



10 years ESJ
Special edition

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Submitted: 25 August 2020
Accepted: 12 September 2020
Published: 22 December 2020

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DOI: [10.19044/esj.2020.v16n37p5](https://doi.org/10.19044/esj.2020.v16n37p5)

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Cite this paper:

Subhashis, N. (2020). Do the indicators of entrepreneurial ecosystem show signs of improvement in India, Pakistan, and Bangladesh? Dynamic and static comparative studies among the three entrepreneurial ecosystems in the Indian subcontinent *European Scientific Journal, ESJ, 16(37), 5*. <https://doi.org/10.19044/esj.2020.v16n37p5>

Do the Indicators of Entrepreneurial Ecosystem Show Signs Of Improvement In India, Pakistan, And Bangladesh? Dynamic And Static Comparative Studies Among the Three Entrepreneurial Ecosystems in The Indian Subcontinent

Abstract

Research studies in the past have enunciated the status of the entrepreneurial ecosystem (EE) in India (Nandy 2018), Pakistan (Asif and Ellahi, 2016), and Bangladesh (Cho, Sultan, and Kwon, 2019). However, no study so far has focused on comparison of the dynamic (longitudinal) and the static (cross-sectional) aspects of the EE of these three countries. This paper focuses on the dynamic and static comparisons of the indicators of EE in India, Bangladesh, and Pakistan, based on the most recent survey data available from Global Entrepreneurship Monitor and World Bank. The results of this analysis show that all three countries in the Indian subcontinent have made some improvements in 2020 in most of the indicators of entrepreneurial ecosystem. Further, the results of the non-parametric hypothesis test indicate that the scores of these three countries are significantly different from that of the world's first-ranked country - New Zealand in 2020.

Keywords: Entrepreneurial Ecosystem, India, Pakistan, Bangladesh, New Zealand

Cite as:

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1. Introduction

India has the world's sixth largest GDP (Gross Domestic Product). India's GDP in 2019 was 2.88 trillion US dollars (World Bank, India, 2020). Pakistan: 0.28 trillion US dollars (World Bank, Pakistan, 2020), and Bangladesh: 0.30 trillion US Dollars (World Bank, Bangladesh, 2020).

In the ranking on the ease of "Doing Business" (Doing Business, 2020) - India was ranked at position 63, Pakistan at position 101, Bangladesh at position 168; while New Zealand was ranked at position 1. This study was based on comprehensive surveys conducted by World Bank in 192 countries. The rankings from this study is a measure of the ease of starting an enterprise in each country. It is interesting to note that New Zealand had a GDP of only 0.20 trillion US dollars in 2019 (World Bank, New Zealand, 2020) – comparable to that of Pakistan and Bangladesh.

According to World Bank (2020), India's population was 1.35 billion, Pakistan: 212 million, Bangladesh: 161 million and New Zealand: 4.9 million in 2019. On the other hand, New Zealand had a per capita Gross National Income of US \$40,820, India: US \$2,020, Pakistan: US \$1,580 and Bangladesh: US \$1,750.

Previous research documented the state of the entrepreneurial ecosystems (EE) in India (Nandy 2018), Pakistan (Asif and Ellahi, 2016), and Bangladesh (Cho, Sultan, and Kwon, 2019). No work exists in the literature that compares the characteristics of EE in the three major countries of the Indian subcontinent – India, Bangladesh, and Pakistan.

The first purpose of this research work is to compare the scores on the conditions of entrepreneurial framework indicators among India, Pakistan and Bangladesh based on the latest data from Global Entrepreneurship Monitor (GEM). The second purpose is to make a comparison of the characteristics of entrepreneurial behaviors and attitudes in India, Pakistan and Bangladesh based on the most recent data from GEM. The third purpose is to compare the dynamic change from 2019 to 2020 in the different categories of doing business in India, Pakistan and Bangladesh based on data from World Bank. The final purpose is to compare the static 2020 scores of India, Pakistan, and Bangladesh with the scores of the number-one ranked country in the world - New Zealand. This is achieved with the use of non-parametric Kruskal Wallis hypothesis test.

2. Literature Review

Ee In India

Subrahmanya (2017) stated that in India the entrepreneurial ecosystem (EE) in Bangalore (the center of IT industry in India) and in Hyderabad (the capital of Andhra Pradesh and Telangana states) had entrepreneurs and prospective entrepreneurs completely surrounded by an

outer layer. This outer layer is comprised of (i) private enterprises, (ii) education and research institutions, (iii) positive government support, (iv) venture capitalists, (v) accelerators such as business incubators or co-working spaces, and (vi) technology and business mentors (Subrahmanya,2017). The EE in these two cities was also aided by exclusive start-up promotion policy, good weather, supportive media, and supportive culture to (Subrahmanya, 2017).

Jha (2018) discussed several positive aspects of EE in India. According to Jha (2018), there are several innovative opportunities for entrepreneurs to explore in India: an educated workforce is available to be employed, and the ample availability of venture capital funding. However, Jha (2018) stated that there were also challenges to overcome in the further development of the entrepreneurial ecosystem of India.

Nandy (2018) documented that the development of the entrepreneurial ecosystem (EE) in India took a firm foothold after the election of Mr. Narendra Modi as the Prime Minister of India in 2016. Modi's government developed a business-friendly attitude towards business and took aggressive steps to expand EE in India (Nandy, 2018).

EE in Pakistan

Asif and Ellahi (2016) enunciated that Pakistan had low total early-stage entrepreneurial activity rate. These authors stated that the government of Pakistan needed to introduce better policies and programs to foster entrepreneurship. Since Pakistan is a factor-driven economy persistence of entrepreneurial businesses could generate higher growth over time. But to sustain businesses government of Pakistan needed to provide the right set of policies that facilitate entrepreneurs and attract new investors (Asif et al. 2016).

Mubarak, Fauziah Yusoff, Mubarik, Tiwari, Ganama, and Kaya (2019) determined from a thematic analysis that the entrepreneurial ecosystem (EE) in Pakistan was stagnant. Further Mubarak et al. (2019) showed that the role of government of Pakistan in fostering EE was ambivalent, unfriendly, and deficient. These authors proposed that to develop a thriving EE in Pakistan, a specific national policy for entrepreneurship should be enacted on priority and then 'one size fit approach' must be relinquished by the government of Pakistan (Mubarak et al. 2019).

Mustafa, Kakakhe and Shah (2019) pointed out that a significant positive relationship existed between entrepreneurial orientation and entrepreneurial firm's performance in Pakistan. Results from their research showed that the entrepreneurial culture significantly moderated the relationship between entrepreneurial orientation and entrepreneurial firm's performance in Pakistan. Mustafa et al. (2019) documented that government

support did not moderate the relationship between entrepreneurial orientation and the performance of entrepreneurial firms.

EE in Bangladesh

Chowdhury (2017) documented new scope and existing opportunities for the entrepreneur in Bangladesh from the government, socio-cultural perspectives, and natural deposit of raw materials. According to Chowdhury (2017) the problems of entrepreneurial ecosystem development in Bangladesh included personal, environmental- situational, judicial, economic, and political.

Cho Sultan, and Kwon (2019) showed that there was no universal or clear definition and regulation for social enterprises in Bangladesh, Social entrepreneurs faced various constraints in operating a new enterprise, These constraints included among others: lack of access to finance, poor skill development, and lack of a clear definition for the enterprise. Cho et al. (2019) stated that the entrepreneurs in Bangladesh would require the effective engagement of a wide range of activities and stakeholders, such as the government of Bangladesh.

Babua, Deyb, Rahmanc, Royd, Faridah, Alwib, and Kamala (2020) stated that strategic alliance formed by commercial, social and government organizations in Bangladesh could have potential to simultaneously achieve market-related success and develop solutions to social problems. Babua et al. (2020) determined the underlying drivers of strategic alliance would lead to value co-creation for concerned parties. Such strategic alliances facilitated emergence, engagement and evolution of social innovation that eventually would drive value co-creation in entrepreneurial ecosystem.

3. Method

The goal of this study is to compare the 2020 scores of India, Pakistan, Bangladesh and New Zealand on the ease of Doing Business (DB) in eleven categories. Based on prior research findings, we have reason to believe that the annual 2020 “Doing Business” scores of India, Pakistan, Bangladesh, and New Zealand in eleven categories will differ, Thus,

H₁: Ceteris Paribus, the annual 2020 “Doing Business” scores of India, Pakistan, Bangladesh, and New Zealand in eleven categories will differ

Parametric hypothesis tests usually assume normal distributions and iid (independent and identically distributed random variables) of annual changes (Nandy, 2014). Harwell (1988) demonstrated that using non-parametric hypothesis tests would reduce the chances of Type I error, especially when sample sizes were small. In this paper, we chose to use Kruskal-Wallis non-parametric hypothesis test, instead of the corresponding parametric ANOVA

test. Thus, we assume that the DB scores are independent of each other. This will reduce the chance of making Type I error, when comparing DB Scores. We have used 5% level of significance (risk of type I error) in conducting these hypothesis tests. The test statistic used for Kruskal-Wallis test is designated by H, where:

$$H = \frac{12}{n(n+1)} \left[\frac{\sum(R_1)^2}{n_1} + \frac{\sum(R_2)^2}{n_2} + \dots + \frac{\sum(R_k)^2}{n_k} \right] - 3(n+1),$$

with k-1 degrees of freedom (k is the number of populations)
 $\sum R_k$ = sum of the ranks of annual growth rates,
 n_k = size of sample k,
 and $n = n_1 + n_2 + \dots + n_k$

The distribution of the sample H statistic is close to that of the chi-square distribution with k-1 degrees of freedom when every sample includes at least five observations. This situation is true on our analysis. The p-value of H is calculated using the chi-square distribution with k-1 degrees of freedom.

4. Data

Longitudinal data from the Global Entrepreneurship Monitor were collected to compare the characteristics of EE in India, and Pakistan (Global Entrepreneurship Monitor (GEM) Annual Report on India 2019, and Global Entrepreneurship Monitor (GEM) Annual Report on Pakistan 2019). Data on Bangladesh came from GEM’s 2011 survey, as no survey was conducted in Bangladesh by GEM in 2019. Table 1 shows the entrepreneurial framework conditions in India (2019), Pakistan (2019) and Bangladesh (2011) as obtained from GEM. Data on Bangladesh came from GEM’s 2011 survey (Global Entrepreneurship Monitor (GEM) Annual Report on Bangladesh, 2011). The global average score for entrepreneurial framework conditions in 2019 are shown in the last column, which serves as a yardstick for fair comparison.

Table 1: Comparisons of Entrepreneurial Framework Conditions (Expert Ratings: 1= highly insufficient, 5=highly sufficient)

	India (2019)	Pakistan (2019)	Bangladesh (2011)	Global Average (2019)
Entrepreneurial Finance	3.37	2.4	2.9	2.78
Government Policies: Support and Relevance	3.46	2.26	2.97	2.7
Government Policies: Taxes and Bureaucracy	3.05	1.9	2.51	2.57
Government Entrepreneurship Programs	3.25	2.28	2.48	2.7

Entrepreneurial Education at School Stage	3.08	2.07	2.08	2.22
Entrepreneurial Education at Post School Stage	3.3	2.71	3.15	2.8
R&D Transfer	3.15	2.04	2.55	2.56
Commercial and Legal Infrastructure	3.34	2.57	3.2	3
Internal Market Dynamics	3.81	2.96	3.14	3.1
Internal Market Burdens or Entry Regulations	3.31	2.7	2.82	2.72
Physical Infrastructure	3.88	3.75	3.41	3.74
Cultural and Social Norms	3.55	2.86	3.2	3.04
Mean	3.38	2.54	2.87	2.83

Source: GEM (Global Entrepreneurship Monitor) India Annual Report (2020), GEM Pakistan Annual Report (2020) and GEM Bangladesh Annual Report (2012).

Table 1 shows that the mean entrepreneurial framework rating of India in 2019 is higher than that of the global average (3.38 versus 2.83), India's mean rating in 2019 is also higher than that of Pakistan (3.38 versus 2.54). The mean rating of Pakistan in 2019 is lower than the mean global average rating (2.54 versus 2.83). According to the experts - Pakistan's rating on "Physical Infrastructure" is slightly higher than that of the global average in 2019 (3.75 versus 3.74). In the rest of the categories, the expert ratings of Pakistan lag that of the global average. This shows that the entrepreneurial ecosystem in Pakistan has ample room to improve. India's expert ratings on all categories are slightly higher than those of the global average ratings. Although the expert ranking of India on the category of "Physical Infrastructure" is only slightly higher than global average (3.88 versus 3.74), India can work on further improvement of this aspect of its entrepreneurial ecosystem.

Based on the latest data available from GEM on Bangladesh in 2011, it is observed that the mean entrepreneurial framework rating of Bangladesh is slightly higher than the mean of global average in 2019 (2.87 versus 2.83). The expert rankings of Bangladesh in 2011 in several categories: "Entrepreneurial Finance", "Government Policies: Support and Relevance", "Entrepreneurial Education at Post School Stage", "Commercial and Legal Infrastructure", "Internal Market Dynamics", "Internal Market Burdens or Entry Regulations", and "Cultural and Social Norms" exceed the global average rankings in 2019 on the same categories. It will be interesting to

determine whether the data collected by GEM on Bangladesh beyond 2011 would show the same encouraging trend about EE in Bangladesh.

Table 2: Comparison of Entrepreneurial Behaviors and Attitudes (in terms of percentages of 19-24-year-old population surveyed)

A. Self-Perception

Categories	India (2019)	Pakistan (2019)	Bangladesh (2011)	Global Average (2019)
Perceived Opportunity Rate	83.1	62.3	64.43	53.65
Perceived Capabilities Rate	85.2	63.02	26.63	68.27
Fear of Failure Rate	62.37	54.16	72.01	41.74
Entrepreneurial Intentions Rate	33.3	27.9	24.57	23.72

B. Activity

Categories	India (2019)	Pakistan (2019)	Bangladesh (2011)	Global Average (2019)
Total Early Stage Entrepreneurial Activity	14.97	3.65	12.77	12.81
Established Business Ownership Rate	11.92	4.72	11.6	7.9
Entrepreneurial Employees Activity Rate	0.17	0.51	ND	3.02

C. Gender Equity

Categories	India (2019)	Pakistan (2019)	Bangladesh (2011)	Global Average (2019)
Female/Male Total Entrepreneurial Activity Ratio	0.75	0.3	0.21	0.71

D. Impact

Categories	India (2019)	Pakistan (2019)	Bangladesh (2011)	Global Average (2019)
High Job Creation Expectation Rate	10.64	12.48	10.26	26.54
Business Services Sector Rate	2.3	2.52	2.97	17.57

E. Societal Values

Categories	India (2019)	Pakistan (2019)	Bangladesh (2011)	Global Average (2019)
High Status to Successful Entrepreneurs Rate	92.3	87.71	100	72.92
Entrepreneurship as a Good Career Choice	89.54	80.15	73.02	65.66

Source of data: GEM (Global Entrepreneurship Monitor) India Annual Report (2020), GEM Pakistan Annual Report (2020) and GEM Bangladesh Annual Report (2012).

It is observed from table 2 that in India (2019) - the societal values towards entrepreneurship categories of: “Self-Perception”, “Activity”, “Gender Equity”, and “Societal Values” exceed that of the global average values. However, the societal values of India (2019) are lower than that of global average in the categories of: “Entrepreneurial Employees Activity Rate”, and “Impact”. Thus, India’s societal values in these categories of entrepreneurship have room to improve.

For Pakistan (2019) - the societal values towards most entrepreneurship categories of: “Self-Perception”, and “Societal Values” exceed the global average values. However, the societal values of Pakistan are lower than that of global average in the categories of: “Activity”, “Gender Equity”, and “Impact”. Thus, Pakistan’s societal values in these categories of entrepreneurship have room to improve. Further, societal values of Pakistan (2019) towards the different entrepreneurship categories are lower than that of India.

Data collected by GEM from Bangladesh in 2011 show that the societal values towards entrepreneurship categories of: “Self-Perception”, “Activity”, and “Societal Values” exceed the global average values from 2019. However, the societal values of Bangladesh (2011) are lower than that of global average (2019) in the categories of: “Activity”, “Gender Equity”,

and “Impact”. It will be interesting to determine whether the societal values towards the different entrepreneurship categories in Bangladesh in the future would show an improvement from 2011 data.

Next, longitudinal data from Doing Business (2020) were collected to compare the changes in scores of the different categories of the ease of doing business from 2019 to 2020 in India, Pakistan, Bangladesh, and New Zealand. This data set was originally obtained by World Bank by conducting surveys in respective countries. This survey shows the ease of starting entrepreneurship activity in each country.

Table 3: Rankings of India in categories on the ease of doing business (DB) and dynamic changes in DB scores between 2010 and 2020.

Categories	DB 2020 Rank (Among 192 countries)	DB 2020 Score (On a Scale of 1 to 100)	DB 2019 Score (On a Scale of 1 to 100)	Dynamic Change in DB Scores (Between 2010 and 2020)
Overall*	63	71	67.5	5.19%
Starting a business*	136	81.6	81	0.74%
Dealing with a construction permit*	27	78.7	72.1	9.15%
Getting Electricity	22	89.4	89.7	-0.33%
Registering Property	154	47.6	47.9	-0.63%
Getting Credit*	119	45	45	
Protecting Minority Investor*	23	80	80	
Paying Taxes*	115	67.6	65.4	3.36%
Trading Across Borders*	68	82.5	77.5	6.45%
Enforcing Contracts	163	41.2	41.2	
Resolving Insolvency*	52	62	40.8	51.96%

Source of data: <http://www.doingbusiness.org/data/exploreconomies/india>

The first column in Table 3 shows the rank of EE in India among 192 countries (1: highest, 192-lowest). In Table 3 - categories marked with (*) indicate the EE categories in which India has obtained an improved score in 2020 According to World Bank (2020), these categories are: “Starting a Business”, “Dealing with Construction Permits”, “Getting Credit”, “Protecting Minority Investors”, “Paying Taxes”, “Trading Across Borders”, and “Resolving Insolvency”. The highest percentage increase from 2019 to 2020 (51.96%) was in “Resolving Insolvency” Category. According to World Bank Doing Business (2020), the recovery rate is almost 72 cents to a dollar which is almost twice the average in Asia. That means if an

entrepreneur goes insolvent, the lenders recover a significant portion of their invested amount in Mumbai. This should reduce the loss to the lenders and make it easier for entrepreneurs to borrow capital. World Bank (2020) has awarded India an overall rank of 63 among 192 countries in “Doing Business” rankings (which is a measure of business regulations).

Table 4: Rankings of Pakistan in categories on the ease of doing business (DB) and dynamic changes in DB scores between 2019 and 2020.

Categories	DB2020 Rank (Among 192 countries)	DB2020 Score (On a Scale of 1 to 100)	DB2019 Score (On a Scale of 1 to 100)	Dynamic Change in DB Scores (Between 2019 and 20120)
Overall*	101	61	55.5	9.91%
Starting a Business*	72	89.3	81.9	9.04%
Dealing with Construction Permits*	112	66.5	51.9	28.13%
Getting Electricity*	123	64	43.1	48.49%
Registering Property*	151	48.6	42.8	13.55%
Getting Credit	119	45	45	
Protecting Minority Investors	28	72	72	
Paying Taxes*	161	52.9	47	12.55%
Trading Across Borders*	111	68.8	67.5	1.93%
Enforcing Contracts*	156	43.5	43.5	
Resolving Insolvency	58	59	59.9	-1.50%

Source of data: <http://www.doingbusiness.org/data/exploreeconomies/pakistan>

The first column in Table 4 shows the rank of EE in Pakistan among 192 countries (1: highest, 192: lowest). In Table 4 - categories marked with (*) indicate the EE categories in which Pakistan has obtained an improved score in 2020. It is evident that Pakistan has shown improvements in all categories, except for “Getting Credit”, “Enforcing Contracts”. and “Resolving Insolvency”. Pakistan has shown the highest degree of improvement in the category of “Getting Electricity”. World Bank (2020) has awarded a score of 5 (on a scale of 0 to 8) in “Reliability of supply and transparency of tariff index” under “Getting Electricity” in Karachi, Pakistan. The average score in South Asia in this category is only 2.7 (World Bank, 2020). World Bank (2020) has awarded Pakistan an overall

rank of 101 among 192 countries in “Doing Business” rankings (which is a measure of business regulations).

Table 5: Rankings of Bangladesh in categories on the ease of doing business (DB) and dynamic changes in DB scores between 2019 and 2020.

Categories	DB2020 Rank (Among 192 countries)	DB2020 Score (On a Scale of 1 to 100)	DB2019 Score (On a Scale of 1 to 100)	Dynamic Change in DB Scores (Between 2019 and 2020)
Overall*	168	45	42.5	5.88%
Starting a Business*	131	82.4	80.8	1.98%
Dealing with Construction Permits*	135	61.1	60.8	0.49%
Getting Electricity*	176	34.9	30.8	13.31%
Registering Property*	184	29	28.9	0.35%
Getting Credit*	119	45	25	80.00%
Protecting Minority Investors	72	60	60	
Paying Taxes	151	56.1	56.1	
Trading Across Borders	176	31.8	31.8	
Enforcing Contracts	189	22.2	22.2	
Resolving Insolvency	154	28.1	28.2	-0.35%

Source of data: <http://www.doingbusiness.org/data/exploreeconomies/bangladesh>

The first column in Table 5 shows the rank of EE in Bangladesh among 192 countries (1: highest, 192: lowest). In Table 5 - categories marked with (*) indicate the EE categories in which Bangladesh has obtained an improved score in 2020. It is evident that Bangladesh has shown improvements in six major categories. However, Bangladesh has not shown any improvement in the categories of: “Protecting Minority Investors”, “Paying Taxes”, “Trading Across Borders”, “Enforcing Contracts”, and “Resolving Insolvency”. Bangladesh has shown the highest degree of improvement in the category of “Getting Credit”. World Bank (2020) has awarded a score of 5.2 in the category of “Credit registry coverage (% of adults)” in Dhaka, Bangladesh under “Getting Credit”. This is slightly above the average score in this category of 5.1 in South Asia (World Bank, 2020). World Bank (2020) has awarded Bangladesh an overall rank of 168 among 192 countries in “Doing Business” rankings (which is a measure of business regulations).

Table 6: Rankings of New Zealand in categories on the ease of doing business (DB) and dynamic changes in DB scores between 2019 and 2020.

Categories	DB2020 Rank (Among 192 countries)	DB2020 Score (On a Scale of 1 to 100)	DB2019 Score (On a Scale of 1 to 100)	Dynamic Change in DB Scores (Between 2019 and 2020)
Overall	1	86.8	87	-0.23%
Starting a Business	1	100	100	
Dealing with Construction Permits	2	86.5	86.5	
Getting Electricity	48	84	84	
Registering Property	2	94.6	94.6	
Getting Credit	1	100	100	
Protecting Minority Investors	3	86	86	
Paying Taxes	9	91	91.1	-0.11%
Trading Across Borders	63	84.6	84.6	
Enforcing Contracts	23	71.5	71.5	
Resolving Insolvency	36	69.5	71.8	-3.20%

Source of data: <http://www.doingbusiness.org/data/exploreeconomies/new-zealand>

The first column in Table 6 shows the rank of EE in New Zealand among 192 countries (1: highest, 192: lowest). It is evident that the scores of New Zealand in different EE categories are significantly higher than the countries in the Indian subcontinent. New Zealand's scores have not changed much from 2019 to 2020. World Bank (2020) has awarded New Zealand an overall rank of 1 among 192 countries in "Doing Business" rankings (which is a measure of business regulations).

Table 7: Static Comparison of 2020 Scores of India, Pakistan, Bangladesh, and New Zealand on the Ease of Doing Business (DB)

Categories	India DB2020 Score	Pakistan DB2020 Score	Bangladesh DB2020 Score	New Zealand DB 2020 Score
Overall	71	61	45	86.8
Starting a Business	81.6	89.3	82.4	100
Dealing with Construction Permits	78.7	66.5	61.1	86.5
Getting Electricity	89.4	64	34.9	84
Registering Property	47.6	48.6	29	94.6
Getting Credit	45	45	45	100

Protecting Minority Investors	80	72	60	86
Paying Taxes	67.6	52.9	56.1	91
Trading Across Borders	82.5	68.8	31.8	84.6
Enforcing Contracts	41.2	43.5	22.2	71.5
Resolving Insolvency	62	59	28.1	69.5

Source of data: <http://www.doingbusiness.org/data/>

Table 7 shows a static comparison of the scores in 2020 of India, Pakistan and Bangladesh and New Zealand in the different categories of the ease of doing business, The scores of New Zealand in almost all categories are higher than the three other countries. India’s cores are somewhat higher than those of Pakistan and Bangladesh in all categories. India’s score is higher than that of New Zealand in “Getting Electricity”. However, India’s scores are way lower than those of New Zealand in “Getting Credit”, “Registering Property” and “Resolving Contracts”.

5. Results

Static Analysis of the 2020 scores of India, Pakistan, Bangladesh, and New Zealand on the ease of Doing Business (DB)

Kruskal Wallis non-parametric test was used to test the equality of the median annual 2020 scores of India, Pakistan, Bangladesh, and New Zealand in the ten different categories on the ease of Doing Business (DB) in the eleven categories based on data from World Bank as shown in Table 7. It was decided not to use Mann Whitney test to compare the medians, because of the small sample size used in our study. Hart (2001) noted that Mann Whitney test could detect a difference in medians in two populations in case of large sample sizes.

The following table shows the results from Kruskal Wallis Hypothesis Test on the equality of the median annual 2020 scores of India, Pakistan, Bangladesh, and New Zealand on the ease of Doing Business (DB) in eleven categories.

Table 8: Results from Kruskal Wallis Hypothesis Test on the 2020 scores of India, Pakistan, Bangladesh, and New Zealand on the ease of Doing Business (DB)

Country	N	Mean Rank
India	11	22.9
Pakistan	11	18.6
Bangladesh	11	10.4
New Zealand	11	35.9
Total	44	

Chi-Square	16.02
df	3
p-value	0.001

Source of data: <http://www.doingbusiness.org/data/>

The p-value of **0.001** indicates that the null hypothesis of the equal median 2020 scores of India, Pakistan, Bangladesh, and New Zealand on the ease of Doing Business (DB) **can** be rejected.

Conclusion

It can be concluded from this analysis that the static scores in 2020 on the ease of doing business in India, Pakistan, and Bangladesh are significantly lower than those of New Zealand. On the other hand, the static scores in 2020 of India in most categories of EE are higher than those of Pakistan and Bangladesh. The scores of India most categories are also higher than the global average values. All three countries in the Indian subcontinent have also shown dynamic improvements in most categories of doing business between 2019 and 2020. Future studies should analyze future data collected by GEM on Bangladesh beyond 2020 to show improving trends in EE in that country.

To summarize - the results from our study indicate that there are ample opportunities for improvement in EE in the three countries of the Indian subcontinent. The governments of India, Pakistan, and Bangladesh need to adopt entrepreneur-friendly policies that will enhance the ease of doing business and improve the overall effectiveness of the entrepreneurial ecosystems.

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