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A Study of various Geographical Ecosystems with High Performing Digital Technology Business sector to replicate in Indian setting with varying Business Matrix

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Abstract - *India as a technology market place is hugely failing to offer at least one world class product or process getting reckoned in the global setting. India as a country offers value proposition to developed countries and to domestic market in the realm of IT services and also some in the IT product space. Countries are demonstrating more and more nationalist aspirations and are trying to maximize market share to optimize their fortunes. Therefore, the business enterprises are expected to create cost and quality arbitrage in the marketplace to survive and thrive in the competitive business setting. This paper therefore investigates the overall rank of India with respect to leading 10 developed countries in the realm of IT Enterprises enlisting various factors like political and business environment, infrastructure, skills etc.*

***Key Words*: Global IT Enterprises, Indian IT Enterprises, Ranking of Countries based on various factors.**

1.INTRODUCTION

It is a known fact that for so many years Indian state and its people are denied with a matter of pride of offering a world class product or process and the longing for at least one is getting prolonged. This is the underlying emotion which provoked us to think aloud and zeroed in on Information Technology market place to find the reasons for years of failure. The inability to create build one world class product is obviously not because of lack of deep pockets.

This paper undertakes to find the inexcusable reasons for the continued failure and suggests ways and means of Indian IT majors to evolve as world leaders in the time to come.

We started with exhaustive survey of literature to find the cultural / historic / social / financial / educational / technological reasons for the stated non-performance of even the cash rich Indian behemoths.

In this paper, the overall ranking of India is compared to 10 leading IT giants of the world, so as to understand the factors required to replicate the same in the Indian setting and evolve the Indian IT enterprises as total solution providers.

As per The Global Information Technology Report by "The world economic forum and INSEAD"[1], the success of IT enterprises in a country are based on the 10 pillars :

Political and Regulatory Environment, Business and Innovation Environment, Infrastructure, Affordability, Skills, Individual Usage, Business Usage, Government Usage, Economic Impacts, Social Impacts[1].

These factors are used to formulate tables and determine the overall rank of India with respect to other leading countries involved in IT business.

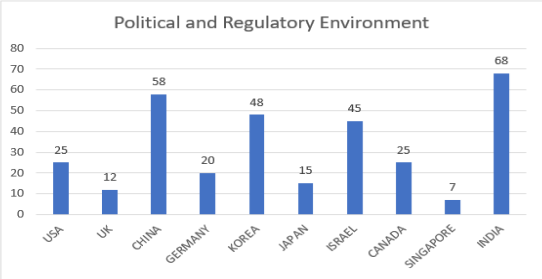
2. Analysis of Leading Countries in IT Business

Tables / Matrix were formulated based on the various aspects of the above factors which show the ranking of 10 leading countries of the world out of total 139 countries on various factors listed above and the overall rank of India was compared with them in various factors[1].

2.1 Political and Regulatory Environment

FACTORS	USA	UK	CHINA	GERMANY	KOREA	JAPAN	ISRAEL	CANADA	SINGAPORE	INDIA
Effectiveness of law-making Bodies	49	5	40	17	99	10	62	13	1	50
Laws relating to ICT	11	6	49	26	21	27	31	13	5	53
Judicial independence	28	10	67	17	69	12	18	11	23	64
Efficiency of legal framework in setting disputes	25	6	50	16	57	13	44	17	1	42
Efficiency of legal framework in challenging regulations	19	9	66	11	74	24	34	14	10	39
Intellectual property protection	15	7	63	20	52	6	29	12	4	50
Software piracy rate	1	9	73	9	25	2	17	14	18	53
Number of procedures to enforce a contract	41	14	69	22	27	27	48	58	2	128
Time required to enforce a contract	33	41	44	38	4	14	124	75	1	137
OVERALL RANK	**25**	**12**	**58**	**20**	**48**	**15**	**45**	**25**	**7**	**68**

Table 1: Ranking based on political and regulatory environment



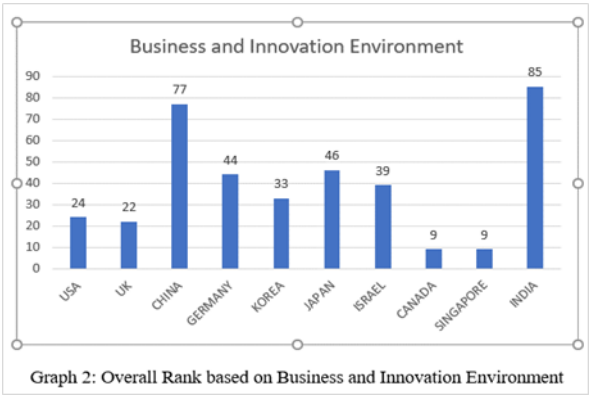
Graph 1: Overall Rank based on political and regulatory environment

From Graph 1, it is observed that India is ranking 68 in terms of various factors of Political and Regulatory Environment.

2.2 Business and Innovation Environment

FACTORS	USA	UK	CHINA	GERMANY	KOREA	JAPAN	ISRAEL	CANADA	SINGAPORE	INDIA
Availability of latest technologies	2	5	95	12	31	16	8	11	13	108
Venture capital availability	5	14	16	25	86	21	4	20	3	13
Total tax ratio	93	45	131	105	54	114	41	15	9	123
Time required to start a business	33	24	121	65	15	64	76	3	6	114
Number of techniques required to begin a business	54	22	120	105	11	92	41	3	11	133
Intensity of local competition	4	3	36	7	13	1	116	24	21	101
Tertiary education enrollment rate	4	46	80	43	2	39	30	n a	10	89
Quality of business schools	9	3	85	25	59	51	29	5	4	55
Government procurement of advanced Jechnology products	11	34	9	10	24	14	8	55	4	26
OVERALL RANK	**24**	**22**	**77**	**44**	**33**	**46**	**39**	**9**	**9**	**85**

Table 2: Ranking based on business and innovation environment



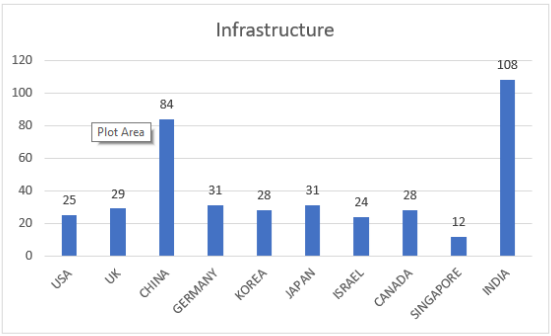
Graph 2: Overall Rank based on Business and Innovation Environment

From Graph 2, it is observed that India is ranking 85 in terms of various factors of Business and Innovation Environment.

2.3 Infrastructure

FACTORS	USA	UK	CHINA	GERMANY	KOREA	JAPAN	ISRAEL	CANADA	SINGAPORE	INDIA
Electricity production	8	39	55	24	12	23	27	4	19	98
Mobile network coverage rate	37	55	61	67	37	37	1	67	1	111
Internet bandwidth	42	7	119	19	57	54	29	21	4	116
Secure internet servers	12	15	102	13	5	20	37	18	22	105
OVERALL RANK	**25**	**29**	**84**	**31**	**28**	**31**	**24**	**28**	**12**	**108**

Table 3: Ranking based on Infrastructure



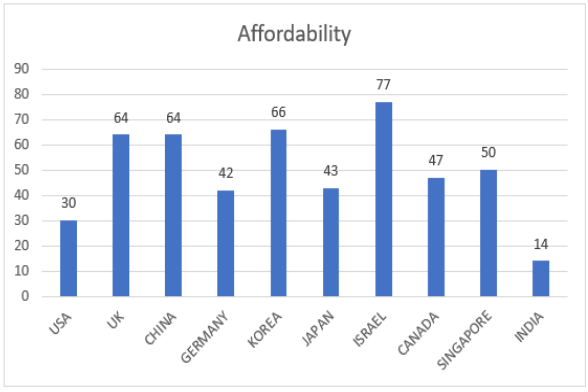
Graph 3: Overall Rank based on Infrastructure

From Graph 3, it is observed that India is ranking 108 in terms of various factors of Infrastructure.

2.4 Affordability

FACTORS	USA	UK	CHINA	GERMANY	KOREA	JAPAN	ISRAEL	CANADA	SINGAPORE	INDIA
Mobile cellular tariffs	77	113	6	27	35	106	83	60	51	5
Broadband internet tariff	11	6	68	97	73	21	60	81	99	36
Internet and telephony sector competition index	1	73	118	1	89	1	87	1	1	1
OVERALL RANK	**30**	**64**	**64**	**42**	**66**	**43**	**77**	**47**	**50**	**14**

Table 4: Ranking based on affordability



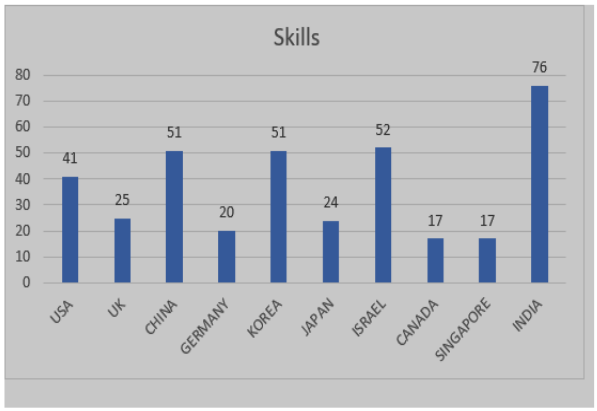
Graph 4: Overall Rank based on Affordability

From Graph 4, it is observed that India is ranking 14 in terms of various factors of Affordabality.

2.5 Skills

FACTORS	USA	UK	CHINA	GERMANY	KOREA	JAPAN	ISRAEL	CANADA	SINGAPORE	INDIA
Quality of education system	18	21	56	10	66	27	52	14	3	43
Quality of math and science education	44	46	49	16	30	9	68	18	1	63
Secondary education enrollment rate	62	9	60	33	57	36	37	19	27	103
Adult literacy ratio	n a	n a	40	n a	n a	n a	n a	n a	37	95
OVERALL RANK	**41**	**25**	**51**	**20**	**51**	**24**	**52**	**17**	**17**	**76**

Table 5: Ranking based on skills



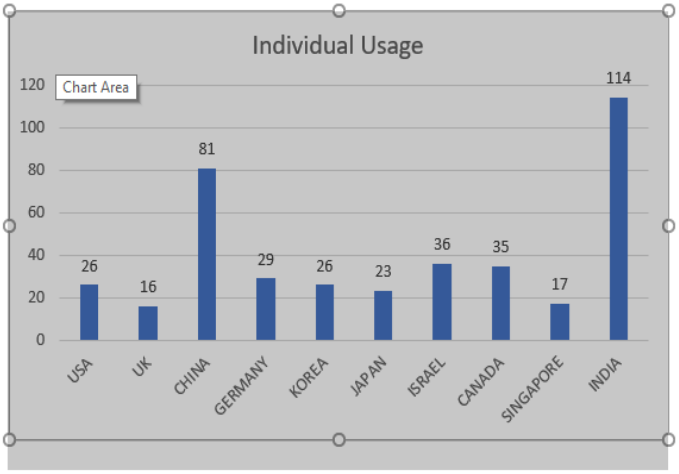
Graph 5: Overall Rank based on Skills

From Graph 5, it is observed that India is ranking 76 in terms of various factors of Skills.

2.6 Individual Usage

FACTORS	USA	UK	CHINA	GERMANY	KOREA	JAPAN	ISRAEL	CANADA	SINGAPORE	INDIA
Mobile telephone subscriptions	79	52	106	56	65	57	55	114	28	120
Internet users	13	8	70	16	20	11	39	14	24	107
Households with personal computers	28	10	71	11	35	23	26	15	12	107
Households with internet access	29	12	69	15	1	3	40	18	16	103
Fixed broadband internet subscriptions	18	7	56	10	6	20	28	11	30	105
Mobile broadband internet subscriptions	14	17	71	39	12	5	55	52	1	124
Use of Social networks	3	5	121	54	40	43	11	18	8	130
OVERALL RANK	**26**	**16**	**81**	**29**	**26**	**23**	**36**	**35**	**17**	**114**

Table 6: Ranking based on individual usage



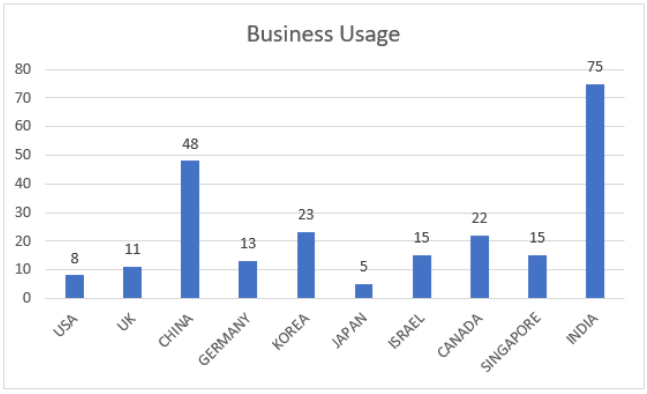
Graph 6: Overall Rank based on Individual Usage

From Graph 6, it is observed that India is ranking 114 in terms of various factors of Individual Usage.

2.7 Business Usage

FACTORS	USA	UK	CHINA	GERMANY	KOREA	JAPAN	ISRAEL	CANADA	SINGAPORE	INDIA
Firm-level technology absorption	3	14	66	13	27	2	5	29	16	102
Capacity for innovation	2	10	49	5	24	14	3	23	19	50
PCT patent applications	10	18	32	7	6	1	5	19	13	64
ICT use for b to b transactions	17	2	57	19	34	1	16	23	13	108
Business to consumer internet use	2	1	32	12	10	5	19	13	24	77
Extent of staff training	14	21	50	13	36	6	43	25	4	48
OVERALL RANK	**8**	**11**	**48**	**13**	**23**	**5**	**15**	**22**	**15**	**75**

Table 7: Ranking based on business usage



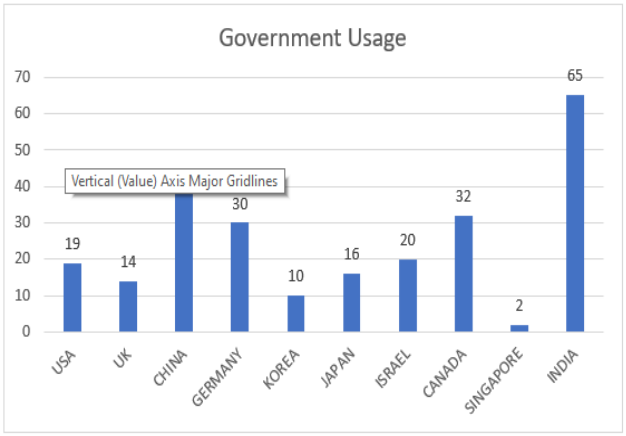
Graph 7: Overall Rank based on Business Usage

From Graph 1, it is observed that India is ranking 75 in terms of various factors of Business Usage.

2.8 Government Usage

FACTORS	USA	UK	CHINA	GERMANY	KOREA	JAPAN	ISRAEL	CANADA	SINGAPORE	INDIA
Significance of ICTs to government vision of things to come	29	16	27	24	17	14	26	49	2	62
Government online service index	4	11	47	34	3	4	13	10	2	57
Government success in ICT promotion	25	15	39	32	11	30	22	38	3	75
OVERALL RANK	**19**	**14**	**38**	**30**	**10**	**16**	**20**	**32**	**2**	**65**

Table 8: Ranking based on government usage



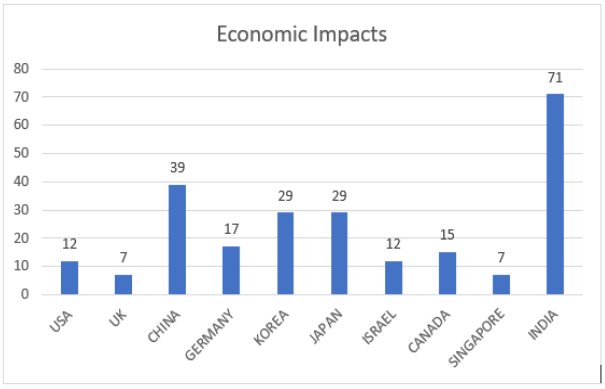
Graph 8: Overall Rank based on Government Usage

From Graph 8, it is observed that India is ranking 65 in terms of various factors of Government Usage.

2.9 Economic Impacts

FACTORS	USA	UK	CHINA	GERMANY	KOREA	JAPAN	ISRAEL	CANADA	SINGAPORE	INDIA
Impact on ICTs on business models	14	2	49	21	17	24	15	18	6	89
PCT ICT patent applications	7	17	26	10	5	3	4	12	9	59
Impact of ICTs on new organizational models	2	1	31	18	28	33	20	12	11	65
Share of workforce utilized in information intensive exercises	26	8	n a	17	65	58	7	16	2	n a
OVERALL RANK	**12**	**7**	**39**	**17**	**29**	**29**	**12**	**15**	**7**	**71**

Table 9: Ranking based on economic impacts



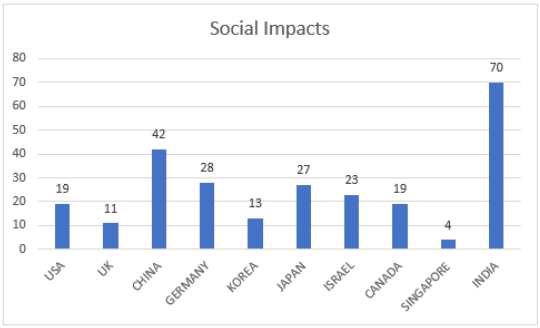
Graph 9: Overall Rank based on Economic Impacts

From Graph 9, it is observed that India is ranking 71 in terms of various factors of Economic Impacts.

2.10 Social Impacts

FACTORS	USA	UK	CHINA	GERMANY	KOREA	JAPAN	ISRAEL	CANADA	SINGAPORE	INDIA
Effect of ICTs on access to fundamental services	15	19	47	14	17	28	21	12	1	70
Internet access in schools	17	7	47	39	19	37	28	13	2	100
ICT use and government efficiency	35	15	41	33	13	37	32	36	2	68
E-participation index	9	4	33	24	1	4	12	14	10	40
OVERALL RANK	**19**	**11**	**42**	**28**	**13**	**27**	**23**	**19**	**4**	**70**

Table 10: Ranking based on social impacts



Graph 10: Overall Rank based on Social Impacts

From Graph 10, it is observed that India is ranking 70 in terms of various factors of Social Impacts.

3. CONCLUSIONS

From the analysis above we can conclude that the main factors that can contribute towards the growth of IT enterprises are:

The lacunas in the Indian Higher / Professional education market place and figuring out the possibility of fundamental and radical restructuring of the business of engaging learner who is going to be an important player of supply chain of human capital for knowledge economy.

Another factor that can contribute towards the growth of IT enterprises is the organizational culture and dynamics of Indian IT services and product companies and its limitation / vulnerability in its business model. The Indian IT enterprises seem to be more than happy to earn profits for its stakeholders and majority of them don't show the culture of Risk taking in research for new breakthrough products and processes like their counterparts in other leading IT destinations of the world. This culture of risk taking and investing massively in research and development will change the evolutionary dynamics of the Indian IT enterprises.

Finally, we conclude by saying that one of the most important factors is to understand Indian public policies and its archaistic rules and regulation which prevents Indian enterprises in unleashing its complete potentials getting embodied in its vision statements.

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BIOGRAPHY

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