2018 BRIDI Report is thus presented in the hope that it will throw some light on cross-border infrastructure investment and development.

This Report is composed of five parts. The first part explains the general features of Belt and Road infrastructure development based on the 2018 BRIDI research. It is followed by the infrastructure development outlook from the perspectives of environment, potential and trend. The third part is an analysis by industry, i.e. the transportation, energy, building and utilities sectors. The fourth part reveals the tendency of infrastructure development in a few typical countries. The last part contains suggestions for Belt and Road governments, financial institutions and companies.

Given the limited time and research capabilities, the Report and index findings may still contain errors and omissions. Therefore, comments and suggestions from readers are highly welcome for further improvement in the future.

China International Contractors Association

May 2018

Catalog

I. Highlights of Belt and Road Infrastructure Development1

1. Global infrastructure development gains good momentum.....1
2. Southeast Asia maintains strong momentum, while some West Asian countries slips down the rankings.....2
3. Transportation and energy sectors remain engines for international infrastructure development.....4
4. New policies, new finance and new technologies offer new momentum for infrastructure development.....5
5. The value of new contracts grows, showing a heightened passion for cross-border infrastructure development.....6

II. Analysis on Belt and Road Infrastructure Development Sub-indexes.....7

1. The development environment sub-index picks up with significant improvements in political and financial dimensions.....7
2. The sub-index of development potential soars and needs for infrastructure keep growing13
3. The sub-index of development trend picks up with an ever higher passion for cross-border infrastructure projects.....16

III. Analysis on Infrastructure Development by Industry in B&R Countries.....19

1. Transport: Constant expansion towards a stable future.....19
2. Building: Constant growth with passion for industrial parks and other non-residential properties.....22
3. Energy: a red-hot industry with great potential.....27
4. Utilities: soaring output and rosy prospects for telecommunications and water treatment27

IV. BRIDI Analysis for Typical B&R Countries.....30

1. Indonesia.....30
2. Pakistan.....31
3. Brazil.....33
4. Turkey.....34
5. Kazakhstan.....36
6. Iran.....38

V. Suggestions.....40

1. Top-down design and policy coordination are needed for governments to deepen infrastructure cooperation.....40
2. Strengthened innovation and green finance are needed for financial institutions to guide sustainable development of cross-border infrastructure projects.....40
3. Companies need to align business strategies with market trends.....40

Appendix I: About the Index.....42

1. BRIDI' s meaning and scope.....42
2. BRIDI' s model.....43
3. BRIDI' s characteristics.....44

Appendix II: BRIDI Country Rankings.....45

- Table 1 B&R Country Infrastructure Development General Index.....45
- Table 2 B&R Country Infrastructure Development Index.....45
- Table 3 Infrastructure Development Index: Portuguese-speaking Country Rankings.....47
- Table 4 Development Environment Rankings (Top 15).....47
- Table 5 Development Potential Rankings (Top 15).....48
- Table 6 Development Trend Rankings (Top 15).....48

I. Highlights of Belt and Road Infrastructure Development

To press ahead with the Belt and Road Initiative, foster the decision-making process of Chinese companies as well as international investors, contractors and operators on cross-border infrastructure development, and enable all related parties to understand trends, discover opportunities and evade risks, China International Contractors Association (hereinafter referred to as "CHINCA"), with the support of Macao Trade and Investment Promotion Institute, has joined hands with Dagong Global Credit Rating Group (hereinafter referred to as "Dagong Global") and developed "The Belt and Road Infrastructure Development Index"(hereinafter referred to as "Development Index", "the index" or "BRIDI").

The index is angled towards infrastructure development in target countries, in a sense of assessing how far it can go in the coming two or three years, rather than measuring how much it has achieved up to now. Built on three sub-indexes of infrastructure development environment, development potential and development trend, which are calculated based on over 200,000 figures generated by B&R and Portuguese-speaking countries¹ from 2007 to 2017. By setting the average of all the indicators in 2008 as the base value, the research team has calculated and established the annual index matrix of the 71 countries from 2008 to 2018 and thus, informed readers of research findings including general index, country-specific and industry-specific index.

Based on the latest calculation of BRIDI of 2018, the general features of the Belt and Road infrastructure development are revealed as follows:

1 Global infrastructure development gains good momentum

This year, the gross BRIDI reached a new high of 124.

Along the enhanced global influence of the Belt and Road Initiative have come ever closer partnership between related countries to promote infrastructure connectivity and open up a broader prospect for cross-border infrastructure investment and development. This year's BRIDI unfolded a promising picture, as supported by the gradually improved climate, still huge potential, ever faster pace and growing passion for cross-border infrastructure projects. It implies a good opportunity for international contractors and investors, and will hopefully maintain the stable upward trend in the next three years.

1.2018 BRIDI research covered 63 B&R countries (Mongolia, Singapore, Malaysia, Indonesia, Myanmar, Thailand, Laos, Cambodia, Vietnam, Brunei, the Philippines, Iran, Iraq, Turkey, Jordan, Lebanon, Israel, Saudi Arabia, Yemen, Oman, UAE, Qatar, Kuwait, Bahrain, Greece, Cyprus, Egypt, Kazakhstan, Uzbekistan, Turkmenistan, Tajikistan, Kyrgyzstan, India, Pakistan, Bangladesh, Afghanistan, Sri Lanka, Maldives, Nepal, Bhutan, Poland, Lithuania, Estonia, Latvia, Czech Republic, Slovakia, Hungary, Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Serbia, Albania, Romania, Bulgaria, Macedonia, Russia, Ukraine, Belarus, Georgia, Azerbaijan, Armenia, Moldova) and 8 Portuguese-speaking countries (Angola, Brazil, Cape Verde, Guinea-Bissau, Mozambique, Portugal, São Tomé and Príncipe, East Timor).

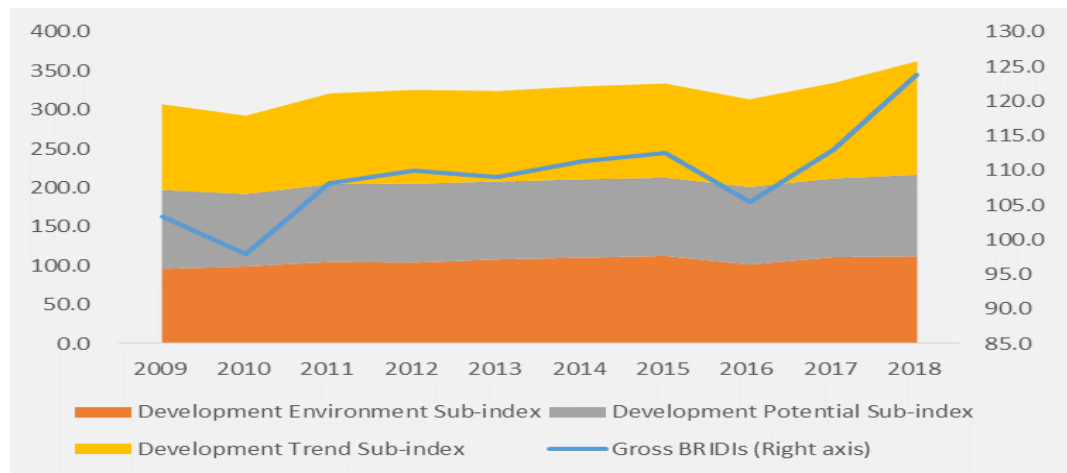


Fig. 1.1 Gross BRIDIs (2009-2018)

2 Southeast Asia maintains strong momentum, while some West Asian countries slips down the rankings

The B&R countries saw varying prospects in infrastructure development. The 2018 Top 10 list by BRIDI included Indonesia, Singapore, Pakistan, Russia, Vietnam, Brazil, Poland, Turkey, Malaysia and India. Coming out top in all three sub-indexes, Indonesia headed the table for the second year in a row with a BRIDI of 158.2. The second place was taken by Singapore which scored 141.7 with the best development climate among all. Pakistan came next, growing by 11 spots to No. 3. With a high score in infrastructure growth rate and passion for cross-border infrastructure projects, Pakistan took the fancy of more and more international investors and contractors. In addition, Brazil outperformed most Portuguese-speaking countries ranking No.6 on the list. Huge market demands and abundant productive factor resources pushed the country to No.3 in the sub-index of development potential.

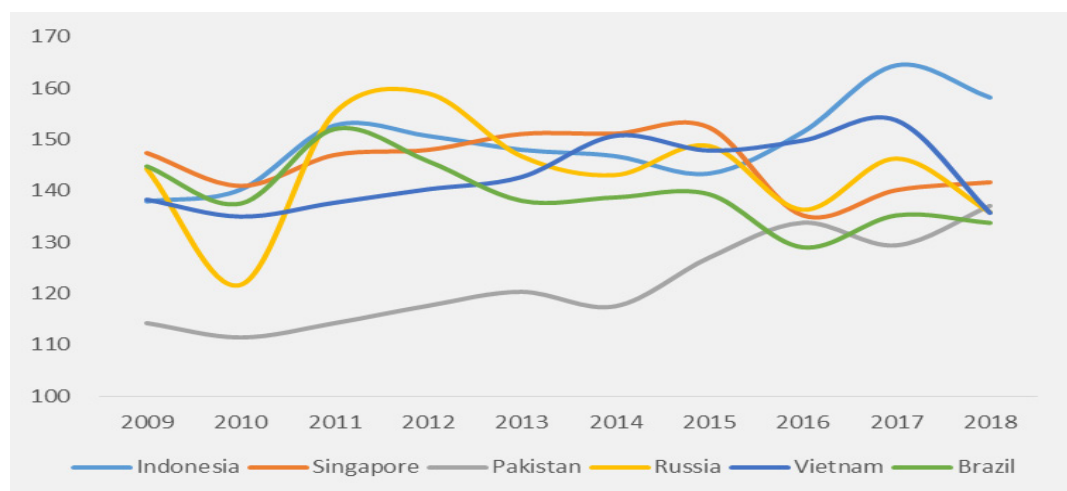


Fig. 1.2 BRIDIs of Countries (2009-2018)

Table 1.1 2018 TOP 20 Countries by BRIDI

Country	2018 BRIDIs	2018 Ranking	Ranking Change	Country	2018 BRIDIs	2018 Ranking	Ranking Change
Indonesia	158.2	1	-	Qatar	129.4	11	↓ 1
Singapore	141.7	2	↑ 5	UAE	128.6	12	↓ 4
Pakistan	137.1	3	↑ 11	Philippines	127.4	13	↓ 1
Russia	135.8	4	↓ 1	Czech	126.5	14	↑ 1
Vietnam	135.7	5	↓ 3	Saudi Arabia	124.2	15	↓ 9
Brazil	133.8	6	↑ 3	Romania	123.9	16	↑ 2
Poland	133.7	7	↑ 10	Thailand	118.4	17	↓ 4
Turkey	131.3	8	↑ 11	Kazakhstan	115.1	18	↑ 15
Malaysia	131.1	9	↑ 2	Cambodia	115.0	19	↑ 4
India	129.9	10	↓ 6	Bahrain	114.4	20	↑ 6

By region, Southeast Asia maintained strong momentum, taking the first place for two consecutive years. Portuguese-speaking countries moved two spots up with a fast growth in comprehensive strength. West Asia, however, dropped sharply from No.2 to No.6 over the past year.

Table 1.2 2018 Ranking and Ranking Change of BRIDI AREAS

Area	2018 Ranking	2017 Ranking	Ranking Change	Area	2018 Ranking	2017 Ranking	Ranking Change
Southeast Asia	1	1	-	Portuguese-speaking countries	5	7	↑ 2
Central and Eastern Europe	2	4	↑ 2	West Asia	6	2	↓ 4
South Asia	3	3	-	East Asia	7	6	↓ 1
Central Asia	4	5	↑ 1				

Given a large population, the demands for infrastructure facilities kept booming in Southeast Asia. The investment and development potentials in energy, transportation, utilities and building construction sectors were huge. Driven by the high scores hit in the indicator of market demands, 7 out of 10 Southeast Asian countries appeared on this year's Top 20 list.

Table 1.3 2018 BRIDI Ranking of Southeast Asia

Southeast Asia	2018 Ranking	2018 BRIDIs	Environment	Potential	Trend
Indonesia	1	149.9	4	4	1
Singapore	2	141.7	1	38	9
Vietnam	5	135.7	3	7	5
Malaysia	8	131.1	30	22	6
Philippines	12	127.4	37	11	11
Thailand	16	118.4	48	5	8
Cambodia	18	115.0	28	19	41
Laos	23	110.3	44	40	28
Myanmar	32	103.2	39	12	25
Brunei	41	94.1	26	63	32

From green to red: the redder the color, the lower the rank.

West Asia slipped down the ranking this year, with noticeable differences across the region. To be specific, Qatar, UAE, Saudi Arabia and Iran showed varying declines in national BRIDI, as

their list of cross-border infrastructure projects was shortened under the impact of geopolitics and global oil price fluctuations. Turkey, straddling Europe and Asia, scored high in the sub-index of development trend, leaping into the 8th place in BRIDI ranking. But it is noteworthy that, in spite of a gloomy picture of West Asia as a whole, the oil producers in this region are financially strong and have a determined mind to develop infrastructure facilities – their infrastructure development potential must not be overlooked.

Led by the best player Brazil, Portuguese-speaking countries moved up 2 spots to No.5 in BRIDI ranking by region this year. Portugal and Angola won favors from cross-border infrastructure investors and contractors in virtue of superior development climate and considerable development potential, respectively.

3 Transportation and energy sectors remain engines for international infrastructure development

The transportation sector is an indispensable link that makes infrastructure connectivity, unimpeded trade and people-to-people bonds possible along the Belt and Road; it is also a major engine for international infrastructure development. Driven by the infrastructure development scale and growth rate, the transportation sector moved its BRIDI steadily from 109.9 to 113.8 over last year. To be specific, in 2017, the output of the transportation sector jumped by USD 1.69 billion or 7.9% to USD 232.15 billion across B&R countries, outpacing the growth rate of gross infrastructure output. The recent five years witnessed productive progress of the Belt and Road transport sector, including the construction of a number of local and overseas railways, roads, ports, airports, cross-border bridges and other infrastructure facilities, and the building of an improved network of road transport, marine shipping, airfreight, express delivery and other services. These efforts have not only facilitated infrastructure connectivity, but also laid a solid foundation for across-the-board development along the Belt and Road.

Another engine for cross-border infrastructure development is the energy sector that relies heavily on power infrastructure. The BRIDI of energy sector stood at 135.7 this year, on the rise for two consecutive years, thanks to the increased industrial, commercial and household power consumption and the accelerated electrification progress. To be specific, the output of the Belt and Road power sector leaped upwards by USD 2.53 billion to USD 217.78 billion in 2017. The growth rate reached 13.1%, much higher than that of the gross infrastructure output. The Belt and Road Initiative, aligning strategically with China-Pakistan Economic Corridor (CPEC), Eurasian Economic Union (EEU), Mongolia's Steppe Road Program, Kazakhstan's "Bright Road" Initiative and Juncker Plan, will usher in new opportunities for the power sector. It is expected that this fast momentum in the transportation and power sectors will continue to spur further growth of infrastructure facilities across all related countries.

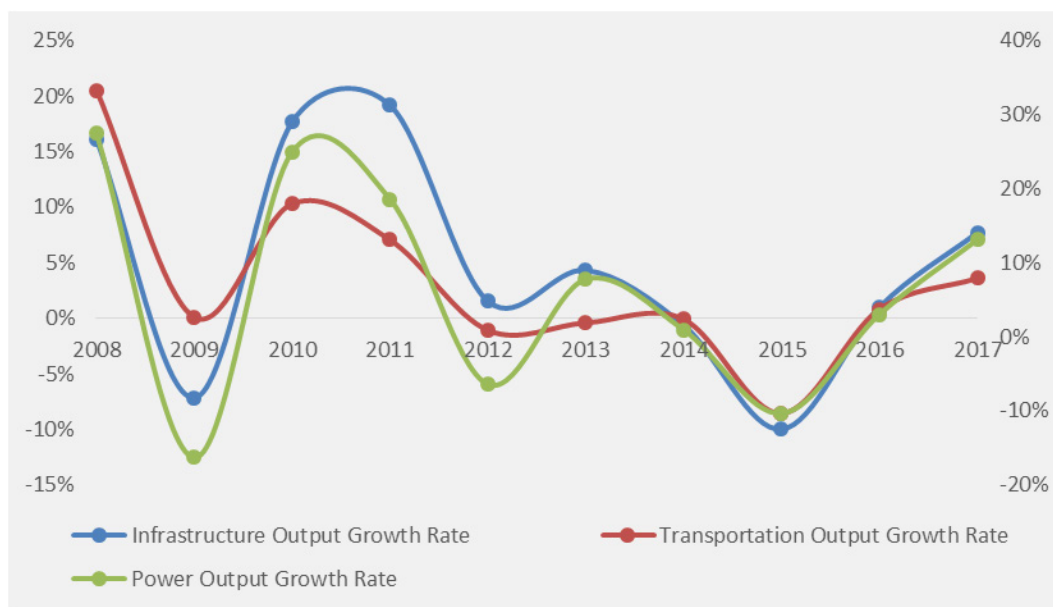


Fig1.3 The Belt and Road Countries Growth Rate of Transportation, Power and Infrastructure
Data source: BMI

4 New policies, new finance and new technologies offer new momentum for infrastructure development

This year's BRIDI indicated new changes in infrastructure development mode under the Belt and Road Initiative. New policies, new finance and new technologies emerged, injecting new impetus into cross-border infrastructure projects.

In terms of the policy climate, new policies were launched successively across B&R countries and regions to intensify international cooperation, unleash growth potentials and promote cross-border infrastructure development in both depth and breadth. In particular, the Chinese government made vigorous efforts to establish globally applicable standards by industry and build up new platforms for international cooperation. The Central and Eastern European (CEE) countries, grouped in the "16+1" cooperation format, also identified the goal of moving towards connectivity across the region. Russia put forth the idea of "Polar Silk Route" to link the shipping lanes through the Arctic with the Belt and Road. Besides, the heads of three Baltic States signed the agreement on the development of the Rail Baltic connection and availed of this opportunity to promote regional economic transition and add further contents to the Belt and Road infrastructure development.

In terms of financing climate, given the fact that most B&R countries are in the developing bloc with only limited financial and economic strengths, any changes to the financial climate, minor or major, may have an impact on infrastructure investment and development. Since 2017, multi-lateral international financial institutions have joined hands with central banks and commercial banks of related countries, broadening the channels to finance the Belt and Road infrastructure projects and making great contributions to improve the financial climate. For

instance, the Asian Infrastructure Investment Bank (AIIB) supported infrastructure connectivity through competitive operations like sovereign-backed financing and non-sovereign-backed financing, etc. Last year, the People's Bank of China (PBC) inked Bilateral Local Currency Swap Agreements with the central banks of Switzerland, Russia and other countries to reduce the risk of exchange rates and ensure fund security for cross-border infrastructure projects.

As for technical climate, world-class technologies have been pouring into the B&R countries through cross-border infrastructure projects. To be specific, the application of engineering technologies, represented by ultra-high voltage direct current transmission and integrated high-speed rail system, has paved a way for the success of related cross-border infrastructure projects.

5 The value of new contracts grows, showing a heightened passion for cross-border infrastructure development

The sub-index of development trend underwent quite an increase in the last two years to align with the rising enthusiasm among cross-border infrastructure investors and contactors in B&R countries. To be specific, the value of new contracts rose rapidly by 6.1% on a y-o-y basis to USD 430.7 billion, maintaining a relatively high growth rate; the passion index stood at 217.4. India, Pakistan, Bangladesh and some other South Asian countries have emerged as a favored destination and may become a potential growth engine for cross-border projects in 2018.

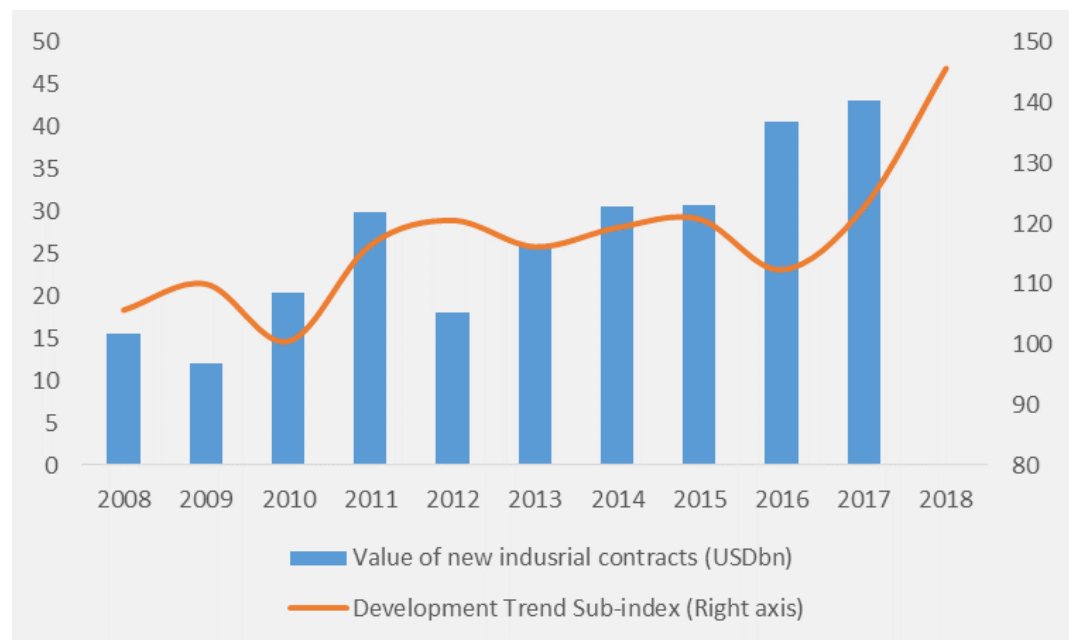


Fig. 1.4 New Contract Value of Cross-border Infrastructure Projects and B&R Development Trend Sub-index

Data source: BMI; Cooperation Department of the Ministry of Commerce

II. Analysis on Belt and Road Infrastructure Development Sub-indexes

The sub-indexes look into the climate, potential and trend of infrastructure development across the B&R countries. To be specific, the development environment is defined by the background and foundation, impetus and guarantee, momentum and passion of a country to develop infrastructure facilities.

In 2018, the sub-index of Belt and Road infrastructure development climate picked up slightly from 111.1 to 112.2; so did that of development potential from 100.8 to 104.6. The development trend sub-index that reviews the infrastructure development trend soared by a much greater margin from 122.7 to 145.7 under the powerhouse of a rising output and a keen passion for cross-border projects, and became the largest contributor to the gains in gross BRIDI.

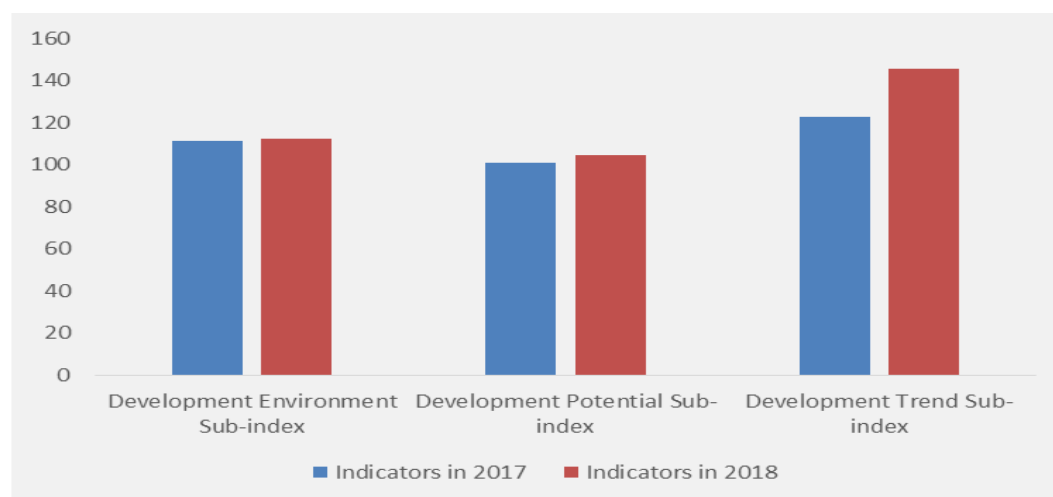


Fig.2.1 BRIDI Development Sub-index

1 The development environment sub-index picks up with significant improvements in political and financial dimensions

The development environment sub-index encompasses four secondary indicators in political, cultural, financial and business dimensions. The general picture looked quite promising along the Belt and Road, as proven by the increase in the sub-index from the 2017 level of 111.1 to 112.2. Improvements were seen in political and financial dimensions, and no major changes were witnessed in business environment. However, there was a minor retrogress in social climate. International contractors and investors should, therefore, pay heed to the risks (e.g. political unrest, social disorder, and insolvency) in the development environment of certain B&R countries.

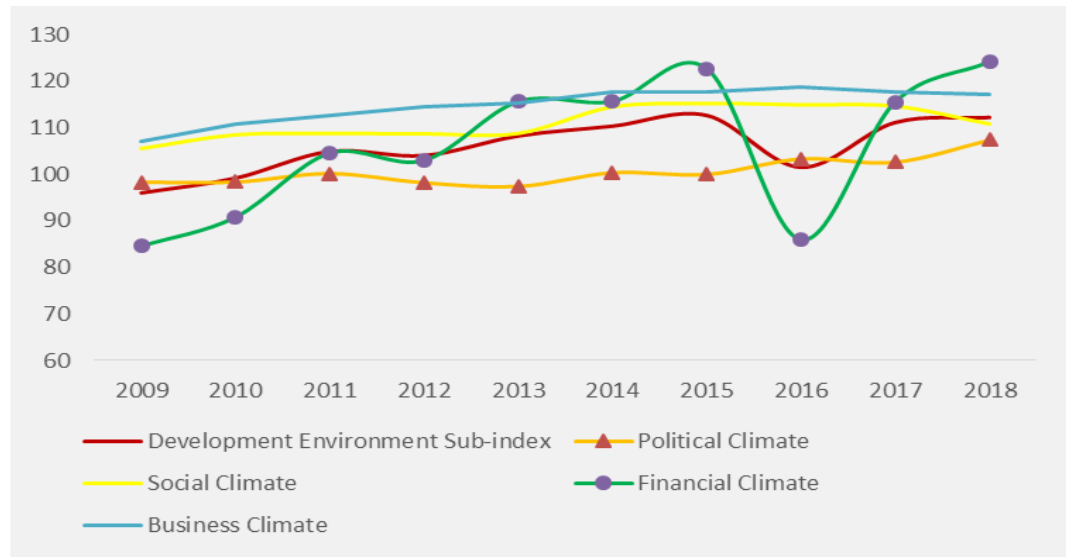


Fig.2.2 Trend of BRIDI Development Environment

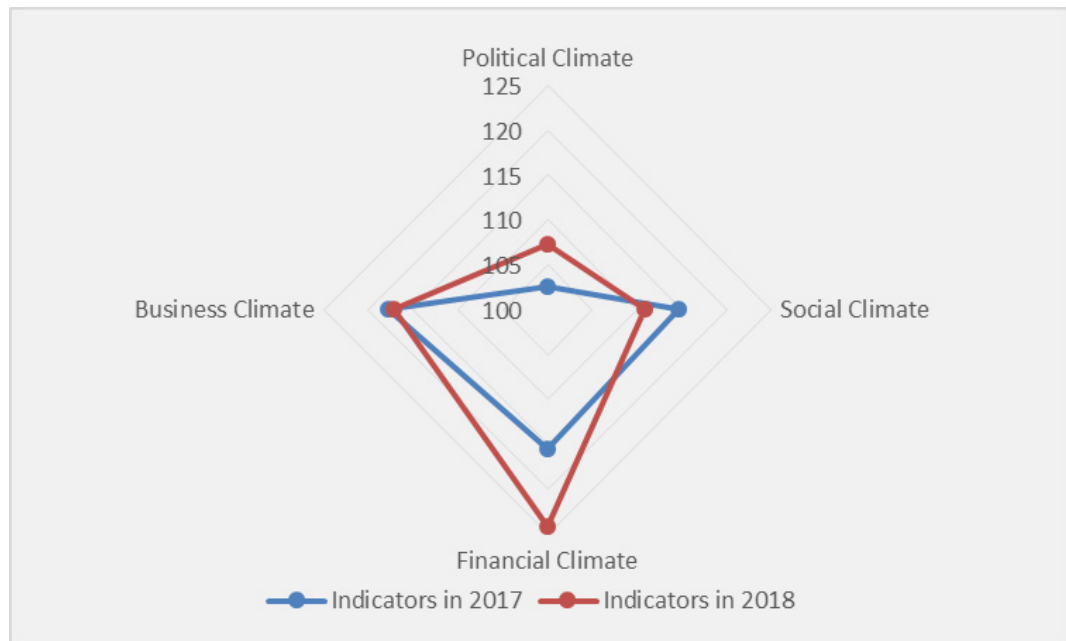


Fig.2.3 Secondary Indicators of BRIDI Development Environment

Table 2.1 2018 Top 10 BRIDI by Development Environment Sub-index

Ranking	Country	Indicators in 2018	Ranking	Country	Indicators in 2018
1	Singapore	197.1	6	Portugal	149.0
2	Czech	175.9	7	Qatar	147.6
3	Vietnam	157.7	8	Slovakia	133.7
4	Indonesia	150.1	9	Bulgaria	133.1
5	United Arab Emirates	149.3	10	Saudi Arabia	132.9

a) Political climate improves in general amidst chaos in some countries

The political climate is measured by political stability, clarity of infrastructure construction development strategy, policy continuity, international relations and openness of infrastructure industry, etc. Benefiting from the improvements in, among others, international relations and policy continuity, the secondary indicator of political climate climbed from 102.6 in 2017 to 107.3 in 2018 – the overall political climate turned for the better along the Belt and Road.

Part of the global efforts to support the Belt and Road Initiative since 2017 included the adoption of the UN Security Council Resolution 2344 and the WHO Memorandum of Understanding on the Belt and Road Health Cooperation Mechanism, which call for intensified exchange and partnership along the Belt and Road. All related countries, like China, Egypt, Czech Republic, Brazil and Portugal, have launched new policies to facilitate cross-border cooperation over infrastructure development and investment under the Belt and Road Initiative.

Table 2.2 2017 BRIDI-Relative Policies and Regulations

Country	Policies and Regulations
Source Korea	New Northern Economic Policy
Egypt	Memorandum of Understanding between China and Egypt on Intensifying “Online Silk Road” Cooperation to Promote Information Connectivity
China	Guidance of the Ministry of Environmental Protection, Ministry of Foreign Affairs and National Development and Reform Commission of China on Promoting Green Belt and Road
New Zealand	Memorandum of Arrangement on Strengthening Cooperation on the Belt and Road Initiative
China	Action Plan on Belt and Road Standard Connectivity (2018-2020)
China, Russia	Agreement on Deepening Cooperation on China Railway Express between railway administrations of China, Belarus, Germany, Kazakhstan, Mongolia, Poland and Russia
Greek	2017-2019 Plan on Key Areas of Cooperation Between China and Greece
Czech	Memorandum of Understanding Between China and Czech Republic on Jointly Coordinating and Promoting Cooperation Planning and Project Implementation under the Framework of the Belt and Road Initiative
Philippines	Six-Year Development Program (SYDP) for Trade and Economic Cooperation between the Philippines and China
Thailand	Framework on Eastern Economic Corridor (EEC) to Support Super Cluster
Brazil	Preferential Policy of Brazil for Foreign Investment
China, Portugal	Memorandum of Understanding of the Forum for Economic and Trade Co-operation between China and Portuguese-speaking Countries (Macao) on Promoting Capacity Cooperation

Source: Government websites, collected by the research team

It's worth mentioning that, as the contradiction between India and Pakistan went serious again and many countries took the extreme step of cutting off diplomatic ties with Qatar, the secondary indicator of political climate fell into a low ebb in South Asia and West Asia this year. The growing conflicts and potential risks – be they political or financial- will bottleneck cross-border infrastructure development in quite a big way across the above regions.

b) Financial climate turns for the better, though some countries still face a high risk of debt insolvency

The financial climate for Belt and Road infrastructure projects is determined by the stability of exchange rates and commodity prices as well as the availability of capital programs, exposure of national debt risks and other indicators. In 2018, the improved availability of capital programs pushed the secondary indicator of financial climate to 124.2, higher than 115.5 last year.

According to the UNCTAD Global Investment Trends Monitor, global flows of foreign direct investment (FDI) fell by 16% in 2017 to USD 1.5 trillion from USD 1.8 trillion in 2016. By stark contrast, the inward FDI flows rose by nearly 3.4% in the B&R countries from USD 560 billion to USD 579 billion. Given this, the stability of exchange rates and commodity prices, the availability of capital programs, exposure of national debt risks and other indicators were all on the upgrade to varying degrees.

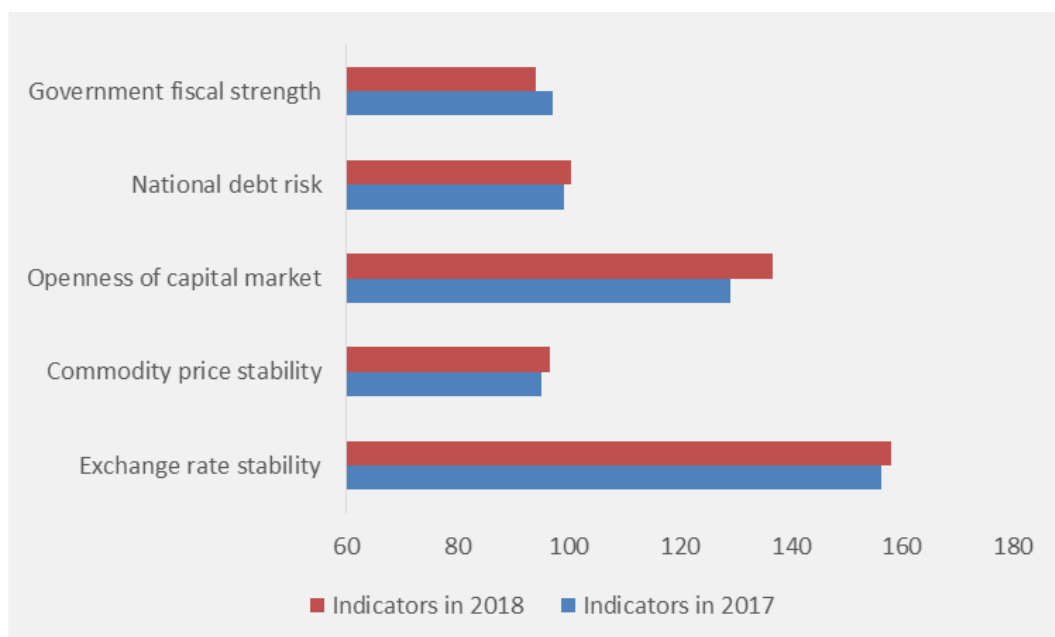


Fig.2.4 BRIDI Financial Climate Indicators

Last year, multi-lateral financial institutions and national commercial banks made vigorous efforts in financial innovation as part of the B&R Initiative to reduce financial risks. Led by AIIB, Silk Road Fund and other multi-lateral financial institutions, several national (regional) central banks inked Bilateral Local Currency Swap Agreements worth RMB 635 billion with China, to further reduce the risks associated with exchange and interest rates and enhance fund security for cross-border infrastructure projects. As for the commercial banks, Citigroup established banking relationships with more than 80 percent of Fortune 500 companies in China, and provided financial services in 58 markets along the B&R. HSBC launched a business desk for overseas Chinese companies in Warsaw, Poland to help Chinese companies active in Poland, Czech Republic, Slovakia, Hungary, Rumania and other neighboring countries along the Belt and Road establish business partnership with local players. In addition, Standard Chartered took part in over 50 B&R deals, and gained rich experiences on project operation.

Table 2.3 The Bilateral Agreements on Currency Swap between Central Banks of BRI Countries and the People's Bank of China in 2017

Overseas Agency	Scale	Validity
The Bank of Mongolia	15 RMBbn /5400 MNTbn	3-year
Bank of Qatar	35 RMBbn/20.8 Riyalbn	3-year
Hong Kong Monetary Authority	400 RMBbn/470 HKDbn	3-year
Bank of Russia	150 RMBbn/1325RUBbn	3-year
Bank of Thailand	70 RMBbn/370THBbn	3-year

Source: websites of banks, collected by research team

Though the financial climate improved along the Belt and Road, international infrastructure investors and contractors must be soberly aware that, some countries are still in a weak fiscal position, with large debts and inadequate foreign exchange reserves. Their low sovereign credit scores and flimsy solvency margin merit attention. According to the 2018 BRIDIs and sovereign credit ratings made by Dagong Global across B&R countries, cross-border infrastructure investors and contractors would need greater caution about any financial risks and debt insolvency in Pakistan, Greece, Yemen, Angola and Cape Verde, etc. this year.

Table 2.4 BRI Countries' National Sovereign Credit Rating below Investment-grade

Area	Country	Rating Time	Long-term Local-currency	Local-currency Outlook	Long-term Foreign-currency	Foreign-currency Outlook
Southeast Asia	Philippines	2016.01	BB-	Negative	BB-	Negative
South Asia	Bangladesh	2015.11	BB-	Stability	BB-	Stability
Central Eastern Europe	Croatia	2017.11	BB+	Stability	BB+	Stability
West Asia	Turkey	2016.09	BB	Negative	BB-	Negative
Southeast Asia	Vietnam	2016	B+	Stability	B+	Stability
East Asia	Mongolia	2017.07	B	Negative	B	Negative
South Asia	Sri Lanka	2017.02	B+	Stability	B+	Stability
Central Eastern Europe	Serbia	2017.01	B+	Stability	B+	Stability
Central Eastern Europe	Bosnia-Herzegovina	2016.10	B	Stability	B	Stability
Southeast Asia	Cambodia	2017.05	B	Stability	B	Stability
West Asia	Egypt	2016.09	B-	Stability	B-	Stability
West Asia	Lebanon	2015	B-	Negative	B	Negative
South Asia	Pakistan	2016.06	CCC	Positive	CCC	Positive
Central Eastern Europe	Greek	2017.11	CCC	Positive	CCC	Positive
West Asia	Yemen	2015.06	CC	Stability	CC	Stability

Source: Dagong Global Credit Rating Group

c) Business climate remains stable while dispute settlement² takes longer

The secondary indicator of business climate refers to any factors that may influence the business operation of Belt and Road infrastructure contractors and investors, including the coverage of economic laws, administrative efficiency, ease of doing business, ease of payment & settlement, and taxation burdens. Despite a very slight decline of 0.6 over the previous year, the indicator scored 117.2 in 2018, thanks to improved economic laws, ease of business and tax rates, to imply a stable business climate across B&R countries.

In terms of the administrative efficiency, Singapore and Portugal outperformed most other B&R countries by shortening the time required for taxation and business registration. As for the ease of doing business, the reconciliation and settlement of commercial disputes took a longer time and consumed more cost and energy than before in all but a few countries like Indonesia and Thailand. In addition, Saudi Arabia and Singapore had lower tax burdens, but the successive launch of regulations on value-added tax across Gulf countries last year may alter the current taxation landscape in related countries.

Also it is noteworthy that the tertiary indicator of time required for dispute settlement among B&R countries maintains its 8-year upward trend. In 2017, it took as many as 681 days to mediate a dispute, up 0.9% y-o-y. This will, to some extent, pose potential risks to the cross-border infrastructure industry and shall receive due attention from related contractors and investors.

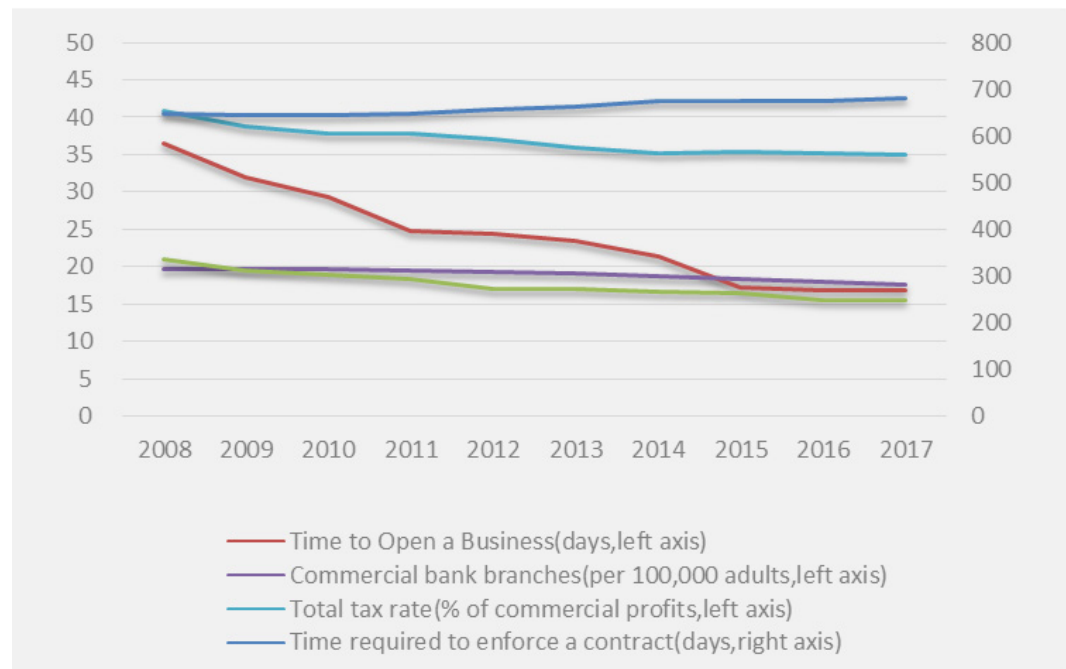


Fig.2.5 Trend of Main Indicators of Business Climate

Data source: World Bank, BMI

2.The length of time required to solve any commercial disputes between two companies.

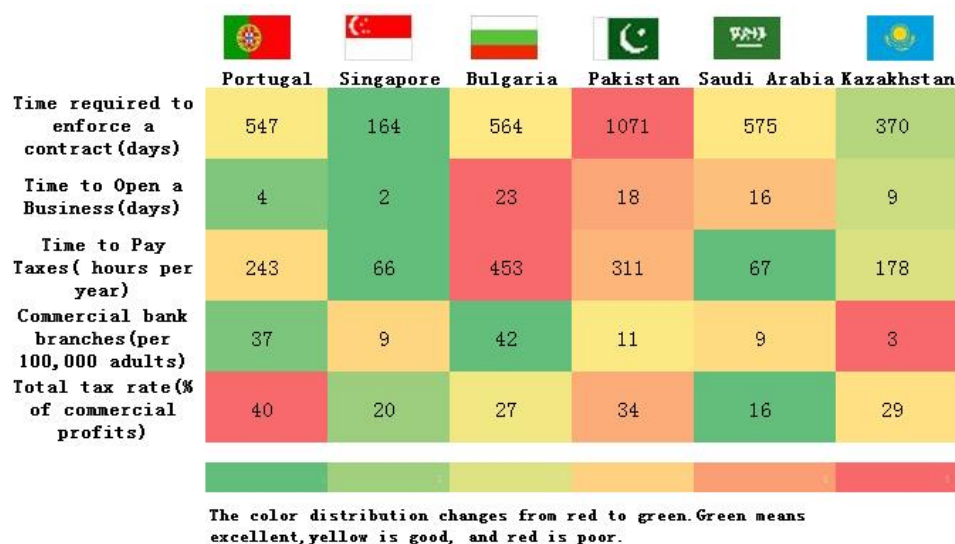


Fig.2.6 Data of Business Climate in Specific Countries
Source: World Bank, BMI

d) Social climate faces downgrading, calling for improvements in South Asia and Central Asia

The secondary indicator of social climate reflects the social condition for infrastructure development across B&R countries from the perspectives of social security, medical and healthcare service and ease of exit and entry, etc. As social tensions and discords waxed in some regions, the indicator dropped from 114.6 to 110.8 over last year. In other words, the B&R countries presented a generally stable picture of social climate, though some regions were still exposed to high risks.

By regions, Central and Eastern Europe ranked first in social climate with an indicator of 167.8, followed by Western Europe which scored 106.4 in 2018. South Asia and Central Asia, by contrast, ran below par. The regional conflicts, be they ethnic, religious or cultural, saw no ends in Kashmir, Syria, Egypt and some other parts of the South Asia and Central Asia, and may expose their neighbors to considerable risks of an unfavorable social climate.

2 The Sub-index of Development Potential Soars and Needs for Infrastructure Keep Growing

The sub-index of development potential looks into two secondary indicators: market demands and production factors. Underpinned by rigid demands and abundant cross-border resources for infrastructure development, the year 2018 saw a slight increase in the sub-index of the Belt and Road infrastructure development potential from 99.6 last year to 100.8.

As the needs for infrastructure facilities and the availability of production factors differ from country to country, the development potential also vary greatly along the Belt and Road. To be

specific, Thailand, Indonesia, Vietnam, Russia, Brazil and Turkey, among others, have revealed a great potential for cross-border infrastructure development; while some West and Central Asian countries are lagging behind in this regard due to a sluggish economic growth and a severe shortage of production factors.

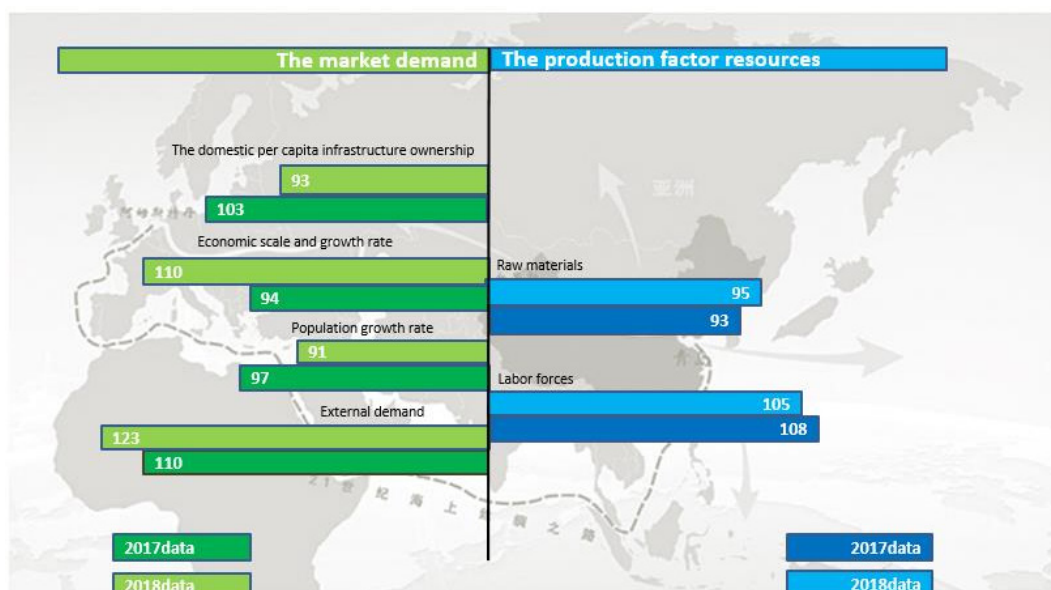


Fig.2.7 The Secondary Indicators of Development Potential Sub-Index

Table 2.5 2018 Top 10 BRIDIs by Development Potential Sub-index

Ranking	Country	Indicators in 2018
1	Russia	172.4
2	India	161.5
3	Brazil	153.9
4	Indonesia	146.9
5	Thailand	145.2
6	Turkey	141.5
7	Vietnam	133.1
8	Saudi Arabia	132.3
9	Iran	130.3
10	Romania	127.1

a) Rigid demands for infrastructure facilities keep rising along the Belt and Road Countries

The secondary indicator of market demands is defined by the domestic per-capita infrastructure ownership and the needs for infrastructure facilities to align with the economic scale and growth rate, population growth rate and external demands along the Belt and Road. Despite a slower population growth, the indicator of market demands rose slightly from 100.8 of the previous year to 105.9 in 2018, as driven by a smaller per-capita infrastructure ownership, an expanded economic scale, a faster economic growth and increased external demands. The

indicator of market demands among B&R countries exhibited a sound momentum of stable rise across the board.

The B&R countries are mostly developing countries and under considerable pressure of economic and population growth and therefore, have revealed rigid demands for massive infrastructure investment and development. As regional integration in Southeast Asia is well underway, the needs on transportation, communication and other infrastructure have also risen in related countries. The economic recovery in Kuwait, Cyprus and other parts of West Asia has helped unleash the potential for local infrastructure development. In addition, by streamlining foreign investment procedures and lowering market access threshold, Russia, Ukraine and other CIS countries have welcomed a huge influx of foreign capital as an impetus to local infrastructure investment and development.

By regions, Southeast Asia ranked first in market demands with an indicator of 123.3, followed by 100.3 in Central and Eastern Europe. West Asia, Central Asia and South Asia recorded 69.5, 68.5 and 97, respectively, after a slight decline over last year.

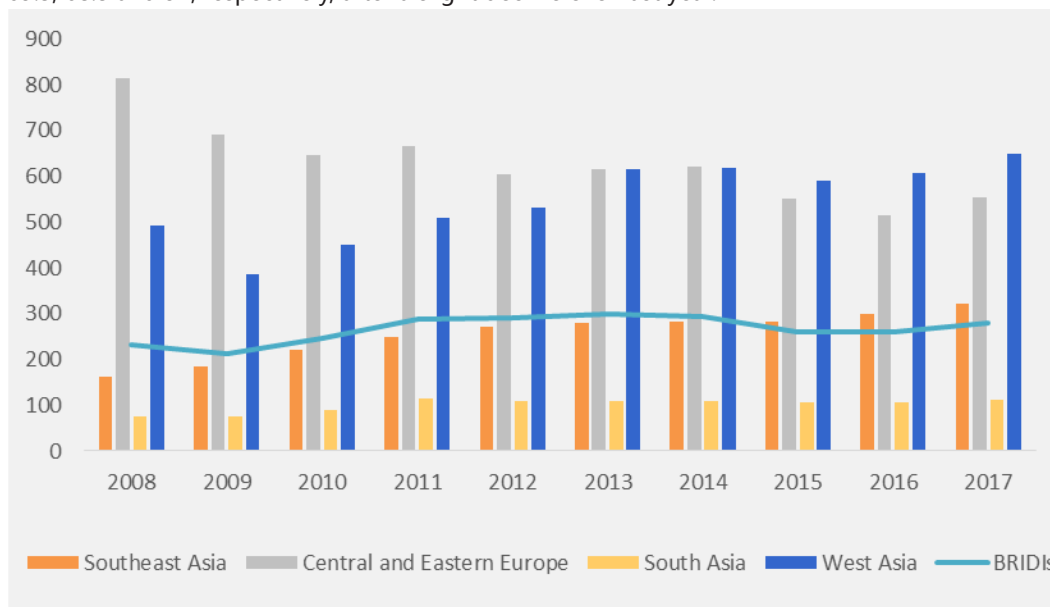


Fig.2.8 Regional per capita infrastructure output (USD)

Source: World Bank, BMI

b) Marked differences exist in development potential, despite abundant infrastructure resources in most countries.

The secondary indicator of production factors recorded 100.5 in 2018, roughly equal to that of last year, without too much changes across tertiary indicators. Though infrastructure resources abound in related countries, natural resource endowment still varies greatly along the Belt and Road.

To be specific, the tertiary indicator of natural resource ownership rose by a small margin to 95.1 in 2018. Natural resources abound in most countries to guarantee an adequate supply of steels, cements, and other basic building materials. While India, Russia, Vietnam, Brazil, Turkey, Iran and Indonesia are included in the list of top 10 cement producers worldwide, Ukraine, Russia,

Turkey and India, among others, perform well in steel export. The sufficiency of building materials will create a favorable condition for cross-border infrastructure development along the Belt and Road.

The tertiary indicator human resource ownership, this scored 105.8 after a modest decrease over 2017. The labor force continued to grow by an average of about 0.7% per year across all countries amidst very mild downward momentums. The unemployment rate stabilized at approximately 9.0% on the whole, with the peak of 13.1% in Central and Eastern Europe and the bottom of 3.8% in ASEAN. In Southeast Asia, the poorly developed institutions on the labor market have dragged the average worker salary and labor cost down to a low level, which means a competitive edge in human resources.

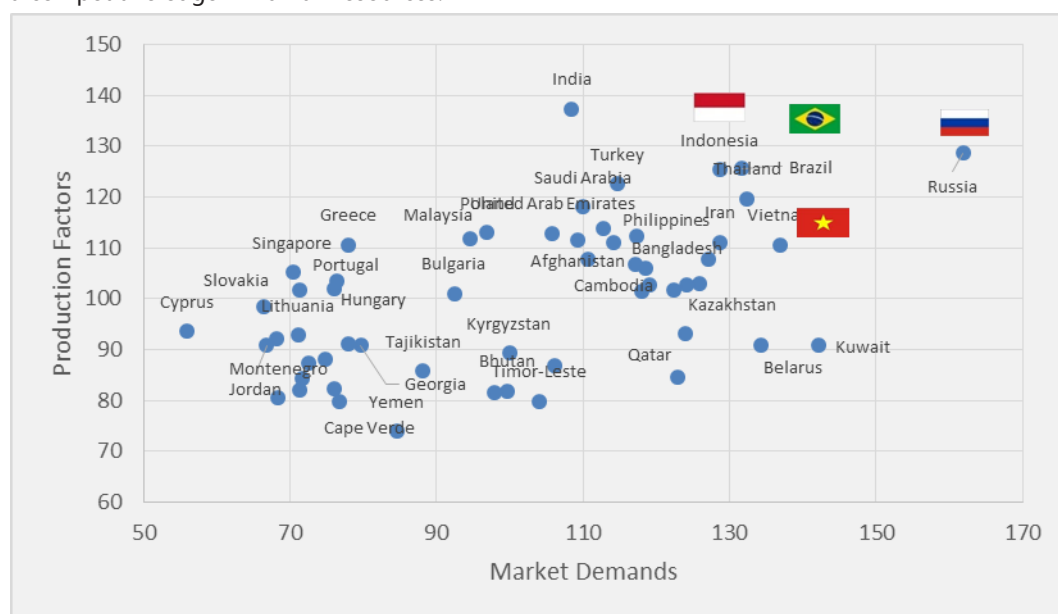


Fig.2.9 Distribution of BRIDIs by Market Demands and Production Factors

3 The sub-index of development trend picks up with an ever higher passion for cross-border infrastructure projects

The sub-index of development trend looks into the scale and growth rate of infrastructure development and the passion for cross-border infrastructure projects. In 2018, this sub-index of development trend moved upwards from 122.7 last year to 145.7. The size and pace of infrastructure development underwent a rapid growth, while the indicator of passion showed a steady enhancement. The general picture of infrastructure development seemed quite promising along the Belt and Road. To be specific, infrastructure facilities have mushroomed in, among others, Indonesia and Vietnam, while Turkey and Malaysia are emerging as both a hotspot for cross-border infrastructure projects and a potential growth engine.

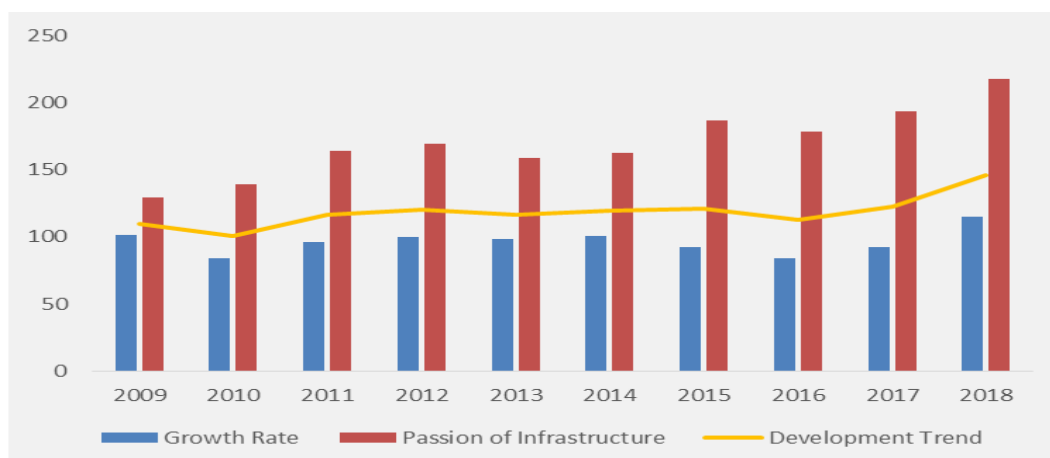


Fig.2.10 Development Trend Sub-index
Table 2.6 2018 Top 10 BRIDIs by Development Trend Sub-index

Ranking	Country	Indicators in 2018
1	Indonesia	187.1
2	India	184.4
3	Turkey	182.7
4	Russia	177.7
5	Vietnam	164.4
6	Malaysia	163.3
7	Brazil	159.4
8	Thailand	156.6
9	Singapore	155.5
10	Qatar	153.0

a) Gross infrastructure output registered a stable rise, with continuous increases in the value of newly-signed cross-border infrastructure contracts

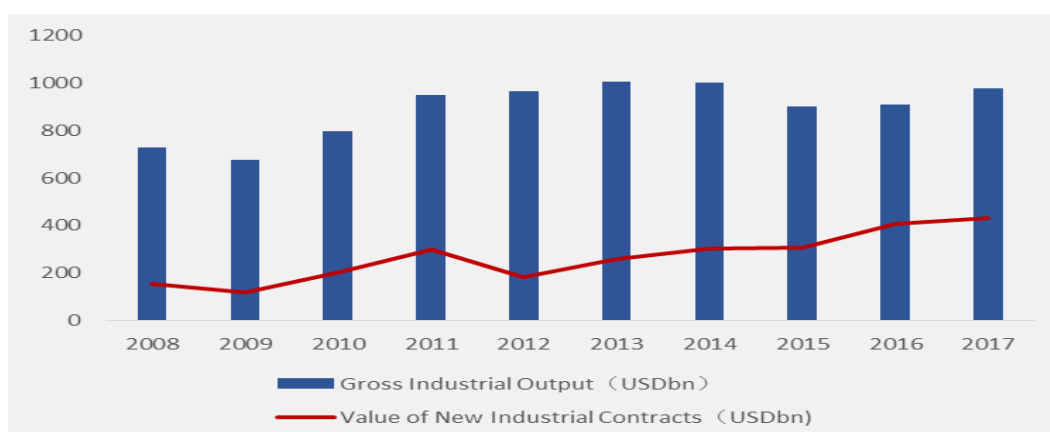


Fig.2.11 Gross Infrastructure Output and Value of New Contracts on Cross-border Projects in BRIDIs

Source: According to the data released by the Cooperation Department of the Ministry of Commerce, BMI

The infrastructure development scale and growth rate is associated with the output and growth rate of the infrastructure industry in B&R countries, while the passion for cross-border infrastructure projects can be explained by the value of newly-signed infrastructure contracts. In 2018, the secondary indicator of size and pace recorded 115 and that of passion rose to 217.4, up 22.5 and 24.1 y-o-y, respectively. The related tertiary indicators remained basically unchanged from the previous year.

The gross output of the Belt and Road infrastructure industry was on the rise as a whole, as proven by a 7.7% y-o-y increase from UDS 979.23 billion in 2018. By regions, Central and Eastern Europe stayed generally ahead of the growth curve, where Poland, Estonia, Hungary and Croatia performed extraordinarily well. In ASEAN, Indonesia and Vietnam also stood out with a major rise.

In recent years, cross-border infrastructure contractors and investors have made a more ambitious foray into the Belt and Road markets. As a result, new contracts on such projects grew year by year in both quantity and value. On the value side, new contracts totaled USD 430.73 billion in 2017, up 6.1% y-o-y. Among the greatest contributors, there were the USD 22 billion Sinop Nuclear Power Plant which, upon completion, will reduce Turkey's reliance on Russia and Iran for power supply; Malaysia's USD 12.66 billion East Coast Rail Link to open up trade routes in Southeast Asia; and USD 10.64 billion China-Thailand Railway which will become Thailand's first standard-gauge high-speed railway line.

b) Indonesian, Indian, Malaysian, Turkish and Russian infrastructure markets enjoy high favors

The distribution of B&R countries by the above-mentioned two secondary indicators well explains marked differences in infrastructure development trend. To be specific, Indonesia, India, Turkey and Russia, among others, performed fairly well in infrastructure output and value of new contracts in 2017. Given their outstanding speed and passion for infrastructure development, these countries will remain on the fast track in the future. Some other countries, like Malaysia, Vietnam, Thailand, Brazil and Singapore, stayed above the average in growth rate and passion, thus exhibiting a momentum of steady growth of infrastructure facilities. In addition, the greatest potentials will be found among Bangladesh, Kuwait, Angola, Iraq and Laos, etc. The huge passion, coupled with a somehow slow pace, will mean considerable investment opportunities. International infrastructure contractors and investors shall pay close attention to such countries.

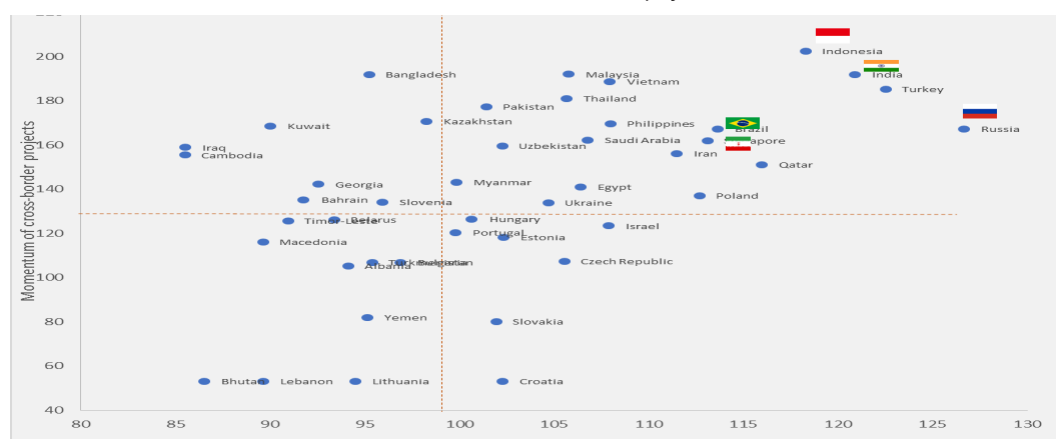


Fig.2.12 Distribution of BRIDIs by Infrastructure Development

Source: BMI, collected by our research team

III. Analysis on Infrastructure Development by Industry in B&R Countries

The Index is able to reflect the development status of infrastructure industries of B&R countries, with predictions on hotspots in trans-regional, cross-border infrastructure cooperation. It registers growth in infrastructure in B&R countries across the board, yet the conditions of various industries are significantly different. To be specific, transport is, and will be, in the uptrend; the burgeoning and expanding building industry reverses the downturn over the past few years; energy is growing amid fluctuations, as electricity remains a global priority while clean and renewable energy projects are gaining currency; utilities represent the sharpest rise; telecommunications are also on the rise; communication and water treatment industries show great potential.

1 Transport: Constant expansion towards a stable future

Transport index of B&R countries is steadily on the increase over the past few years. In 2018, it rises moderately to 113.8 from 109.9 in 2017. The rise is largely attributed to the indicator of growth rate and scale. Passion for transport projects, however, shows a slight decline.

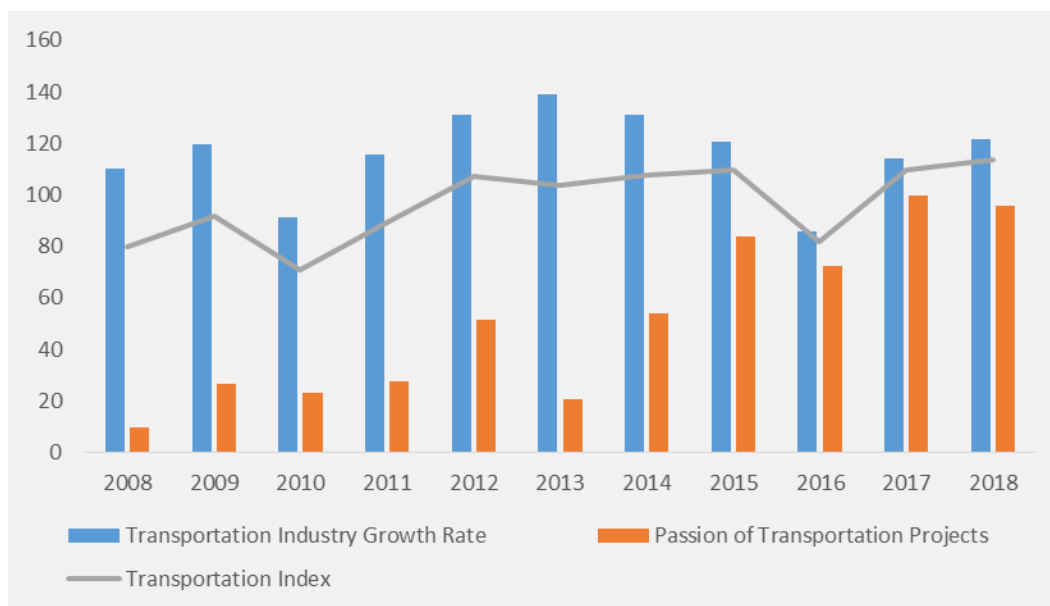


Fig3.1 The Belt and Road Countries Transportation Index

a) Construction of road and railway is in the spotlight with long-term transport plans

ENR report shows that transport takes a consistently large share of infrastructure markets; among the USD 2.5 trillion investment worldwide, a staggering USD 1.15 trillion lands in the industry. In 2008-2017, the output of transport sectors in B&R countries rose steadily from

USD 160.65 billion to USD 232.15 billion, with an average annual growth of 7.3%. In particular, the output of roads and railways – against the backdrop of sustained transport development – as a share of the total increased from 81.5% in 2008 to 86.8% in 2017; such increase is likely to continue in the coming years.

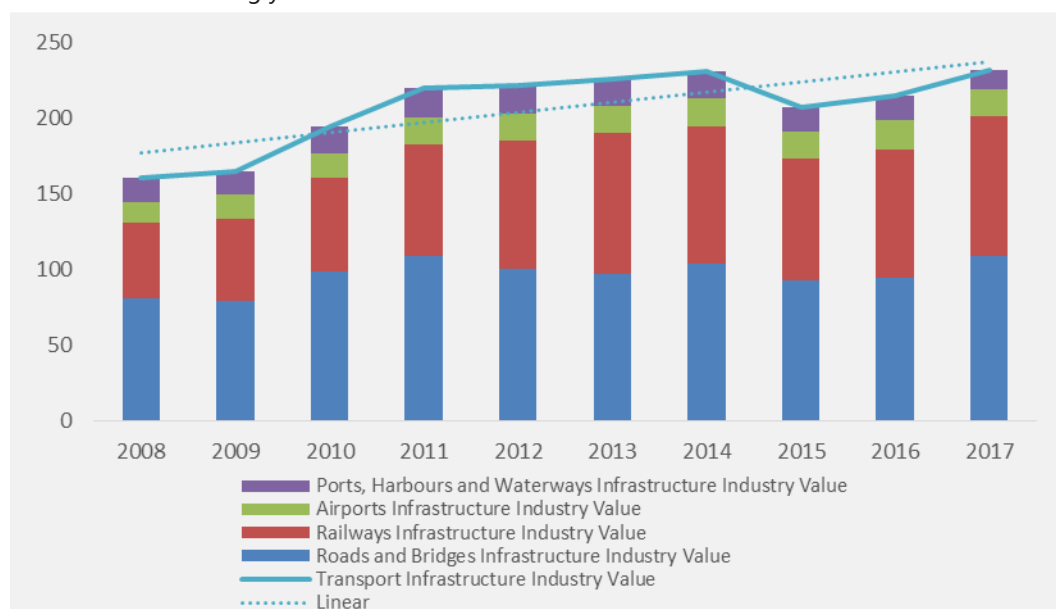


Fig3.2 The Belt and Road Countries Transport Infrastructure Industry Value (USD bn)
Data Source: BMI

Transport as a B&R priority features prominently in the medium- to long-term strategies of most countries. Pakistan, India, Poland, Turkey, Indonesia and Iran have successively planned to build or upgrade the high-speed railway and road network. The Long Term Plan for China-Pakistan Economic Corridor (2017-2030) positions railway as Pakistan’s main mode of transport, so that the transport system can turn profitable gradually and give a big boost for economic development. Such positioning sets the stage for medium- to long-term development of the national railway network.

Table 3.1 Transport Development Plans of Target Countries

Country	Category	Development Plan
Pakistan	Road	In 2010-2020, it will comprehensively expand the road network, increase road density and transport speed, and reduce vehicle operating costs and road problems.
Poland	Road	According to the National Road Construction Program for 2014-2023, the Polish government will spend PLN 107 billion for the construction of 3,900km of motorways and expressways and 57 new ring roads.
India	Railway	The government plans to modernize, through PPP, 22 main railway stations across the country, and extend India’s railway network by 25,000km by 2020.
Malaysia	Railway	To invest some USD 50 billion in railway projects by 2020.

Country	Category	Development Plan
Turkey	Road	To build 1,775km of expressways and 15,000km of multilane highways.
	Railway	To develop a high-speed railway network with three lines extending from Ankara, i.e. the Istanbul-Ankara-Sivas Railway, the Ankara-Afyon-Karahisar-Izmir Railway, and the Ankara-Konya Railway.
	Air	To invest USD 160 million in building an air traffic navigation control center; USD 937 million in building six terminals, with an annual passenger handling capacity of over 50 million, at five international airports; and EUR 22.152 billion in building the Istanbul New Airport.
Indonesia	Road	In 2014-2019, the Indonesian government will build 2,650km of highways and 1,000km of expressways, and repair 46,770km of highways.
	Railway	In 2014-2019, the Indonesian government will build a 3,258km railway network.
	Air	The Indonesian Ministry of Transport plans to build 15 airports by 2019.
	Water	In 2014-2019, it will build 24 large ports.
Iran	Road	According to the 6th Five-Year Plan, over 7,000km of expressways will be open to traffic by the end of 2021.
	Railway	According to the 20-Year Development Plan, Iran will have a railway network of no less than 25,000km by 2025

Source: Overseas Investment Cooperation Country (Region) Guide by MOFCOM

Railway construction is in full swing among B&R countries. A number of railway network and high-speed railway projects have kicked off, including the Mombasa-Nairobi Railway, the Jakarta-Bandung High-speed Railway, the Moscow-Kazan High-speed Railway, and Tehran-Mashhad Railway electrification. As the cornerstone of regional economic integration and national logistics development, such projects have injected an adrenaline into the infrastructure industries.

Large-scale road connectivity projects are well on track, including the China-Kyrgyzstan-Uzbekistan Highway, Tajikistan-Uzbekistan Highway maintenance and upgrading, and the Zemun-Borca Bridge (Serbia). Such projects play an important role in promoting economic cooperation and cross-border infrastructure construction of B&R countries.

Over the past few years, highly automated ports, typified by Hambantota Port (Sri Lanka), Doha New Port (Qatar) and Port of Bata (Equatorial Guinea), are replacing new ports as the main engine of cross-border port infrastructure business.

b) Fast-growing transport infrastructure in Southeast Asia and Central and Eastern Europe

In terms of both output and new contract value, transport infrastructure is developing rapidly in Southeast Asia and Central and Eastern Europe. In 2017, the output of transport sectors of Southeast Asia reached USD 56.49 billion, accounting for 24.3% of B&R's total; that of Central and Eastern Europe reached USD 30.94 billion, accounting for 13.3% of the total. The transport sectors of Indonesia ranked first with an output of USD 34.94 billion. In 2017, the new contract value of transport sectors of Southeast Asia registered USD 91.67 billion, accounting for 53.1% of the total; that of Central and Eastern Europe registered USD 4.67 billion, accounting for 2.7% of the total. The eastern enlargement of the EU has promoted regional economy and tapped the great potential for railway upgrading. The "16+1" initiative gets off to a flying start, as the Serbia section of Hungary-Serbia Railway officially broke ground, as railway repair and upgrading goes on smoothly in Montenegro and Serbia. Transport sectors of both regions are radiant with rosy prospects.

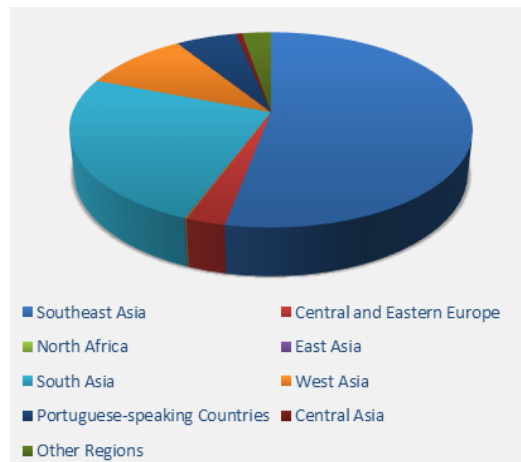


Fig3.3 Regional Distribution of Transport Newly Signed Contracts in 2017
Data Source: BMI

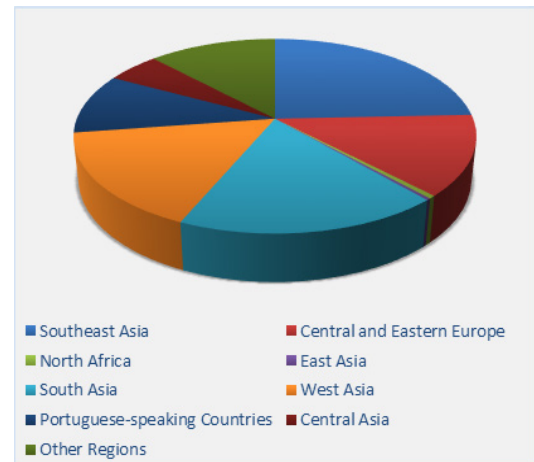


Fig3.4 Regional Distribution of Transport Output Value in 2017
Data Source: BMI

2 Building: Constant growth with passion for industrial parks and other non-residential properties

Building industry index in B&R countries is steadily climbing. In 2018, it rises substantially to 158.1 from the 2017 level of 130.0. The indicator of growth rate and scale, reversing the downturn since 2012, becomes the main driver of the building index.

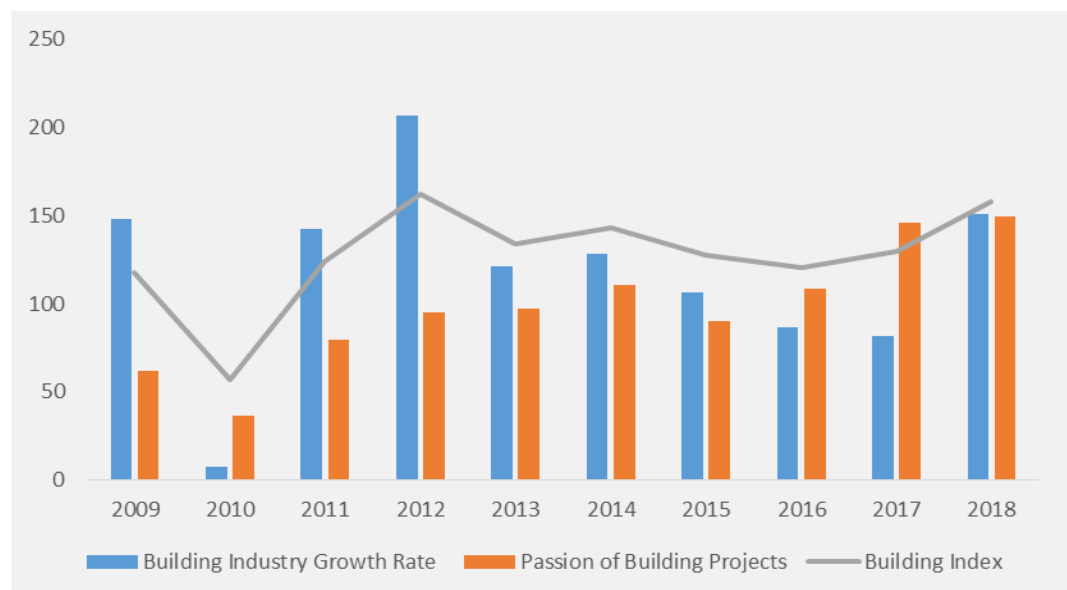


Fig3.5 The Belt and Road Countries Building Index

a) Non-residential properties is the focus of well-defined building plans.

Building sectors of B&R countries have seen a steadily increasing output over the past few years. In 2017, the output rose 5.19% Y-o-y to USD 557 billion, of which non-residential properties accounted for 60% and residential housing for 40%. On the whole, the percentage of the former may continue in the uptrend, thanks to the growing importance attached to industrial & commercial buildings.

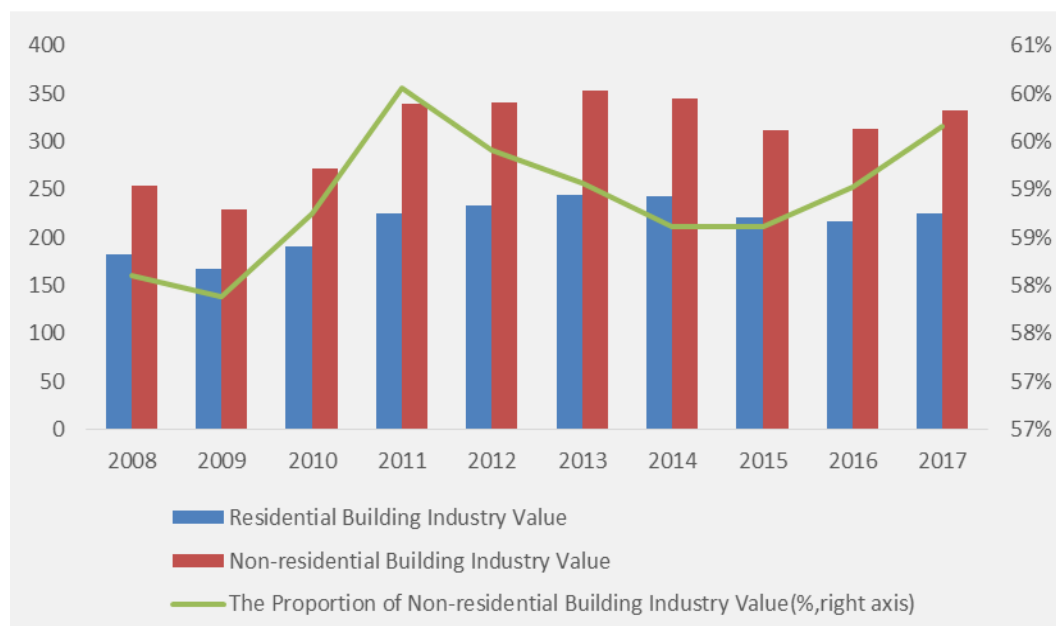


Fig3.6 The Belt and Road Countries Total Output Value of Building Industry (USD bn)

Data Source: BMI

In B&R countries, non-residential properties consist mainly of industrial parks, convention & exhibition centers, hotels, hospitals and sports venues. As the emerging markets of Africa, Asia and Middle East are gathering pace towards industrialization and urbanization, the ever-growing needs for CBDs make non-residential properties a priority for cross-border infrastructure cooperation. For instance, the Egyptian government is committed to building the Suez Economic and Trade Cooperation Zone into an international industrial base and a modern town; the Singapore government vows to develop Tanjong Pagar into a “new waterfront city” with business, tourism, recreation and living zones in ten years; the Oman government plans to wrap up infrastructure projects at the Duqm Special Economic Zone and South Al Batinah Logistics Hub by 2020; the Philippine President has signed the Investment Priorities Plan 2017-2019, under which a much larger share of the infrastructure budget goes to the upgrading of schools, hospitals and other non-residential properties.

Meanwhile, B&R countries are pressing ahead with housing projects for upgraders, like those in Ismailia (Egypt) and Seri Tanjung Pinang (Malaysia). With a large population of upgraders and an enabling government, Myanmar and Saudi Arabia are potential markets for international infrastructure contractors and investors.

b) Southeast Asia is the largest and most promising international building market.

In 2017, the output of building sectors of Southeast Asia reached USD 113.41 billion, accounting for 20.35% of the total and ranked second among regions. The new contract value of building sectors of Southeast Asia registered USD 58.98 billion, up 14.6% Y-o-y, accounting for 56.7% of the total. That made Southeast Asia the most attractive building market for investment. To be specific, Indonesia, Malaysia, Vietnam and Cambodia were among the Top Ten B&R building markets by new contract value. Together they took up 50.66% of the total.

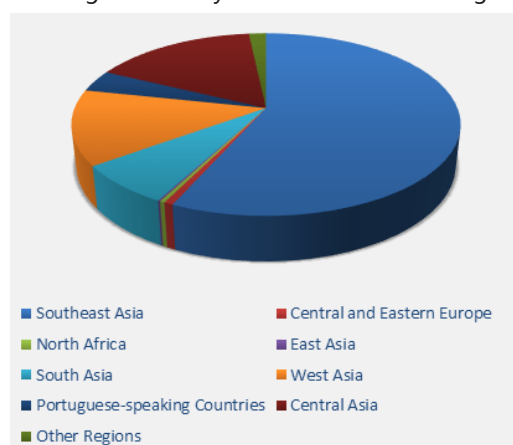


Fig3.7 Regional Distribution of Building Newly Signed Contracts in 2017

Data Source: BMI

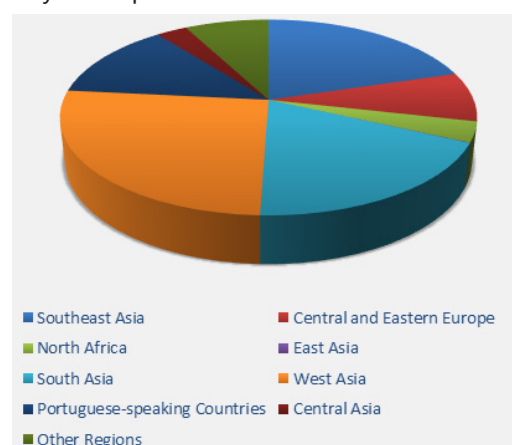


Fig3.8 Regional Distribution of Building output in 2017

Data Source: BMI

Indonesia is the largest B&R building market by new contract value (USD 41.36 billion). Its robust growth is driven by large inflows of international money, including Japan' s loan of USD 650 million for beach development in Bali and AIIB' s soft loan of USD 216 million for slum upgrading. Another burgeoning market is Vietnam, which recorded a Y-o-y increase of 19.2% in output in 2017, largely attributed to medium- to low-end housing. Cambodia logged USD 6.429 billion in building investment. The 3,052 ongoing projects made it the most active market. The Philippines is stepping up construction of New Clark City. Expecting an average growth of 11.2% in 2017-2021, it promises to become the fastest-growing building market in the world.

3 Energy: a red-hot industry with great potential

In recent years, energy index of B&R countries has been growing amid fluctuations. Following a decline from 2011 to 2016, the indicator of growth rate and scale has gradually picked up, thanks to the increasing passion for energy projects. In 2018, the index rises substantially to 135.7 from the 2017 level of 112.4.

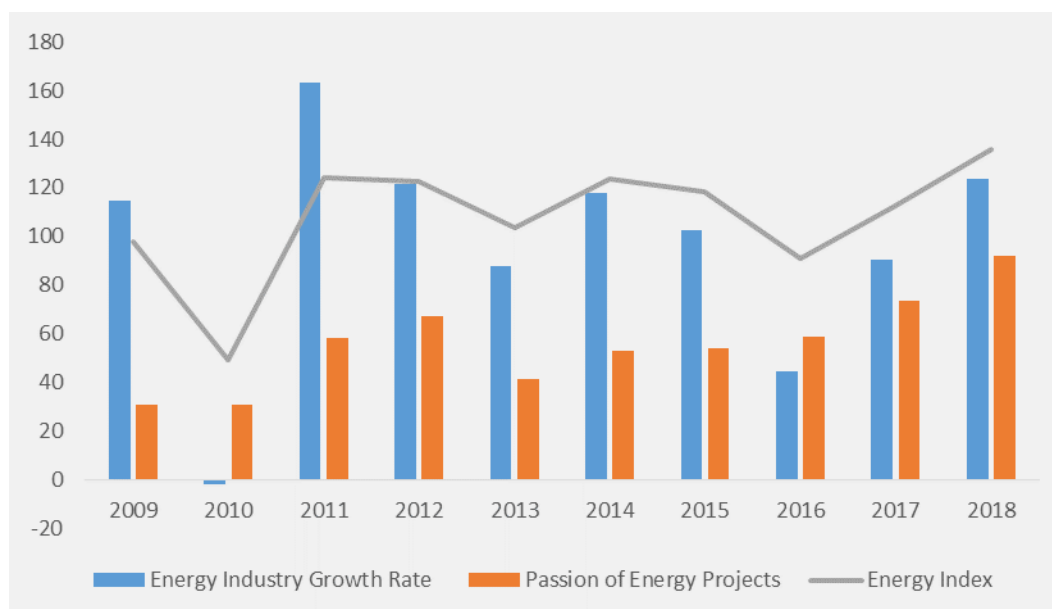


Fig3.9 The Belt and Road Countries Energy Index

a) Electricity is in great demand with new energy as a potential priority

In recent years, great changes have been taking place in the global energy landscape, as the world economy is undergoing profound adjustment, as we proceed with energy technology innovation, environmental protection, and climate solutions. Fossil fuels are being replaced by new energy. Renewable energy typified by solar power, wind power, geothermal power and bioenergy is being developed and utilized worldwide.

Particular attention has been drawn to electricity. A constant electricity supply makes for economic sustainability and livelihood improvement. In 2017, the output of electricity sector of B&R countries approximated USD 108.9 billion, accounting for 72% of the total. By 2030, global electricity investment will grow continuously to an estimated USD 6 trillion, roughly 40% of which will land in B&R countries. Development plans keep springing up in face of ever-increasing demand across the globe. For instance, India's 12th Five-Year Plan pledges an additional USD 1 trillion investment for an above-100GW electricity generation capacity.

The growing popularity of low-carbon development is bringing worldwide attention to clean and renewable energy. In 2017, global investment in renewable energy rose 2% to USD 280 billion - faster than that of oil and other fossil fuels. The sun-drenched UAE is dead set on solar power. Indonesia has allocated USD 300 million for geothermal exploration in 2018. Brazil injected USD 6 billion in solar power, wind power, biofuel etc. in 2017. In Portugal, wind power, hydropower, bioenergy, PV power etc. have accounted for 44% of total electricity consumption. Turkey has legislated on renewable energy, swelling the ranks of new energy while ramping up the use of solar power, wind power, geothermal power and nuclear power.

Table 3.2 Energy Development Plans of Target Countries

Country	Category	Development Plan
India	Nuclear power	The government plans to build 22 reactors and increase electricity generation capacity by 40GW. It is estimated that nuclear power will account for a quarter of India's electricity generation capacity by 2050.
Russia	Clean energy	Gazprom has finalized the 2016-2020 Program for Comprehensive Overhaul of Gas Mains, covering compressor stations, pipelines, gas distribution stations, heating and safety facilities.
Indonesia	Electricity	To meet the huge demand for electricity, the Indonesian government plans to build 35,000MW power plants and 40,000km of power grid in the next five years.
Iran	Electricity	1. Build nine nuclear power plants by 2025; 2. Invest USD 50 billion in launching 800 energy projects in 20 years.
Poland	Nuclear power	To build at least two nuclear power plants with a total installed capacity of 4,500MW in 2020-2030.
	Renewable energy	Poland has proposed a 10% bioenergy substitution for vehicle fuels by 2020, in answer to the EU mandate that renewable energy should account for no less than 15% of total final consumption.

Source: Overseas Investment Cooperation Country (Region) Guide by MOFCOM

In 2017, the output of oil and gas sectors of B&R countries rose 3.7% Y-o-y. Russia, Turkey, Iran and India led the pack, thanks to abundant reserves and favorable mining conditions. In particular, Russia's oil and gas sectors amazingly recorded a five-year annual average output of USD 20.2 billion; Iran's ten-year gas plan envisages a 71% hike in gas output and a 45,000km gas pipeline network (the current length is 36,000km) by 2025.

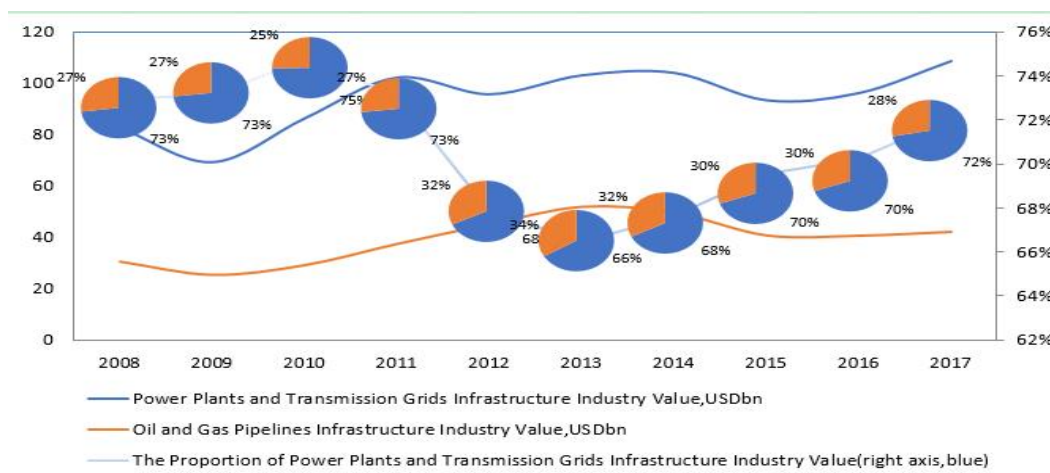


Fig3.10 Comparison of output value of Electric Power Infrastructure and Oil and Gas Infrastructure in Belt and Road countries
Data Source: BMI

b) Turbocharged energy sectors of South Asia with India, Pakistan and Bangladesh in the limelight

South Asia comes out first among regions in both energy output and new contract value. In 2017, output of its energy sectors reached USD 34.48 billion, accounting for 22.8% of the total. New contract value registered USD 50.16 billion, accounting for 36.2% of the total. The crème de la crème was India, whose ever-growing energy output (USD 32.94 billion) took up 21.8% of B&R' s total.

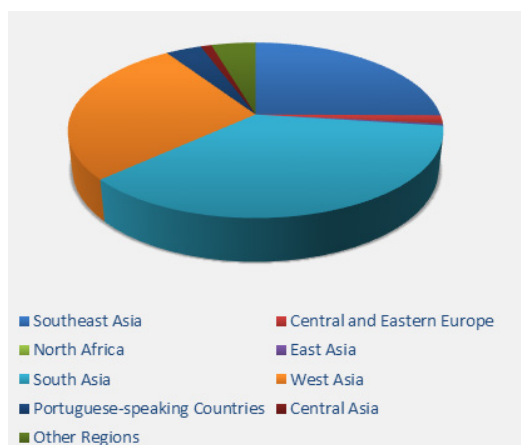


Fig3.11 Regional Distribution of Energy Newly Signed Contracts in 2017
Data Source: BMI

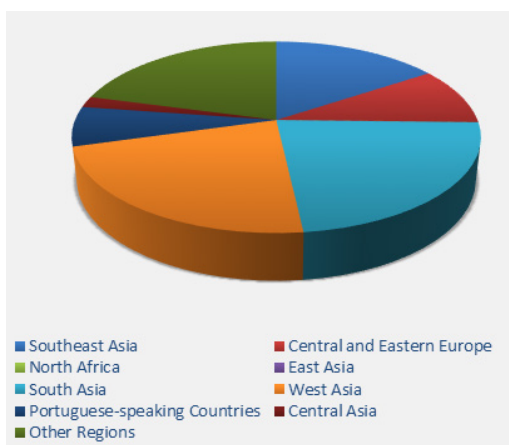


Fig3.12 Regional Distribution of Energy Industry Output in 2017
Data Source: BMI

In terms of international energy contract value, Bangladesh accounts for a chic 42% of the South Asian market, while Pakistan and India take the second place with a 28% share each.

In 2017, Standard Chartered Bank underwrote power plant, railway and road projects of Bangladesh. AIIB will bankroll the 220MW combined cycle power plant in southern Bhola; the plant, after completion, will generate electricity of approx. 130GWH each year. Japan will grant a soft loan of USD 1.83 billion for power development of Bangladesh.

Pakistan has built a number of famed hydropower plants, including Karot and Neelum Jhelum. In 2017, a consortium led by China Development Bank adopted a USD 1.5 billion financing plan for the 1,320MW Hubco Coal-fired Power Plant.

4 Utilities: soaring output and rosy prospects for telecommunications and water treatment

In recent years, utility index of B&R countries has been climbing step by step. In 2018, passion for utility projects witnesses a slight rise, while growth rate and scale see a sharp increase. The index skyrockets to 170.7 from the 2017 level of 113.4.

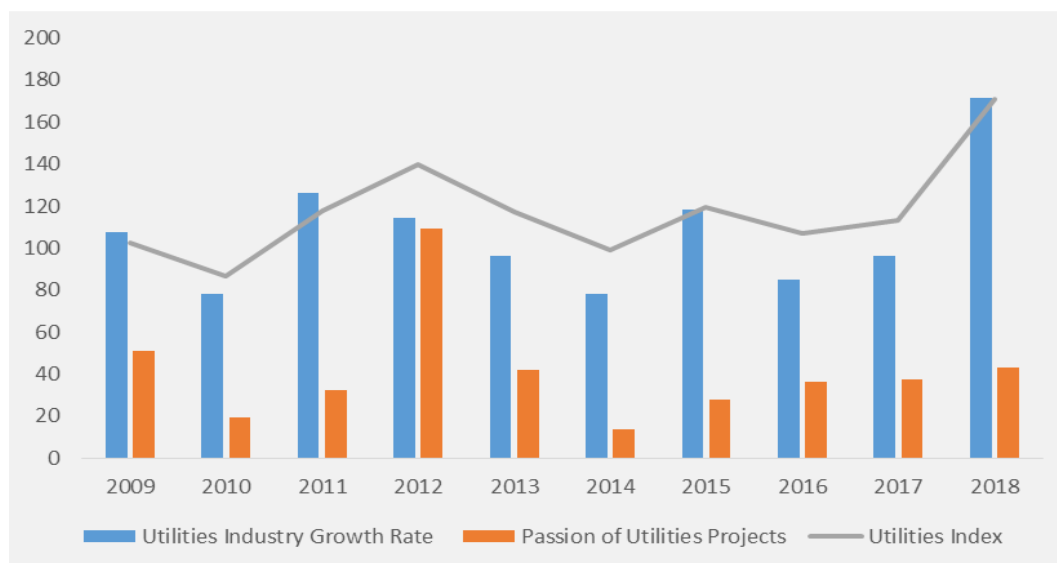


Fig3.13 The Belt and Road Countries Utilities Index

Seeing utilities as a guarantee of people's livelihood, B&R countries have issued policies on telecommunications and other utility sectors.

Table 3.3 Utility Development Plans of Target Countries

Country	Category	Development Plan
Brazil	Telecommunications	1. Invest BRL 1.85 billion (or roughly USD 529 million) by 2019 to ensure 70% of the towns (the current ratio is 53%) are covered by the fiber optic network, and 95% of the population can access the broadband network. 2. Build six submarine cables which are connected to Europe, Africa and the US; 3. Build broadband and wireless networks and multimedia centers at some 30,000 urban and rural public schools.
Malaysia	Telecommunications	Step up construction of high-speed broadband network.
India	Water supply	The water supply and health authorities will invest RUP 3 trillion to connect 50% of the rural population with tap water.
	Telecommunications	The telecommunications authority will invest RUP 9 trillion to cover 70% of the rural areas with telephone services.
Mongolia	Communication	1. Build full-fledged communication networks/Internet; 2. Ensure 95% of the country and its citizens are covered by fixed and mobile communication networks by 2021.
Czech	Telecommunications	Offer 30Mb/s+ Internet to various towns.
Poland	Telecommunications	By the end of 2020, ensure 30Mb/s+ connection across the board and 100Mb/s+ connection for 50% of the households.
Iran	Telecommunications	Extend the fiber optic network by 12,000km.

Source: Overseas Investment Cooperation Country (Region) Guide by MOFCOM

In recent years, most B&R countries have been relaxing control over the telecommunication market. With the privatization of government functions come the constant increase in telecommunications facilities and subscribers and the influx of international money and cross-

border operators like China Mobile, Movistar, Telkom Indonesia, and Orange.

The Philippines, Poland, Malaysia, Israel and Qatar boast a wide-covering, ever-expanding mobile network. Most B&R countries have made a point of investing in fixed lines, mobile data transmission services and communication networks, yet some are stubbornly raising barriers to communication market entrants. For instance, India, Indonesia, Turkey and Israel have imposed cap on equity holding by foreign telecommunications investors. Such countries are characterized by high market access threshold and complicated application process.

The increasing awareness of sustainable development is seen ever more clearly in the water treatment sector of B&R countries. From 2007 to 2017, the EU granted over EUR 400 million for Egypt' s water treatment projects; the Egyptian government also plans to invest USD 4 billion in the construction and maintenance of sewage plants. Turkey has injected RMB 446 million in building a sewage plant which can handle the wastewater produced by 2 million residents each day. Angola has seen the completion of two sewage plants in Baía Farta and Lobita, as part of the Benguela RED project. India, Czech and Qatar focus on the equipment and technology for biological sewage treatment. Czech' s newly-developed R-AN-D-N technology, for instance, solves the long-standing problem of inadequate nitrification. The environment-friendly solution has so far found wide application.

IV. BRIDI Analysis for Typical B&R Countries

The research team will go on to prepare The Belt and Road Infrastructure Development Index Country Reports (hereinafter referred to as the “Country Reports”). Based on country-specific analysis of the Index, outlook, and industrial characteristics, we will offer suggestions, identify risks and recommend hotspots. The Country Reports will be successively published in the second half of 2018. They will be available for download at the BRIDI Information Service Platform (www.bridi-research.com).

In this Report, we will analyze the Index, factors and hotspots of six typical countries³ (Indonesia, Pakistan, Brazil, Turkey, Kazakhstan and Iran), hoping to provide reference for cross-border infrastructure construction and investment.

1 Indonesia

a) Index

Indonesia maintains its lead among B&R countries with a BRIDI score of 158.2. The scores of development potential and development trend have further picked up, and that of development environment somewhat declined. The ranks of development environment and development potential have remained unchanged, and that of development trend gone up one spot. Generally, the country stands far ahead especially in investment environment.

Table 4.1 Indonesia National Index and Sub-index of Infrastructure Development and Ranking Change

Indonesia	2017		2018		Ranking Change
	Index	Ranking	Index	Ranking	
Infrastructure Development index	164.5	1/71	158.2	1/71	Stable
Development Environment Sub-index	152.7	4/71	150.1	4/71	Stable
Development Potential Sub-index	150.8	4/71	146.9	4/71	Stable
Development Trend Sub-index	182.6	2/71	187.1	1/71	↑ 1

b) Factors

The political and social climate of Indonesia has remained stable; the business climate risen to some degree; and the financial climate slightly declined, which is imputed to the mounting national debt risks incurred by weak currency, as World Bank report shows. In 2017, the amount USD 1 could buy in IDR rose from 13,308 to 14,286. The weak currency is also an outgrowth of domestic politics.

3.Indonesia is the highest-scoring country and Brazil the highest-scoring Portuguese-speaking country. The scores of Pakistan, Turkey and Kazakhstan are soaring, while that of Iran is plummeting.

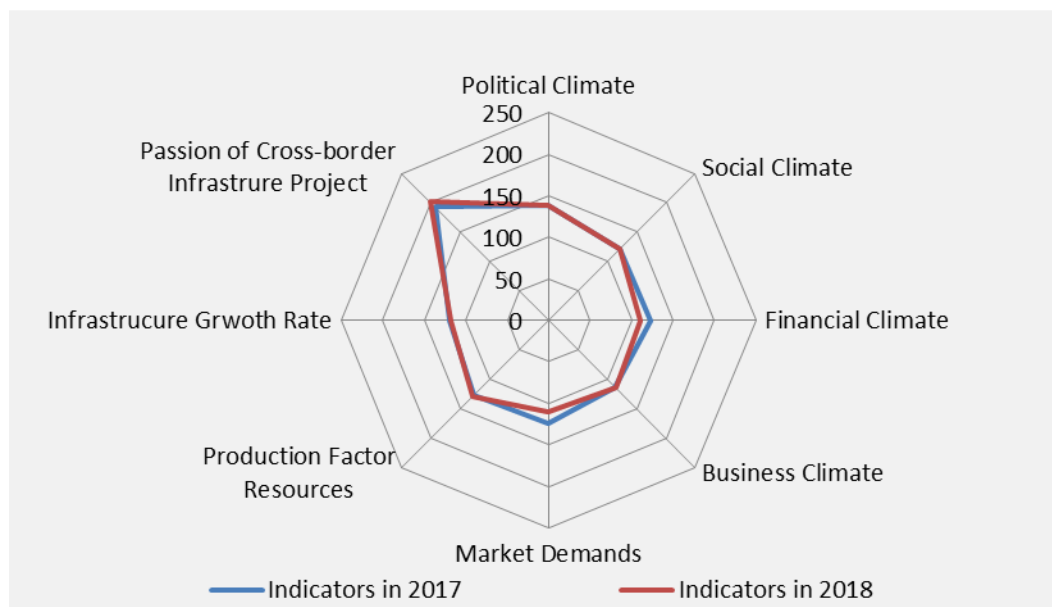


Fig. 4.1 Secondary Indicators of Indonesia Infrastructure Development Index

The slight rise in development trend comes from the subtly growing passion for infrastructure projects. Domestic infrastructure industries are boosted by a succession of newly signed memoranda, including the Indonesia-Korea MOU on projects worth USD 1.9 billion, and the Indonesia-China MOU on jointly developing the Regional Comprehensive Economic Corridor, on building the Jenelata Dam, and on designing the Riam Kiwa Reservoir.

c) Hotspots

Building and transport stand out among Indonesia's infrastructure industries.

In 2017, the output of Indonesia's building sectors rose 9.35% to USD 50.3 billion, and the value of new contracts (e.g. Kupang Cement Plant and Balongan Refinery) registered USD 41.4 billion.

The output of Indonesia's transport sectors rose 9.80% to USD 34.9 billion, and new contract value registered USD 15.3 billion. According to the National Medium Term Development Plan 2015-2019, the Indonesian government will build 2,650km of highways and 1,000km of expressways, and repair 46,770km of highways; it will also step up construction of support infrastructure like the Kuala Tanjung International Hub Port and the Kuala Nama International Airport.

In short, the research team believes the great potential of Indonesia's building and transport deserves attention from investors.

2 Pakistan

a) Index

Pakistan scores 137.1 this year. Its BRIDI rank among B&R countries grows by 11 spots to No.3. The scores of development environment, development potential and development trend have all picked up. The rank of development environment has gone up 11 spots, that of development potential remained unchanged, and that of development trend gone down 1 spot.

Generally, the country stands ahead especially in development environment.

Table 4.2 Pakistani National Index and Sub-index of Infrastructure Development and Ranking Change

Pakistan	2017		2018		Ranking Change
	Index	Ranking	Index	Ranking	
Infrastructure Development index	129.4	14/71	137.1	3/71	↑ 11
Development Environment Sub-index	115.7	28/71	128.2	17/71	↑ 11
Development Potential Sub-index	125.3	15/71	122.0	15/71	Stable
Development Trend Sub-index	142.3	13/71	148.4	14/71	↓ 1

b) Factors

The business, financial and social climate of Pakistan has remained stable; and the political climate risen to some degree, which is mainly attributed to the significantly improved performance of industrial openness, policy continuity, and infrastructure strategic clarity. Published on Dec. 18th, 2017, the Long Term Plan for China-Pakistan Economic Corridor (2017-2030) defines the key cooperation areas as connectivity, energy related fields, trade and industrial parks, agricultural development and poverty alleviation, tourism, people's livelihood and non-governmental exchanges, and finance. The Corridor is an epitome of bilateral strategic partnership. It has put Pakistan's economy on a fast track and significantly improved the development environment sub-index.

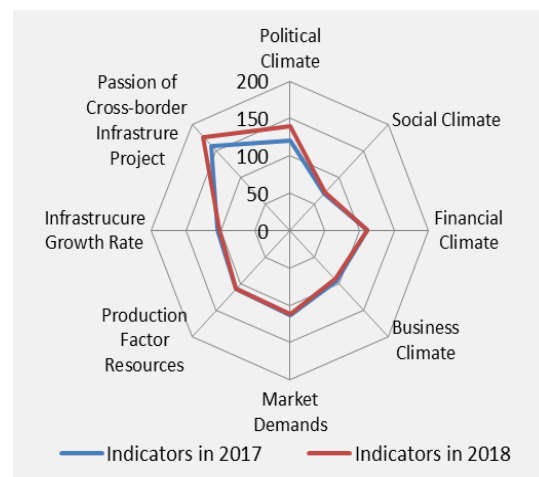


Fig. 4.2 Secondary Indicators of Pakistan Infrastructure Development Index

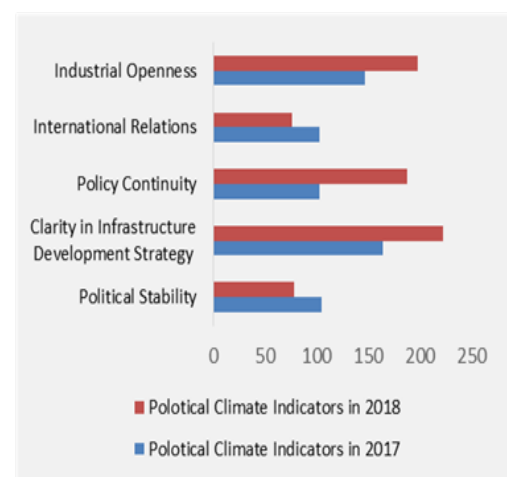


Fig.4.3 Pakistani Political Climate Indicators

c) Hotspots

Energy and building outshine Pakistan's other infrastructure industries.

In 2017, new contract value of Pakistan's energy sectors saw an astounding Y-o-y growth of 760% to USD 14.225 billion. In early 2018, the policy of subsidizing electricity and gas exporters

was going through final deliberation. The Pakistani government also considers cutting electricity and gas costs of the industrial sector while offering refunds to exporters. Such measures promise to boost energy export by 20-25%.

In 2017, new contract value of Pakistan's building sectors soared to USD 373 million. Among the newly signed projects, the Labor Welfare Complex Multan, China Special Economic Zone and Bostan Industrial Zone have driven domestic building industry and local employment, setting the stage for the deepening of cross-border infrastructure cooperation. As Arif Yousuf Jeewa, Chairman of the Association of Builders and Developers of Pakistan, put it, building industry has a vital bearing on national economy. Since Pakistan needs 800,000 new houses each year, it is imperative to lay down development plans for the industry.

In short, the research team believes infrastructure contractors and investors should keep tabs on Pakistan's energy and building sectors.

3 Brazil

a) Index

Brazil scores 133.8 this year. Its BRIDI rank among B&R countries grows by 3 spots to No.6. The scores of development environment and development trend have somewhat declined, and that of development potential slightly picked up. The rank of development environment has gone up one spot, and those of development potential and development trend remained unchanged. Generally, the country is more attractive to investors than its peers.

Table 4.3 Brazil National Index and Sub-index of Infrastructure Development and Ranking Change

Brazil	2017		2018		Ranking Change
	Index	Ranking	Index	Ranking	
Infrastructure Development index	135.2	9/71	133.8	6/71	↑ 3
Development Environment Sub-index	83.8	58/71	83.1	57/71	↑ 1
Development Potential Sub-index	153.2	3/71	153.9	3/71	Stable
Development Trend Sub-index	130.3	7/71	129.7	7/71	Stable

b) Factors

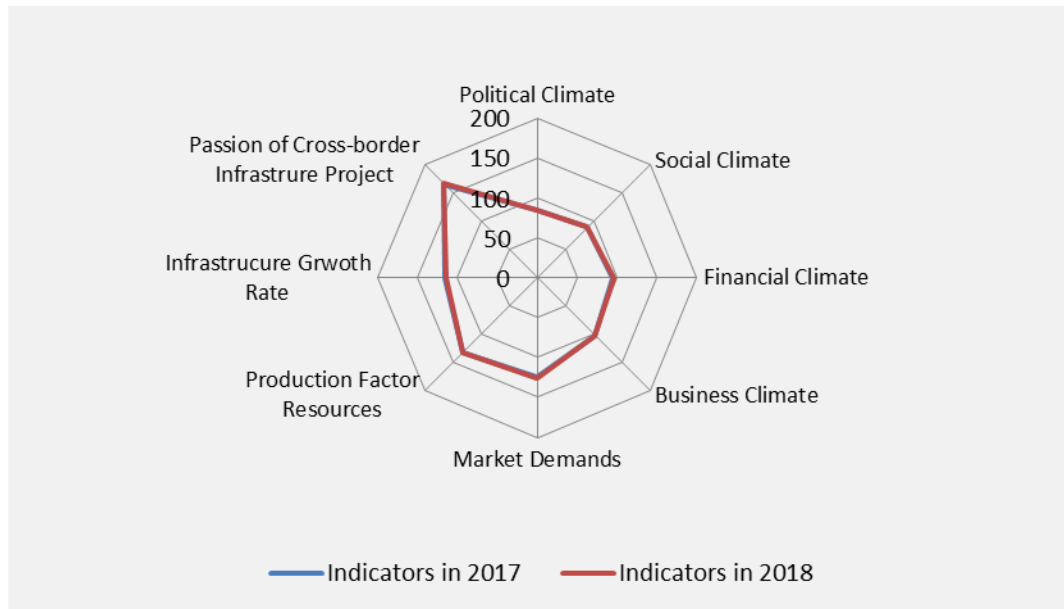
The business and political climate of Brazil has remained stable; the financial climate slightly picked up, thanks to higher stability of commodity prices; and the social climate declined, which is mainly imputed to the post-Olympic deterioration of social order. According to data from the Brazilian Institute of Geography and Statistics (IBGE), Brazilian inflation plummeted from 6.29% to 2.95% in 2017, the lowest in the past 19 years, which means currency devaluation and price hike has been brought under control. And that is conducive to the implementation of cross-border infrastructure projects and long-term industrial development.

The rise in development potential is mainly attributed to the increasing market demands, economic growth rate and scale. IBGE data shows that Brazilian economy picked up 1% in 2017

after two years' decline (3.5% in 2015 and 3.6% in 2016). Furthermore, the World Bank's Global Economic Prospects has projected a 2% growth in 2018 and a 2.3% growth in 2019.

The decline in development trend is mainly imputed to project slowdown. As Brazil tightens belt, a large number of key transport projects grind to a halt. In 2017, growth of Brazil's transport sectors shrank significantly. Money problems have suspended the Guaíba Bridge in the State of Rio Grande do Sul, a project worth BRL 680 million (or USD 210 million), and postponed the BR-101 Highway (Bahia Section) expansion project, which was scheduled to break ground in 2014.

Fig. 4.4 Secondary Indicators of Brazil Infrastructure Development Index



c) Hotspots

Energy is the main driver of Brazil's infrastructure. In 2018, the energy index rises sharply to 123.4, thanks to the burgeoning renewables sector. Brazil is the second Latin American country to cross the 1GW mark of installed PV capacity after Chile. According to data from the Brazilian Solar Association, in 2017 Brazil reached a cumulative installed solar power of around 1,099.6MW, of which 935.3MW was represented by large-scale solar plants, and 164.3MW by distributed generation PV power generators (up to 5 MW). It is noteworthy that at the end of 2016, large-scale PV had only 24MW of installed capacity. This means that in 2017 alone, around 910MW of newly installed PV capacity was brought online. In the coming six years, Brazil's energy sectors promise to attract investment of USD 8.2 billion.

In short, the research team believes infrastructure demand will remain high in Brazil's renewables sector.

4 Turkey

a) Index

Turkey scores 131.3 this year. Its BRIDI rank among B&R countries grows by 11 spots to No.8.

The scores of development environment and development trend have significantly picked up, and that of development potential somewhat declined. The rank of development environment has gone up 19 spots, that of development trend gone up 9 spots, and that of development potential remained unchanged. Generally, the country stands ahead thanks to a better environment and feel-good trend.

Table 4.4 Turkey National Index and Sub-index of Infrastructure Development and Ranking Change

Turkey	2017		2018		Ranking change
	Index	Ranking	Index	Ranking	
Infrastructure Development Index	123.6	19/71	131.3	8/71	↑ 11
Development Environment Sub-index	70.4	62/71	100.9	43/71	↑ 19
Development Potential Sub-index	143.3	6/71	141.5	6/71	Stable
Development Trend Sub-index	149.1	12/71	182.7	3/71	↑ 9

b) Factors

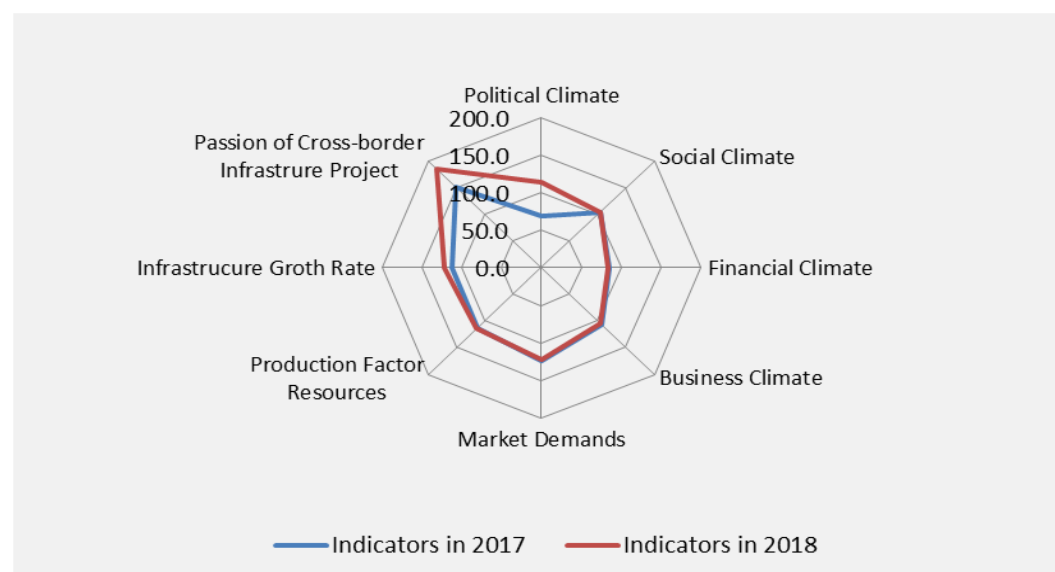


Fig. 4.5 Secondary Indicators of Turkey Infrastructure Development Index

The business, financial and social climate of Turkey has remained stable; and the political climate risen sharply. The improved social climate, in particular, is attributed to higher political stability and better foreign relations. As the repercussions of the 2016 coup attempt are fading away, Turkish society is getting back to normal.

The soaring development trend index is attributed to the increase in growth rate and passion for infrastructure projects. In 2017, new contract value skyrocketed 500% to USD 27.2 billion, which speaks of how the infrastructure market is recognized by international contractors and

investors.

c) Hotspots

Among B&R countries, Turkey ranks No.5 in transport (140.2) and No.3 in energy (159.0). These two industries are the pillars of its infrastructure.

Turkey's transport enjoys a sustainable future. The Phase I project of Istanbul New Airport will kick off in October 2018; after completion, it will be able to handle 90 million passengers each year. The entire airport is set to be complete by 2028, with an annual passenger handling capacity of 200 million. The Çanakkale Bridge and Malkara-Çanakkale Motorway Project over the Dardanelles has recently secured funding of EUR 2.3 billion. They are estimated to be complete by 2023.

Renewables will prop up Turkey's energy sectors. According to the electricity development plan of the Turkish government, the total installed capacity will hit 125GW by 2023, of which renewables will account for 30%. Such an ambitious goal is hastening the launch of the 4.8GW Akkuyu Nuclear Power Plant in Mersin Province. Its first nuclear unit is projected to come online in 2023, and the rest in 2026. After its operation, the plant will meet 10% of domestic energy demand.

In short, the research team believes Turkey's transport and energy sectors will remain robust in the near future.

5 Kazakhstan

a) Index

Kazakhstan scores 115.1 this year. Its BRIDI rank among B&R countries grows by 15 spots to No.18. The score of development environment has remained stable, that of development potential somewhat declined, and that of development trend substantially picked up. The rank of development environment has gone up 2 spots, yet still stays low; that of development potential somewhat declined; and that of development trend amazingly gone up from No.30 to No.16. Generally, Kazakhstan has moved up fast in ranking, yet infrastructure growth in the country is still crimped by a less favorable environment.

Table 4.5 Kazakhstan National Index and Sub-index of Infrastructure Development and Ranking Change

Kazakhstan	2017		2018		Ranking change
	Index	Ranking	Index	Ranking	
Infrastructure Development Index	108.3	33/71	115.1	18/71	↑ 15
Development Environment Sub-index	86.6	56/71	86.4	54/71	↑ 2
Development Potential Sub-index	116.2	23/71	112.9	25/71	↓ 2
Development Trend Sub-index	118.7	30/71	140.0	16/71	↑ 14

b) Factors

In 2017, new contract value of Kazakhstan skyrocketed from USD 2.539 billion to USD 12 billion. The rise of BRIDI is mainly attributed to the surging passion for infrastructure projects. One of the most typical urban transport projects in Kazakhstan and Central Asia as a whole is the Astana Light Metro, with a total investment of USD 1.8 billion. Phase I of the project includes a 22.4km railway. In addition, Kazakhstan State Highway Company plans to build or upgrade 9,000km of major highways. Currently, five national highways are being upgraded, courtesy of the USD 2.6 billion export buyers' credit from The Export-Import Bank of China.

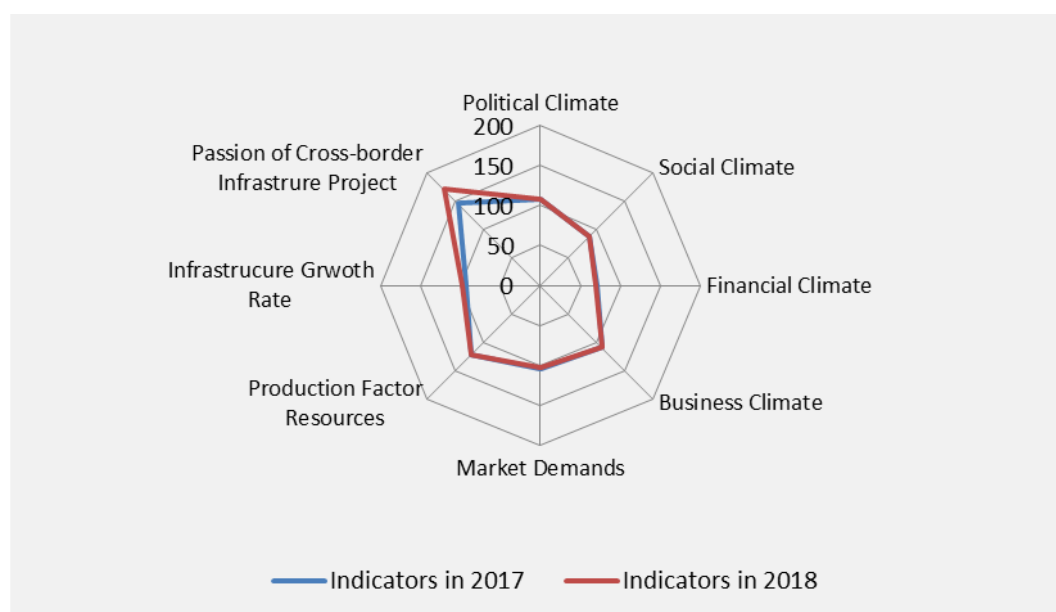


Fig. 4.6 Secondary Indicators of Kazakhstan Infrastructure Development Index

c) Hotspots

Transport is key to Kazakhstan's infrastructure. In 2018, transport index rises sharply to 101.3 from the 2017 level.

Transport figures prominently in the Strategic Plan on Development of Kazakhstan till 2020. The country plans to build 1,400km of railways, reduce the share of over-aged tracks, trains and equipment to 40%, ensure that no less than 40% of the railways are electrified, and set up no less than five independent railway companies. Kazakhstan will make sure that by 2020, 15 of its airports will meet the standards of the International Civil Aviation Organization. It will develop the aviation market competition mechanism and manage to double the transit traffic by dint of four international hub airports. By 2020, the annual cargo handling capacity of its Caspian Sea ports is expected to hit 48 million tons.

In short, the research team believes the implementation of the national infrastructure development plan will put Kazakhstan's transport on a fast track.

6 Iran

a) Index

Iran scores 110.8 this year. Its BRIDI rank among B&R countries drops by 18 spots to No.23. The scores of development environment, development potential and development trend have all declined. The rank of development environment has fallen drastically from No.15 to No.41, that of development potential gone down 1 spot, and that of development trend gone down 8 spots. Generally, environmental uncertainties have taken their toll on infrastructure industries of the middle-ranking country.

Table 4.6: Iran Index and Sub-index of Infrastructure Development and Ranking Change

Iran	2017		2018		Ranking Change
	Index	Ranking	Index	Ranking	
Infrastructure Development Index	144.6	5/71	110.8	23/71	↓ 18
Development Environment Sub-index	129.2	15/71	100.6	41/71	↓ 26
Development Potential Sub-index	135.4	8/71	130.3	9/71	↓ 1
Development Trend Sub-index	162.4	4/71	149.8	12/71	↓ 8

b) Factors

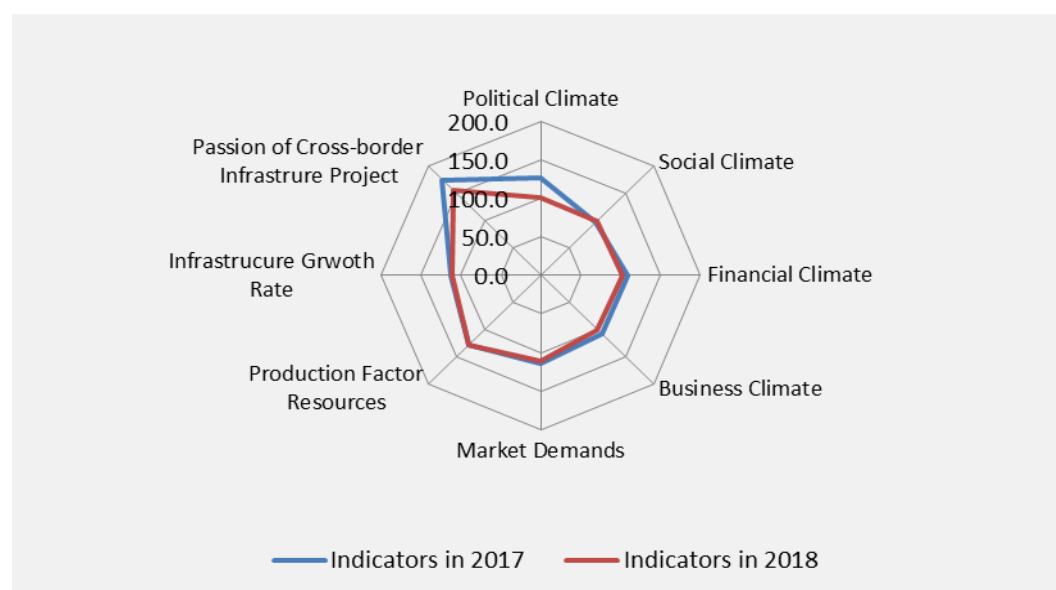


Fig. 4.7 Secondary Indicators of Iran Infrastructure Development Index

The business, financial and political climate of Iran has declined, and the social climate has remained stable. Among the freefalling tertiary indicators are foreign relations and fiscal power. In May 2018, American President Donald Trump scrapped the Iran nuclear deal and resumed sanctions for doing business with Iran. As a result, many countries have suspended loans to Iran.

That will further dent Iran' s foreign relations and fiscal power.

When it comes to development potential, the market demands and factor resources of Iran have remained unchanged. In terms of development trend, the growth rate and scale has remained unchanged, and the passion for infrastructure projects declined. In 2018, the value of new cross-border infrastructure contracts registers USD 4.9 billion, down 67% from the 2017 level of USD 14.85 billion; the greatest drop comes from energy sectors. Considering possible sanctions in the long run, even the existing projects will struggle to stay afloat.

c) Hotspots

Energy is the prime mover in Iran's infrastructure development. In 2018, Iran ranks No.7 among B&R countries in energy (122.7). Last year, Norway's Saga Energy signed a EUR 2.5 billion deal with Iran's state-owned Amin Energy to build 2GW solar power plants in the coming five years. Danish companies are ready to invest USD 1 billion in renewable energy projects in Iran. The UK's Quercus plans to deliver 600MW of solar power in Iran at a cost of EUR 500 million.

In short, the research team believes the resumed sanctions are a political factor to be reckoned with. That said, keeping an eye on Iran's energy sectors will pay off for international contractors and investors.

V. Suggestions

We suggest the governments, financial institutions, contractors and investors take full account of market trends along with their own characteristics and strengths, so as to seize opportunities and deepen win-win cooperation.

1 Top-down design and policy coordination are needed for governments to deepen infrastructure cooperation.

The B&R initiative has been echoed and supported by an increasing number of countries and international organizations and thus become a global consensus. In 2018, the political climate of B&R countries is improving across the board, yet much remains to be done in terms of infrastructure strategic clarity and industrial openness. Governments of all countries are suggested to play a great role in planning and guiding infrastructure construction. They should ramp up policy coordination and top-down design, clarifying infrastructure development goals and cooperation frameworks for the reference of international financial institutions, contractors and investors. They should properly lower the market access threshold, ameliorating the environment for international cooperation on key connectivity projects, and bringing the benefits of cross-border infrastructure construction to a greater population.

2 Strengthened innovation and green finance are needed for financial institutions to guide sustainable development of cross-border infrastructure projects.

Finance is a key factor in international infrastructure construction. In 2018, the financial climate of B&R countries turns for the better, yet bottlenecks still exist in global markets. Multilateral financial institutions and commercial banks should continue to develop new products for the sake of building a green, long-term mechanism and a diversified system for financing. They should strive to issue green bonds and launch green funds in B&R countries, constantly bankrolling environment-friendly cross-border building, energy and transport projects. Bilateral currency swap will help reduce the costs of international contractors and investors, while payment/settlement system and inclusive finance are conducive to the opening and connectivity of financial markets.

3 Companies need to align business strategies with market trends

As the powerhouse of international infrastructure construction, companies need to identify market trends, sharpen their edge and pursue sustainable development through strategy making, risk control, innovation and compliance.

a) Industry- and region-specific strategies

To tap into the complex and changeable B&R markets, enterprises should adjust their

strategies to different industries and regions. International traffic arteries bear watching. Demand for renewables and nuclear power is constantly growing. Emerging building markets like Southeast Asia, South Asia, Central Asia and the Middle East are on a tear. Telecommunications and water treatment have shown great potential, thanks to technical innovation and fiscal support.

b) Risk identification and crisis handling on geo-political and sovereign credit risks

The sovereign debt insolvency and credit risks of B&R countries should not be neglected. International contractors and investors are suggested to get acquainted with local laws and customs before project planning. For each project, they should make strategic evaluation on countries and geo-political risks as well as business, financial and legal risks, so as to enhance risk awareness and crisis handling capacity. They should keep a weather eye on sovereign rating changes, trying to prevent profit loss due to local currency devaluation. They should also develop a whole-process overseas security risk management system based on advice and support from professional insurance agencies.

c) New growth engines and new business models

Project investment and financing, integrated construction and operation, and cross-border cooperation will emerge as the new growth engines for international engineering. An increasing number of foreign governments and owners have required engineering companies to: evolve from contractors to developers through effective use of funds from all channels; provide integrated services which cover planning, design, consulting, operation, maintenance, management and other links of the industry chain; and shift their focus from single-project construction to comprehensive economic development. Business transition and upgrading will be the “new normal” in the long run. International contractors and investors should make flexible choices of business models based on their capabilities. Given the ever-growing market complexity, they may forge strategic alliances on the principle of shared efforts, benefits and risks, in an effort to reduce market risks and rev up infrastructure industries.

d) Compliance with international standards and local requirements

Compliance is a defining factor for corporate sustainability. As the international infrastructure industries have been maturing in recent years, a new competitive landscape is over the horizon. The ability to compete in line with international practices and standards, local requirements and contractual rules matters not only to the enterprises themselves, but also to local markets. In such a context, the enterprises should beef up compliance management, stay in closer touch with the host governments, civil societies and business partners, integrate into the communities and perform their social responsibilities.

Appendix I: About the Index

To press ahead with the Initiative, offer supportive information for Chinese companies as well as international investors, contractors and operators to make decisions on cross-border infrastructure projects, and enable all related parties to understand trends, discover opportunities and evade risks, China International Contractors Association (hereinafter referred to as “CHINCA”) has joined hands with Dagong Global Credit Rating Group (hereinafter referred to as “Dagong Global”) and developed “The Belt and Road Infrastructure Development Index” (hereinafter referred to as “Development Index”, “the Index” or “BRIDI”).

Upon repeated studies over other existing index models and factors in relation to international infrastructure development, our research team has defined the scope of BRIDI and built our own research model.

1 BRIDI's meaning and scope

“Infrastructure” refers generally to economic projects that can directly or indirectly improve output or productivity⁴. In this research, infrastructure facilities are broken down into four major categories, namely, transportation, energy, utility service and buildings, with reference to the classification of the World Bank and Business Monitor International (BMI). Here, the transportation facilities include roads, railways, airports and ports, among others; the energy mainly refers to oil & gas and electricity; the utility service is provided through water conservancy projects and communication networks; and buildings are for civil and industrial & commercial purposes.

The current research is angled towards infrastructure development in target countries, in a sense of assessing how far it can go in the future rather than describing how much it has achieved up to now. BRIDI, therefore, is to identify the potential of a country to develop infrastructure facilities in the next two or three years, based on an analysis of some major factors that may influence such development in that country. In addition to country-specific development indexes which are at the foundation and heart of this research, we have also calculated and analyzed the gross BRIDI and some sub-indexes.

Excluding China, 63 B&R countries⁵ are involved in this research. We have also worked over eight Portuguese-speaking countries to support the forthcoming International Infrastructure Investment and Construction Forum in Macao, which is a cooperation platform for the Portuguese-speaking market. The market is highly complementary to B&R in resources and technology; their cooperation in transport, electricity and petrochemicals has made initial progress and will go a long way. Therefore, altogether 71 countries and regions (hereinafter referred to as “B&R countries”) are chosen for the 2018 BRIDI research. As more and more nations are involved in the Initiative, a wider spectrum of countries will be included in BRIDI in the future.

4. Encyclopedia of Economics, 1982, McGraw-Hill book Company.

5. Though also along the B&R, Palestine and Syria are not included in this Index research due to a severe lack of data.

2018 BRIDI Research	
63 B&R countries	Mongolia, Singapore, Malaysia, Indonesia, Myanmar, Thailand, Laos, Cambodia, Vietnam, Brunei, Philippines, Iran, Iraq, Turkey, Jordan, Lebanon, Israel, Saudi Arabia, Yemen, Oman, UAE, Qatar, Kuwait, Bahrain, Greece, Cyprus, Egypt, Kazakhstan, Uzbekistan, Turkmenistan, Tajikistan, Kyrgyzstan, India, Pakistan, Bangladesh, Afghanistan, Sri Lanka, Maldives, Nepal, Bhutan, Poland, Lithuania, Estonia, Latvia, Czech, Slovakia, Hungary, Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Serbia, Albania, Romania, Bulgaria, Macedonia, Russia, Ukraine, Belarus, Georgia, Azerbaijan, Armenia, Moldova
Portuguese-speaking countries	Angola, Brazil, Cape Verde, Guinea-Bissau, Mozambique, Portugal, São Tomé and Príncipe, East Timor

2 BRIDI model

What affects the infrastructure prospects is not limited to external factors, but also includes internal dynamics and industry trends. After comparing and analyzing various factors, we have built the BRIDI model based on the three calculated sub-indexes of development environment, development potential and development trend, which further include eight secondary indicators and 33 tertiary indicators.

a) Development environment is the No.1 factor that may affect cross-border infrastructure development and a major source of risks associated with actual cross-border infrastructure investment or development.

The sub-index of development environment encompasses 4 secondary indicators in political, social, financial and business dimensions. The political climate is associated with political stability, infrastructure strategic clarity, policy continuity, international relations, industrial openness and other indicators. The social climate refers to public security, culture and other social elements that may secure or hinder smooth progress of infrastructure projects. The financial climate looks into the sustainability of liquid capital and the difficulty in capital recovery for cross-border infrastructure projects, and is reflected through exchange rates, commodity prices, availability of capital programs, national debt risks and other indicators. The business climate refers to any factors that may influence the business efficiency of cross-border contractors and investors, including, among other indicators, the coverage of economic laws, administrative efficiency, ease of doing business and taxation burdens.

b) Development potential measures any long-term forces that drive infrastructure development in a country.

The sub-index of development potential consists of two secondary indicators: market demands and factor resources. The market demands indicator is defined by the domestic per capita infrastructure ownership and the needs for infrastructure facilities to align with the current economic development and international communications. The factor resources indicator looks into the availability of lands, raw materials, labor forces, funds and other factor resources for cross-border infrastructure projects.

c) Development trend reflects the run of infrastructure development and implies where the infrastructure industry will head towards in the short term.

The “development trend” sub-index is composed of 2 secondary indicators: infrastructure growth rate and the passion for cross-border infrastructure projects. The infrastructure growth rate is measured by the annual output of infrastructure-related subsectors and the growth rate of industrial investment in a country. The passion for cross-border infrastructure projects means to which degree an infrastructure market is favored by overseas contractors. It can be explained by the number and value of newly signed overseas infrastructure contracts.

BRIDI is an annual release and is calculated through the index model based on data concerning all indicators from the previous year. In 2018, in the run-up to the second release, we have gone one step further and collected data from 2007 to 2017, so as to gain an accurate insight into the trend and history of infrastructure development. We have set the average of all indicators in 2008 as the base value, and derived from the index model the matrix of infrastructure indexes for 71 countries in 2009-2018. With the country-specific development indexes at hand, we are able to work out the B&R Country Infrastructure Development General Index.

3 BRIDI's characteristics

Given its concept and calculation results, the BRIDI reveals the following characteristics:

a) Both lateral comparison and vertical comparison are conducted.

for a comprehensive view of the infrastructure development among B&R countries. The vertical comparison between BRIDIs of the last few years reveals the general trend of infrastructure development along the route; while the lateral comparison between B&R countries helps rank specific regions and countries by infrastructure development.

b) Both internal and external factors are studied.

for a multi-level view of the elements that may influence B&R infrastructure development. The aim is to identify the internal and external driving forces and risks as well as the opportunities and restrictions of each country for infrastructure development through an analysis of its environment, potential and trend.

c) Both the status quo and future trend are analyzed.

for a forward-looking understanding of the opportunities and risks facing B&R countries in developing infrastructure facilities. An investigation into, among others, the status quo, driving forces and growth rates of the infrastructure industry in related countries will reveal future prospects and enable all parties to the overseas infrastructure projects to make corresponding plans and strategies.

Appendix II: BRIDI Country Rankings⁶

Table 1 B&R Country Infrastructure Development General Index

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
General index	103	98	108	110	109	111	113	105	113	124

Table 2 B&R Country Infrastructure Development Index

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Indonesia	138	140	153	151	148	147	143	151	164	158
Singapore	147	141	147	148	151	151	152	135	140	142
Pakistan	114	111	114	118	120	118	127	134	129	137
Russia	144	122	155	159	147	143	149	136	146	136
Vietnam	138	135	138	140	143	151	148	150	154	136
Poland	111	120	132	131	120	125	138	125	124	134
Turkey	126	112	137	132	125	132	132	126	124	131
Malaysia	128	118	128	136	130	131	137	131	134	131
India	142	138	147	155	139	142	144	142	145	130
Qatar	131	125	131	132	129	142	140	128	135	129
UAE	133	130	131	131	113	136	120	137	136	129
Philippines	111	116	122	118	128	133	125	125	131	127
Czech	126	109	141	125	125	130	133	125	129	126
Saudi Arabia	139	138	142	149	149	147	152	142	142	124
Romania	134	94	108	127	117	122	126	115	124	124
Thailand	118	122	121	126	133	129	118	129	130	118
Kazakhstan	114	106	120	119	125	121	120	115	108	115
Cambodia	99	102	108	106	122	111	113	109	121	115
Bahrain	108	109	103	112	112	108	109	105	113	114
Kuwait	111	106	116	125	125	117	127	120	127	113
Iran	136	132	140	143	133	135	133	133	145	111
Oman	98	106	114	113	128	113	112	118	105	111
Laos	90	96	103	100	113	105	104	108	102	110
Georgia	82	88	90	92	83	105	97	91	103	110
Egypt	111	117	116	113	119	113	125	118	123	110

6.This index was officially announced in 2017. The statistics between 2009 and 2016 were calculated based on compiled data and were first published in 2017.

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bangladesh	110	107	116	111	111	130	110	119	121	110
Maldives	87	83	87	84	87	89	93	94	97	108
Estonia	77	65	84	99	105	87	82	78	94	108
Israel	95	103	121	122	93	118	121	120	116	107
Bulgaria	98	108	95	106	109	100	109	98	105	107
Greece	110	87	92	94	97	92	101	96	112	105
Myanmar	110	114	118	116	120	114	116	116	121	103
Hungary	103	80	95	102	94	94	92	84	109	102
Kyrgyzstan	94	83	84	91	97	100	91	90	90	101
Bosnia and Herzegovina	73	72	74	75	74	89	94	69	89	99
Uzbekistan	108	97	104	104	112	113	103	104	109	98
Jordan	103	102	118	97	87	114	116	116	120	98
Slovenia	107	79	80	97	104	85	87	101	106	97
Belarus	107	83	112	103	92	111	102	96	90	96
Albania	111	90	106	96	97	119	98	94	100	96
Brunei	85	89	103	96	89	101	90	94	102	94
Macedonia	64	64	70	69	72	73	88	76	86	93
Slovakia	93	104	93	103	90	107	108	103	112	93
Sri Lanka	103	107	86	105	94	101	112	97	100	92
Croatia	88	81	71	94	78	99	104	94	105	91
Turkmenistan	106	99	115	111	109	110	117	98	111	90
Serbia	85	87	92	106	92	105	102	101	100	89
Cape Verde	85	85	85	80	86	83	89	78	94	88
Nepal	87	89	97	96	99	91	98	96	105	86
Afghanistan	78	101	89	88	84	98	79	76	73	85
Mongolia	95	88	97	101	102	103	96	104	100	85
Ukraine	107	88	122	112	107	97	78	85	94	84
Latvia	72	67	69	78	80	79	94	79	102	83
Tajikistan	96	86	89	92	95	98	90	92	87	83
Lithuania	79	88	87	78	81	90	98	91	103	82
Azerbaijan	101	112	116	109	116	107	110	91	84	81
Armenia	89	80	76	83	98	88	74	70	93	80
Iraq	79	88	100	102	111	105	107	100	97	79

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Montenegro	72	67	84	78	80	95	98	84	86	79
Cyprus	103	75	91	93	76	74	77	75	82	75
Lebanon	67	87	69	76	85	83	68	69	83	73
Bhutan	75	68	91	68	87	63	85	69	73	69
Moldova	70	70	74	75	87	79	84	84	72	61
Yemen	85	81	89	85	90	91	92	68	71	56

Table 3 Infrastructure Development Index: Portuguese-speaking Country Rankings

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Brazil	145	138	152	146	138	139	139	129	135	134
Angola	113	108	106	116	121	111	114	115	111	112
Portugal	108	102	107	107	105	92	122	92	103	108
São Tomé and Príncipe	86	104	107	85	100	105	117	126	102	101
East Timor	99	95	94	97	91	82	98	97	96	96
Cape Verde	85	85	85	80	86	83	89	78	94	88
Mozambique	88	94	93	92	101	103	106	101	97	84
Guinea-Bissau	47	54	60	65	58	56	59	54	63	69

Table 4 Development Environment Rankings (Top 15)

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Singapore	179	186	197	185	202	209	197	184	196	197
Czech	157	162	180	167	173	181	164	160	176	176
Vietnam	142	140	136	132	144	152	155	147	159	158
Indonesia	115	119	120	125	125	119	118	125	153	150
UAE	139	144	143	137	147	154	159	155	148	149
Portugal	137	126	130	136	139	120	149	128	149	149
Qatar	116	119	119	126	128	140	144	126	129	148
Slovakia	101	105	107	115	122	118	117	117	117	134
Bulgaria	108	128	123	121	136	121	129	111	131	133
Saudi Arabia	138	141	144	137	156	148	153	146	133	133
Turkmenistan	104	108	116	117	119	118	121	102	132	133
Poland	120	120	135	131	105	111	133	125	126	131
Kuwait	100	108	119	109	127	125	137	120	132	130

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Israel	118	128	127	126	119	130	135	124	134	130
Maldives	113	122	117	98	96	125	124	120	115	130

Table 5 Development Potential Rankings (Top 15)

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Russia	164	162	173	176	179	179	175	168	173	172
India	151	158	163	160	159	161	166	168	169	161
Brazil	157	153	165	163	160	162	161	151	153	154
Indonesia	143	144	150	150	151	151	150	150	151	147
Thailand	136	133	145	141	149	146	143	146	148	145
Turkey	133	132	145	145	141	143	144	143	143	142
Vietnam	128	127	129	132	133	135	136	137	138	133
Saudi Arabia	131	120	123	133	130	127	129	126	125	132
Iran	127	128	133	132	126	130	132	128	135	130
Romania	118	103	108	111	109	112	112	114	117	127
Philippines	119	117	124	122	126	128	128	128	131	127
Myanmar	122	122	126	118	120	122	124	126	126	124
Egypt	133	131	133	128	131	130	132	133	134	124
UAE	136	123	127	131	133	131	130	129	128	123
Pakistan	116	119	119	121	122	122	123	124	125	122

Table 6 Development Trend Rankings (Top 15)

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Indonesia	152	153	179	170	162	165	158	172	183	187
India	178	166	181	203	171	176	174	173	185	184
Turkey	147	125	170	162	147	162	168	156	149	183
Russia	168	120	185	190	157	145	171	151	164	178
Vietnam	142	137	145	152	148	161	151	161	161	164
Malaysia	146	130	143	151	141	145	153	152	156	163
Brazil	180	167	192	184	165	165	165	153	161	159
Thailand	118	132	114	132	126	125	122	140	135	157
Singapore	163	145	137	155	151	145	158	126	128	156
Qatar	141	132	141	144	143	165	155	140	155	153
Philippines	121	133	140	135	145	141	144	144	151	153

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Iran	143	134	148	155	147	152	143	143	162	150
Bangladesh	112	105	126	121	121	164	111	131	139	149
Pakistan	138	128	131	129	140	132	140	151	142	148
Saudi Arabia	144	149	154	168	156	159	167	151	161	147



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