

## Where are the Best FinTech Centers?

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*New research by the Institute of Financial Services Zug (IFZ) at Lucerne University of Applied Sciences (HSLU) evaluates the performance of FinTech ecosystem centers on a global scale by deriving a ranking of multiple FinTech hubs. Please reach out to the authors if you have any questions or feedback.*

The ranking is led by Singapore, with its outstanding political and legal environment. However, the technological dimension is also an important driver of Singapore's success. The political and legal framework generally seems to be the dimension that manifests the greatest differences among the 30 cities, followed by the technological, economic and social aspects. Some of the underlying indicators are specific to the FinTech vertical while some describe the environment in general. This is due to the fact that the FinTech sector is more prone to environmental factors such as politics or regulation than most other industry verticals (a full list of sources and indicators can be found below). The coverage of the ranking will be extended to additional cities in the future.

### How the Rankings are Derived

The ranking methodology is based on the PEST-approach, which includes political/legal, economic, social and technological dimensions. In the new research, 72 indicators are categorized

into one of the four PEST-dimensions according to their affiliation. Note that while the data for eight indicators has been collected on a city-level, the data for the remaining 64 indicators has been collected on a countrywide level. All indicators adopt the form of a ranking of the included regions. Since not every in-scope region of this study is incorporated in every indicator, missing values occur. These missing values are replaced by the average indicator rank of the relevant values region in the respective PEST-dimensions. In what follows, the three steps necessary to derive the overall ranking are explained. Figure 1 shows an overview of our methodology.

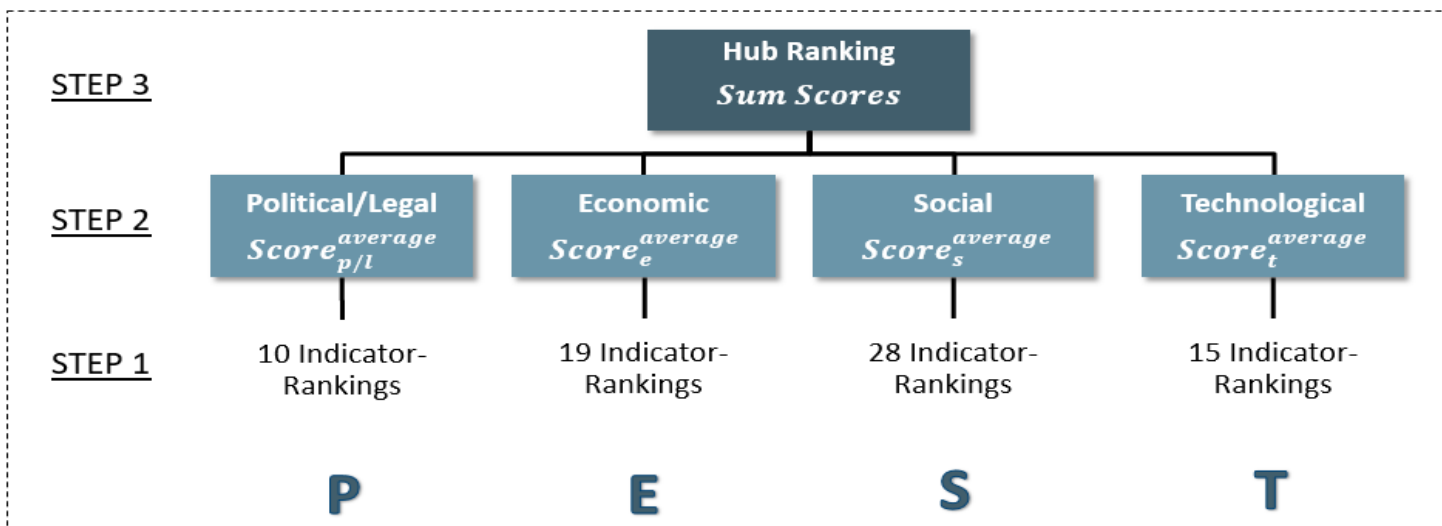
First, each indicator is transformed into a ranking of the in-scope regions based on their individual performance. Since this analysis includes 30 different cities, every indicator ends up as a ranking of the cities from 1 (worst performance) to 30 (best performance). This procedure corrects for the different number of considered regions across the original indicators.

Second, the four PEST-dimension scores of all cities are derived. This is achieved by averaging the ranks of the underlying indicators of the respective PEST-dimension for every city. As a consequence, dimensional scores again are bound between 1 and 30, with the higher the score, the better the performance. Due to this proceeding, the relative differences in the performance of the cities in the individual PEST-dimensions are retained.

Third, the overall hub ranking is created by aggregating the dimension scores for each in-scope region and sorting the resulting values in descending order. The region with the highest aggregated PEST-dimension score ranks first, the one with the lowest on the last position. Due to the derivation of the overall scores by aggregation, the four PEST-dimensions are equally weighted in the overall hub ranking.

### How Can the FinTech Rankings be used?

In assessing the most attractive centers for locating FinTech businesses, factors may be of varying importance to different entrepreneurs and start-ups. For this reason, Thomson Reuters has partnered with the IFZ research team to produce an interactive data tool which allows factor weightings to be adjusted according to individual specific criteria.



## Sources of FinTech Hub Ranking Indicators

Publisher	Factor	Source	Dimension
<b>2think now</b>	Innovation Cities	Innovation Cities Index	Technological
<b>Economist Intelligence Unit</b>	Global Cities Competitiveness	Hot spots - Benchmarking global city competitiveness	Economic
<b>Ernst &amp; Young</b>	FinTech Adoption	EY FinTech Adoption Index	Economic
<b>Hays</b>	Global Skills	Hays Global Skills Index	Social
<b>Heidrick &amp; Struggles and Economist Intelligence Unit</b>	Compulsory education quality	Heidrick & Struggles database	Social
	Demographics	Heidrick & Struggles database	Social
	Openness	Heidrick & Struggles database	Social
	Proclivity to attracting talent	Heidrick & Struggles database	Social
	Quality of labor force	Heidrick & Struggles database	Social
	Talent environment	Heidrick & Struggles database	Social
	University Education	Heidrick & Struggles database	Social
<b>Henley &amp; Partners</b>	Visa Restriction	Visa Restrictions Index	Political/Legal
<b>IMD</b>	World Talent	World Talent Report	Social
<b>University of Sydney, the Economist</b>	Global Peace Index	Global Peace Index	Political/Legal
<b>International Labour Organization</b>	Employment in knowledge-intensive services	ILOSTAT Database of Labour Statistics (2006–14)	Social
	Female Employ. Advanced Degree	ILOSTAT Annual Indicators (2009–14)	Social
<b>International Monetary Fund</b>	Domestic Credit to Private Sector	International Financial Statistics and data files and World Bank and OECD GDP estimates	Economic
	Domestic Market Scale	International Monetary Fund Database	Economic
	Foreign Direct Investment Net Inflows	International Financial Statistics and data files and World Bank and OECD GDP estimates	Economic
<b>International Telecommunication Union</b>	ICT Access	Measuring the Information Society	Technological
	ICT Use	Measuring the Information Society	Technological
	Cybersecurity	Global Cybersecurity Index (GCI)	Technological
<b>InterNations</b>	Expat Ranking	Expat Insider	Social
<b>Knight Frank</b>	Global Cities	Global Cities Report	Social
<b>KPMG</b>	Corporate Tax Rates	Corporate tax rates table	Political/Legal
<b>Numbeo</b>	Cost of Living City	Numbeo database	Social
	Local Purchasing Power Index	Numbeo database	Economic
	Quality of Life City	Numbeo database	Social
<b>OECD</b>	PISA Ranking	Programme for International Student Assessment (PISA)	Social
<b>QS Quacquarelli Symonds Ltd</b>	QS university ranking average score of top 3 universities	QS World University Ranking 2015/2016	Social
<b>Reporters without Borders</b>	Press Freedom	World Press Freedom Index	Political/Legal
<b>Tax Justice Network Limited</b>	Financial Secrecy	Financial Secrecy Index	Economic
<b>The Global Entrepreneurship and Development Institute</b>	Global Entrepreneurship Index	The Global Entrepreneurship and Development Institute website	Economic
<b>The World Bank</b>	Applied Tariff Rates	World Bank World Development Indicators database	Economic
	Cost of Redundancy Dismissal	Ease of Doing Business Index	Political/Legal
	Ease of Getting Credit	Doing Business 2016: Measuring Regulatory Quality and Efficiency	Economic
	Ease of Paying Taxes	Doing Business 2016: Measuring Regulatory Quality and Efficiency	Political/Legal
	Ease of Protecting Minority Investments	Doing Business 2016: Measuring Regulatory Quality and Efficiency	Economic

	Ease of Resolving Insolvency	Doing Business 2016: Measuring Regulatory Quality and Efficiency	Economic
	Government Effectiveness	World Governance Indicators	Political/Legal
	Logistics Performance	Logistics Performance Index	Social
	Mobile Cellular Subscription	World Bank database (Mobile cellular subscriptions (per 100 people))	Technological
	Political Stability	World Governance Indicators	Political/Legal
	Regulatory Quality	World Governance Indicators	Political/Legal
	Starting a Business	Doing Business 2016: Measuring Regulatory Quality and Efficiency	Economic
<b>Thomson Reuters</b>	Joint Venture/strategic alliance deals	Thomson One Banker Private Equity, SDC Platinum database	Economic
	Venture Capital Deals	Thomson One Banker Private Equity database; International Monetary Fund, World Economic Outlook database	Economic
<b>Transparency International</b>	Corruption Perception	Corruption Perceptions Index	Political/Legal
<b>UBS</b>	Wage Level City	Preise und Löhne	Social
<b>UNESCO Institute for Statistics</b>	Expenditure on Education	UIS online database	Social
	Government Expenditure on Education per Pupil	UIS online database	Social
	Graduates in Science & Eng.	UIS online database	Social
	Gross expenditure on R&D (GERD)	UIS online database	Technological
	Number of Students from Abroad	UIS online database	Social
	Pupil-Teacher Ratio	UIS online database	Social
	Research Talent in Business Enterprise	UIS online database	Technological
	Researchers	UIS online database	Technological
	School Life Expectancy	UIS online database	Social
	Tertiary Enrolment	UIS online database	Social
<b>United Nations</b>	High-Tech Imports	COMTRADE database; Eurostat, 'High-technology' aggregations	Technological
<b>United Nations Public Administration Network</b>	Gov. Online Services	e-Government Survey	Technological
	Online E-Participation	e-Government Survey	Technological
<b>World Economic Forum</b>	Quality of Infrastructure	Global Competitiveness Report	Social
	Human Capital	The Human Capital Report	Social
	State of Cluster Development	Executive Opinion Survey	Social
	University/Industry Research Collaboration	Executive Opinion Survey	Technological
<b>World Federation of Exchanges</b>	Market Capitalization	World Federation of Exchanges database: extracted from the World Bank's World Development Indicators database	Economic
	Total Value of Stocks Traded	World Federation of Exchanges database: extracted from the World Bank's World Development Indicators database	Economic
<b>World Intellectual Property Organization</b>	Patent families in at least 2 Offices	WIPO Statistics Database; International Monetary Fund, World Economic Outlook Database	Technological
<b>World Trade Organization</b>	ICT Services Imports	Trade in Commercial Services database	Technological
	Intellectual Property Payments	Trade in Commercial Services database	Technological
<b>Z/Yen Group</b>	Global Financial Centers	Global Financial Centers Index	Economic