

A Growth Model for the Sri Lankan ICT/BPM Industry

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Abstract: This paper is a result of a research doctoral degree and focuses on two vital sectors for which Sri Lanka has a great potential. The two sectors are Information and Communication Technology (ICT), and Business Process Management (BPM) industry, broadly known as the Outsourcing industry. The research develops a national growth model for this industry in Sri Lanka. This industry records fifth highest foreign revenue for Sri Lanka as at now. In 2016, a target was set to achieve US. \$ 5 billion in revenues per year by 2022. However, by 2019, the country has achieved only about 20% of this. The target has been revised in 2020 to achieve US \$ 3 billion by 2025. Whilst the progress is commendable, it is apparent that the set targets have not been achieved. Additionally, the study weaves in the context of turbulences in Sri Lanka. Key findings are that Sri Lanka has not been able to achieve expected growth in the sector due to various factors such as continuous instability in the country, skills shortage, poor branding, weak sales networks overseas, immature startup eco system and issues related to ease of doing business. An overall lack of leadership and the non-existence of a monitoring process to achieve the previously set targets also have had an impact. The key outcome of this exercise is a growth model for the Sri Lankan ICT/BPM industry. This is a key research milestone for this industry and the academia. An execution model also has been proposed to take the sector forward.

Keywords: ICT, BPM, Sri Lanka, Industry Growth, Outsourcing, Factors

I. INTRODUCTION

This research was carried out as part of doctoral degree that aims to study the Factors Limiting the Growth of Sri Lanka's ICT / BPM Industry. As a result, the doctoral research developed a growth model for the Sri Lankan ICT/BPM industry and the associated execution recommendations. Its' Literature research is published separately at Abeywickrama et al. (2020). This paper captures research methodology, study results, research analysis, the model development and outcomes. It places higher stress on the quantitative elements of the research, although the research had a significant qualitative consideration as well. This paper publishes a growth model for the Sri Lankan ICT/BPM industry which is a key research milestone for the Information and Communication Technology (ICT), and Business Process Management (BPM) industry in Sri Lanka and the academia. An execution model also has been proposed.

II. RESEARCH METHODOLOGY

For this research, a pragmatism based approach is used given the mixed contexts that applies in the scope of this research. It uses a mixed research strategy with both quantitative and qualitative components are well supported by academic literature. Wisdom et al. (2013) discusses the mixed research methodologies. The term "mixed methods" refers to an emergent methodology of research that advances the systematic integration, or "mixing," of quantitative and qualitative data within a single investigation or sustained program of inquiry. The basic premise of this methodology is that such integration permits a more complete and synergistic utilization of data than do separate quantitative and qualitative data collection and analysis. (Wisdom et al. ,2013)

As a result of literature research (Abeywickrama et al., 2020), following 7 factors were identified as the factors affecting growth in this sector in Sri Lanka (a short name also has been given for easy reference). They are - 1. Skill availability – SKILLS 2.Brand strength of the country and providers – BRAND 3. Quality of services of providers and of the country in general – QUALITY 4. Startup, new product/service scalability – EXPANSION 5.Global Sales and Marketing – OUTREACH 6. Stability of the country – STABILITY 7. Ease of doing business in terms of contracting to providers, new venture initiating and business operations – EASE.

The survey (primary research) captures the importance of each of these factors to develop a growth model. This will be done using both quantitative and qualitative data. The key research instrument is companies and responses are sourced from companies. However, those who are not representing such a company but still have valuable input due to their background could also respond to the questionnaire as qualitative parts of their responses will be useful for the research. A control question at the beginning supports this. It was also determined that the primary research survey should be anonymous as during testing phase it was revealed that companies do not wish to reveal their names, revenue or specific challenges. Therefore, it was established that for the purpose of this, the best cause of action would be do it an anonymous style.

It is important note that this research considers all ICT, BPO, BPM and KPO services that offer services. The government and industry targets are for the whole industry. It does not make sense to take only components of it and analyze as to how the industry targets can be achieved or why the industry targets have not been achieved. Therefore, all sectors are considered as one pool for the purposes of this research.

According to the EDB website, there are about 300 ICT companies in Sri Lanka. EDB website does not specify a number of BPO/BPM companies. ICTA's 2019 Workforce survey estimates the number of ICT companies to be around 600. From qualitative interviews, it was established that this includes companies of all sizes and startups as well. The same report indicated that the specific number of BPO companies is not clear, however the report estimates it to be in the range of 80-100. Therefore, our direct population size according to ICTA Workforce survey 2019 is 700 (ICTA Workforce survey, 2019). However, it is noteworthy that this is everything – large companies, SMEs, startups and also freelancers in certain cases if they had come into lists. Therefore, this is a high number. The SLASSCOM Membership of 193 indicates that the organized sector is much smaller than the larger population estimated. Considering all this, it was established the realistic approachable population size is 250. Based on table for sample size for research activities by Krejcie, R. V., & Morgan, D. W. (1970), it is established that the sample size for this survey should be 152.

Following steps were followed as per the methodology.

1. Finalizing the research problem -Researching about factors limiting the growth of ICT/BPM industry amidst turbulence in Sri Lanka from 2010 to 2020 was finalized as the research area.
2. Secondly, the literature research was carried out and is published (Abeywickrama et al., 2020).
3. The research methodology was developed, considering both quantitative and qualitative aspects.
4. The research questionnaire for both quantitative input and qualitative input was developed.
5. A focus group with four ICT/BPM industry experts was organized to check the survey as well as to have an unstructured discussion regarding the research questions.
6. The survey questionnaire was tested with a small group of respondents, and based on the feedback and experience, minor tweaks were made to the survey questionnaire.
7. The survey questionnaire was sent out to the industry for input.
8. Afterwards, industry experts were approached for further qualitative feedback.
9. Then the results of both quantitative and qualitative research were analyzed using the study results.
10. A growth model for the Sri Lankan ICT/BPM industry was developed, and the final conclusions and recommendations were outlined.

III. STUDY RESULTS

There were 155 responses from ICT/BPM companies. There were 25 responses from people who have a background in ICT/BPM but do not work in such a company now. There were 12 responses from people who do not have any background in this sector as well and were discarded. Of the total 155 IC/BPM company responses, 92 are from ICT communes, 38 from BPM companies while 25 did not specify which category they fall in.

As research objectives have an aim to study how startups can contribute towards the growth of this sector, the survey asked respondents to explain if they are a startup or not. Some have chosen not to answer that question. The Number of Startups that have responded to the survey is 55. The Number of Startup as a percentage of total ICT/BPM responses is 35%. Responses by Company Size is as follows.

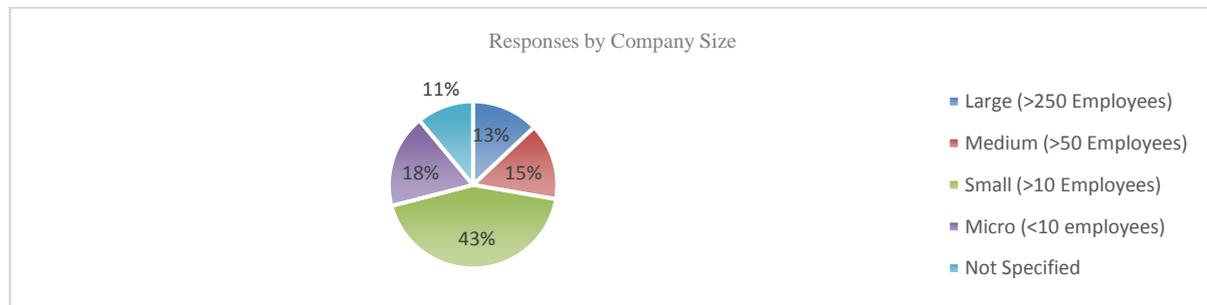


Figure 1: Responses by Company Size

Achievement of revenue Goals is as follows.



Figure 2: Achievement of revenue goals

It is important note that some respondents were reluctant to answer this question on achievement of their revenue goals.If the ones who were reluctant to specify if their companies achieved Revenue Goals in the last 3 years or not are excluded from the equation, the analysis is as follows.

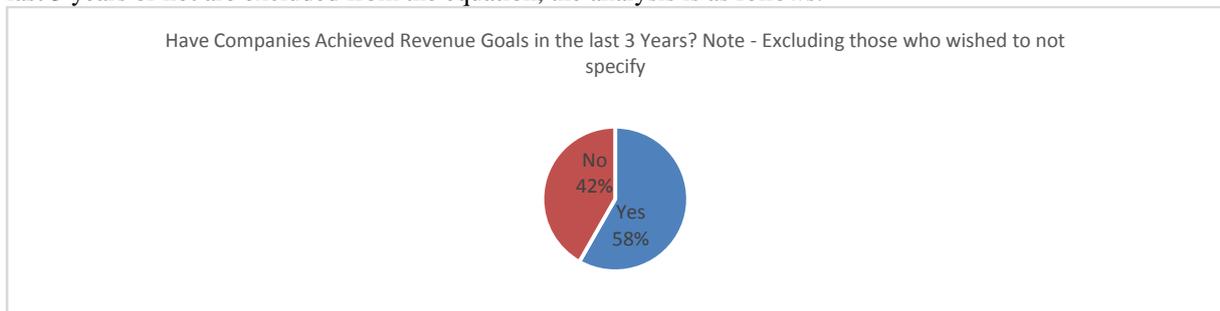


Figure 3: Achievement of revenue goals

There is a reasonable high percentage of 42% who have not achieved their revenue goals. This would have had a direct impact on Sri Lanka as a country struggling to achieve the goals set for the industry.

Sri Lanka had turbulence from 2010 to 2020 such as riots between communities, constitution crisis, Easter Sunday terrorist attacks and finally COVID 19. When asked if these had an impact on their business, below is how people responded.

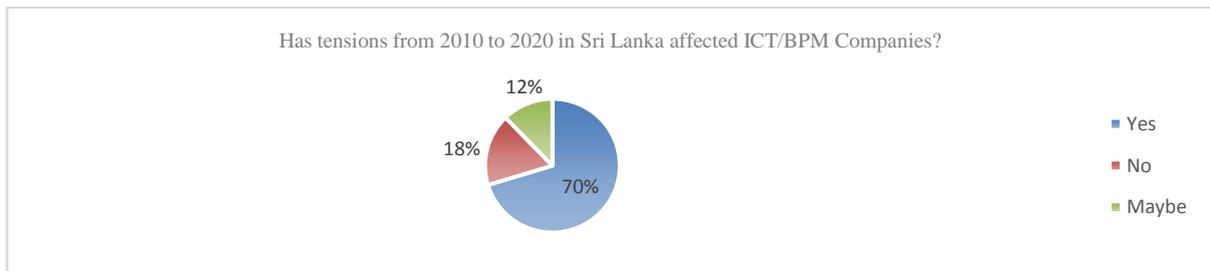


Figure 4: Impact of turbulence

If we consider those who responded as 'Maybe' also as a borderline “Yes”, the graph is as follows.

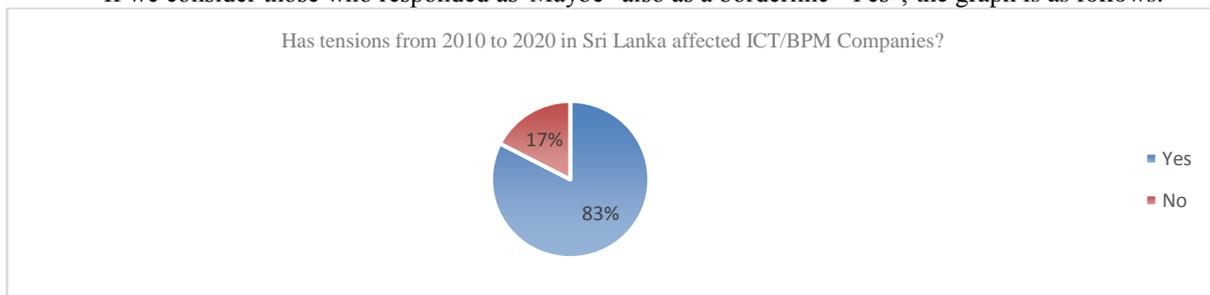


Figure 5: Impact of turbulence

When specifically asked about COVID 19 impact, below is the response.

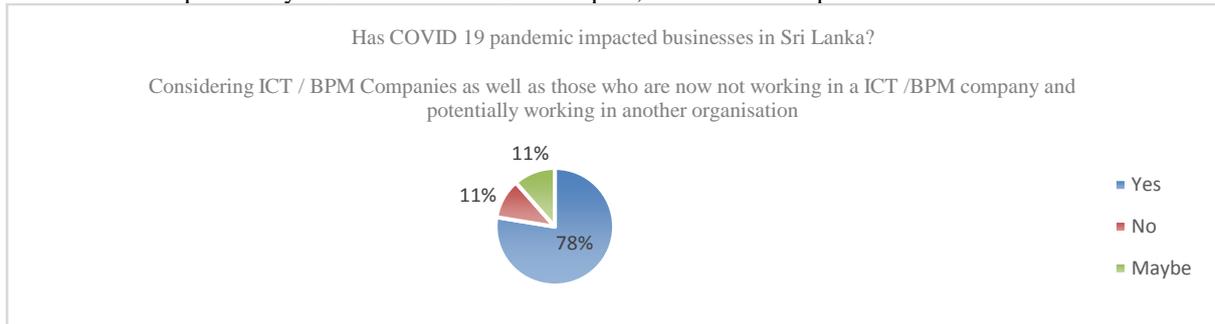


Figure 6: Impact from COVID 19

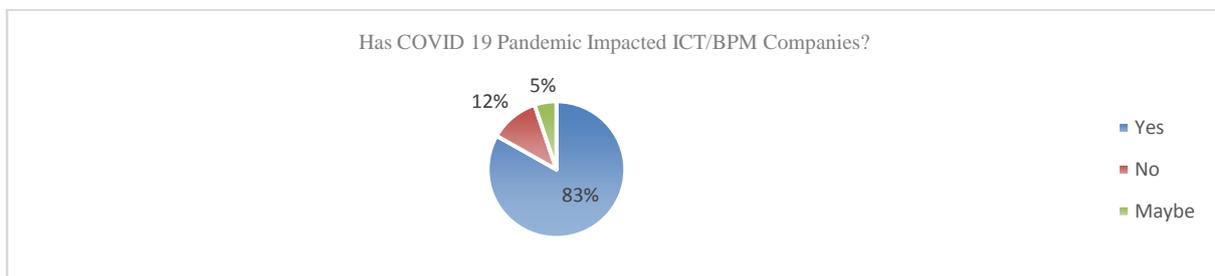


Figure 7: Impact from COVID 19

The growth factors were included in the research methodology to be surveyed. The respondents were asked to state the importance in a Likert scale from 1 to 5 (5 being most important while 1 being of lowest). If all Respondents are considered (i.e.: ICT / BPM Companies and Respondent who do not work in ICT / BPM Companies now but have a background in ICT / BPM industry), the table of responses with No of responses for each Likert scale point against each Growth factor is as follows.

Likert Scale Point	Skills	Brand	Quality	Expansion	Sales	Stability	Ease
1	5	2	2	4	2	2	9
2	13	2	10	27	3	1	21
3	74	16	71	65	15	14	23
4	25	27	20	35	47	32	28
5	66	137	78	49	114	135	60

Table1: Growth Factor Comparison

If only the ICT/BPM company responses are considered, the table of responses for each Likert scale point against each Growth factor is as follows.

Likert Scale Point	Skills	Brand	Quality	Expansion	Sales	Stability	Ease
1	4	1	1	3	1	1	8
2	13	2	10	27	2	0	19
3	69	10	69	60	13	10	18
4	14	16	12	20	31	19	16
5	51	123	57	38	102	122	48

Table 2: Growth Factor Comparison

Since the brand of the country for ICT/BPM services is a growth factor, that was further delved in the survey.

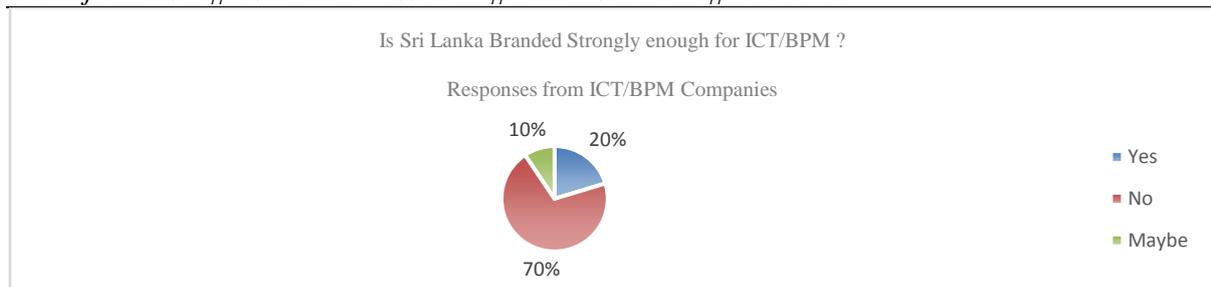


Figure 8: Strength of the country brand

Qualitative inputs on how Government can support the growth of revenue from international markets included tax benefits for this sector, infrastructure development, country branding, developing ease of doing business and skills development.

Just before the survey was sent out for feedback, a focus group of people from ICT/BPM companies were gathered to get feedback regarding this area. The participants wanted to maintain their anonymity in any publication due to confidentiality of their companies as well as due to sensitive nature of the ideas shared. As per focus group guidelines, a free flow of exchange was allowed with the researcher posing open ended questions. Overall, all four participants were positive about the possibility of growing ICT/BPM industry to greater level in the coming years. However, they are also disappointed that the industry has not grown as it was expected. One participant in particular was in the view that Sri Lanka could have achieved USD 5 billion if the government policy framework developed. However, others were of the opinion that the fact that the country has grown to an annual revenue of about USD 1 billion should be appreciated amidst challenges in various forms. They were in the opinion that USD 5 billion target was too high in the first place. One participant was of the strong view that achievement of targets is mostly due to risk averse nature of the companies. He believed that Sri Lankans in general have a risk averse nature and that impacts the growth of the industry too.

There was general consensus that the branding of the country is weak. Some of the events such as ethnic tensions, constitutional crisis and easter Sunday attacks may have had an impact on the overall perception. 'Island of Ingenuity brand in general is not a 'hot' thing for those in the industry. There is no attraction for it even within the country. There is no passion attached to it, according to the focus group participants.

While there were comments that turbulent nature may have had impact on the overall brand of the country, there was no such belief that it really had a serious impact on business performance or the overall industry targets. It appeared that Sri Lankans are used to such disturbances and are happy to move on, without worrying about the implications such events may have had. There was general consensus that COVID 19 will have an impact on ICT/BPM industry, its revenue targets as well as on the overall economy of Sri Lanka. Participants stressed on the importance of increasing sales focus to the industry. The government can help with creating channels, for example via Sri Lankan foreign missions abroad. Also attending forums with bi-lateral support is another suggestion. While there was a mentioning that there was facilitation of such promotions abroad, there was a view in two participants that these initiatives are not consistent and tends to be ad hoc. Industry bodies can help in this, but it was noted that their financial capabilities are weak to execute these activities. The government should play a role in this area. At a micro level, companies also need to become more sales focused was the view of one participant. The companies also may not move out of their comfort zones, resulting in slow growth at both micro and macro level.

This is a mixed research with both quantitative and qualitative data. Qualitative inputs are fed into the research in three ways. They are – 1. Qualitative questions (open ended type) in the survey questionnaire, 2. Focus Group Discussion before the qualitative survey was sent out for responses and 3. Qualitative interviews after the survey results were received conducted during the Research Analysis phase to cover any gaps in findings.

The qualitative interviews (listed below) were unstructured and meant to clarify any doubtful areas, clarify any gaps in findings and to get any additional thoughts regarding this area.

1. The researcher spoke to a staffer from the industry development unit at ICTA, who is heading the unit that is promoting Sri Lanka as a destinate for ICT/BPM services from the GoSL.
2. The researcher spoke to ICT/BPM industry stalwart, who is also a senior employee of an ICT/BPM company.

Feedback from ICTA- The recorded figure of revenue per year as per official Central Bank of Sri Lanka report is 995 million US dollars. The industry calculations may be higher than this based on billing rates. The new target is 3 billions USD per year revenue. ICTA will give leadership to achieving this with the

support of other organizations such as Export Development Board and industry bodies such as SLASSCOM and The Federation of Information Technology Industry Sri Lanka (FITIS) and the professional association in ICT – Computer Society of Sri Lanka (CSSL). In comparison, 5 billion target is a figure that came from the industry and there was no lead body to execute it, but everyone worked towards it and may have lacked a leadership. In contrast, now ICTA will lead the achievement of 3 billion US \$ target. ICTA will lead with a multi stakeholder taskforce. The ICTA strategy will also be driven with the support of steering committees. When asked why the previous target could not be achieved, his view was that implementation was poor, and there were funding issues. When growing an industry like this, while companies will do their part, it is important for the government to intervene and facilitate. It is dependent also on various other factors connected to above. One is capacity building issues. Another is the need move the industry towards a product oriented market. When asked about the brand in the context of results of this research, he was on the opinion that we are not loud as a brand. We haven't done much investments into that either. Companies do setup here and projects do come through but that is through focused approach rather than due to a loud brand. For example, the few overseas visits to promote country has shown strong Return on Investments (ROI), but there hasn't been capacity to do more.

IV. DEVELOPMENT OF THE GROWTH MODEL

We can use Analysis of Variance (ANOVA) technique test to check the variances between different sub groups within the data set. Firstly, the two sub groups – ICT Vs BPO Companies. The null hypothesis was that there is no difference between the responses from the two groups. For all different Growth Factors, the P-Value is greater than 0.05. Hence the null hypothesis is valid. The conclusion is that variance between the responses from the two group ICT companies Vs BPM companies for each Likert scale is within the acceptable variance, hence they can be compared together. Another Anova test can be performed between groups based on company size, for each growth factor. The null hypothesis is that there is no difference between the responses from the four different groups (i.e.: Large, Medium, Small and Micro). All growth factors except Ease of doing businesses have P-Values greater than 0.05. Therefore, the null hypothesis is valid. The variance between groups based on company size is within limit, giving basis for further comparison for ranking. However, it was observed that for “Ease of Doing Business”, the P-Value is less than 0.05, meaning 1 or more groups (based on company size) within this factor behave differently from others. Two further Anova tests have been performed by removing the extreme factor in each case (Micro and Large sizes respectively) to analyze which factor may be having different behaviours. The observation from these additional Anova tests is that P value is greater than 0.05 for Medium, Small and Micro size companies. However, the P-value is less than 0.05 for Large and the behaviours of “Large” companies is the group that has a variance from other groups. This is an interesting finding that “Ease of Doing Business” is potentially tougher on Larger companies. This is a fact supported by qualitative feedback also. Smaller companies find it easy to either set up or partner with a provider and transfer business to Sri Lanka. Larger players have more difficulty in coming to Sri Lanka, due various constraints around bringing in investment, finding talent, finding right provider and others. In next few sections, we use the above basis of similar behavior between groups and consider all groups together to develop different methods of rankings.

If all Respondents are considered (i.e.: ICT / BPM Companies and Respondent who do not work in ICT / BPM Companies now but have a background), the table of responses for each Likert scale point against each Growth factor is as follows.

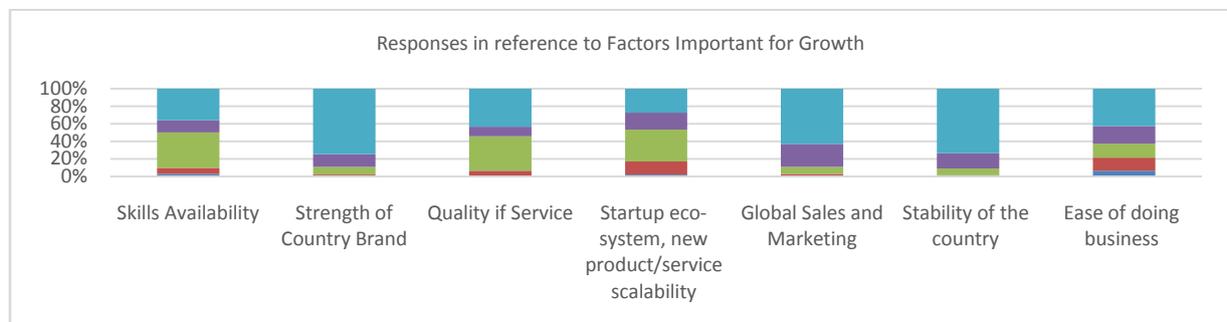


Figure 9: Growth Factor Comparison

For analysis purposes, if we consider that Likert Responses for points 3, 4 and 5 are strongly supportive of that particular factor, we can draw a graph by accumulating Likert Scale point 3, 4 and 5 as follows.

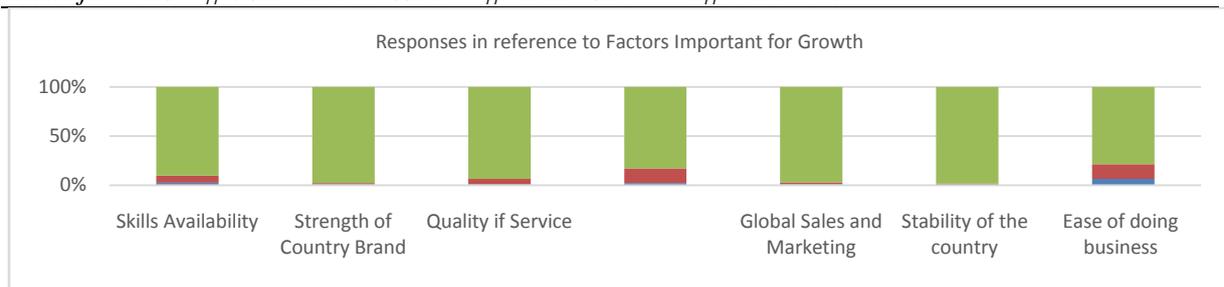


Figure 10: Growth Factor Comparison

If we assign following values to each Likert scale response and multiply it by number of responses for each Likert Scale point for each growth factor, following total points can be derived. Based on which a ranking can be given for the importance of each growth factor. (Likert Scale Point 5 = 5, Likert Scale Point 4 =4, Likert Scale Point 3 =3, Likert Scale Point 2 =2, Likert Scale Point 1 =1)

	Skills	Brand	Quality	Expansion	Sales	Stability	Ease
Total Points	683	847	705	638	811	849	532
Rank	5	2	4	6	3	1	7

Table 3: Ranking of Growth Factors

The analysis on Growth Factors can be done in detail using the responses only from the ICT/BPM Companies with the table of responses with percentage No. of responses for each Likert scale point against each Growth factor, considering responses from ICT/BPM Companies.

Likert Scale Point	Skills	Brand	Quality	Expansion	Sales	Stability	Ease
1	3%	1%	1%	2%	1%	1%	7%
2	9%	1%	7%	18%	1%	0%	17%
3	46%	7%	46%	41%	9%	7%	17%
4	9%	11%	8%	14%	21%	13%	15%
5	34%	81%	38%	26%	68%	80%	44%

Table 4: Growth Factor Comparison

This can be graphed as follows.

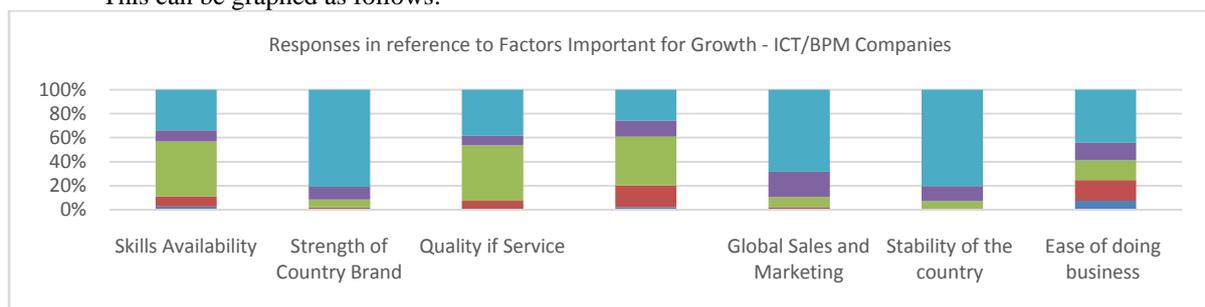


Figure 11: Growth Factor Comparison

If we assign following values to each Likert scale response and multiply it by number of responses for each Likert Scale point for each growth factor, following total points can be derived. Based on which a ranking can be developed. (Likert Scale Point 5 = 5, Likert Scale Point 4 =4, Likert Scale Point 3 =3, Likert Scale Point 2 =2, Likert Scale Point 1 =1).

	Skills	Brand	Quality	Expansion	Sales	Stability	Ease
Total Points	548	714	561	507	678	717	404
Rank	5	2	4	6	3	1	7

Table 5: Ranking of Growth Factors Based on Total Points

The above can be graphed for further analysis as follows.

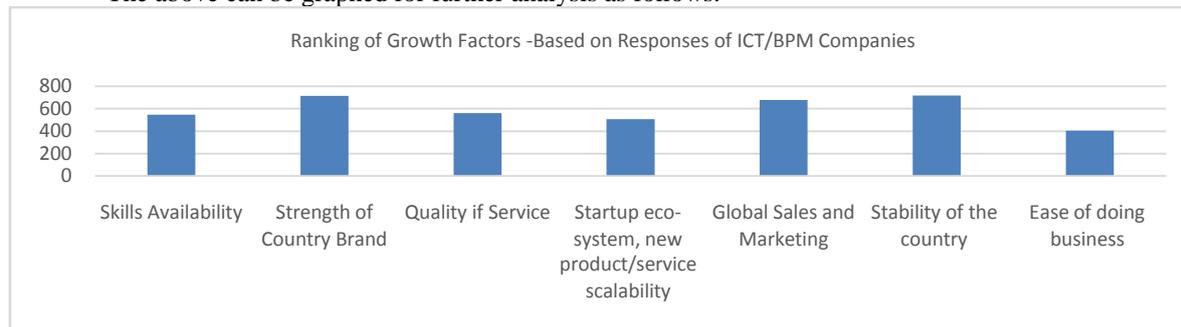


Figure 12: Ranking of Growth Factors Based on Total Points

For further analysis, let’s consider only the Likert Scale Response 5 demonstrating a strongest importance. The analysis is as follows.

	Skills	Brand	Quality	Expansion	Sales	Stability	Ease	Total
5 s - ICT /BPM	51	123	57	38	102	122	48	541
5 s - All	66	137	78	49	114	135	60	639

Table 6: No. of Likert Scale Response 5s by each Growth Factor

In the above table, all responses as well as focused responses from ICT/BPM companies have been separately considered.

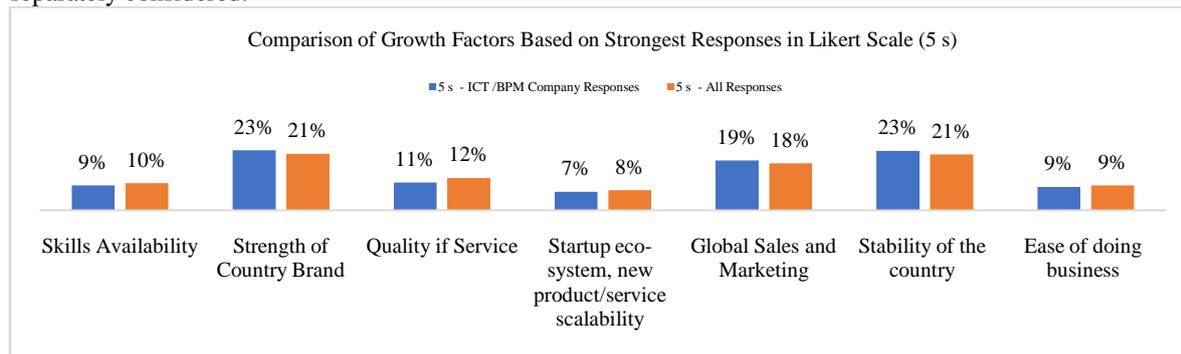


Figure 13: Comparison of Likert Scale Response 5s

If a ranking is done based on this, it is as follows.

Skills	Brand	Quality	Expansion	Sales	Stability	Ease
5	2	4	7	3	1	6

Table 7: Ranking based on Likert Scale Response 5s

The previous ranking based on assigning values from 1 to 5 to Likert Scale Points from 1 to 5 and multiplying it by number of responses for each Likert Point for each growth factor, the ranking was as follows.

Skills	Brand	Quality	Expansion	Sales	Stability	Ease
548	714	561	507	678	717	404
5	2	4	6	3	1	7

Table 8: Ranking based on total points from Likert Scale Responses

The two different ranking methods give consistent outcomes except for the fact that 6th and 7th positions are swapped between “Startup eco-system, new product/service scalability” and “Ease of doing business”.

Summary of Rankings based on different methods is as follows.

Ranking Method	Skills	Brand	Quality	Expansion	Sales	Stability	Ease
Consider All Respondents - 5 s	5	1	4	7	3	2	6

Consider All Respondents - Points for Likert Responses	5	2	4	6	3	1	7
Consider ICT/BPM Company Responses Only - Points for Likert Responses	5	2	4	6	3	1	7
Consider ICT/BPM Company Responses Only - 5 s	5	1	4	7	3	2	6

Table 9: Comparison of Rankings for each Growth Factor

These factors can be further analyzed (i.e.: impact from turbulence (tension) and COVID 19) as per below sections.

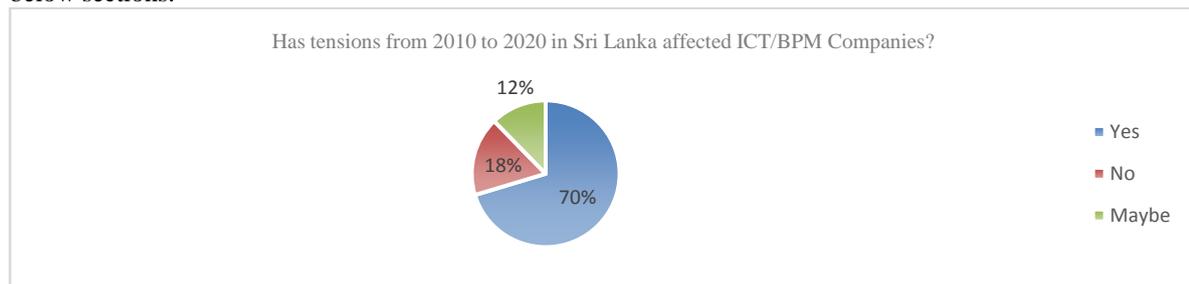


Figure 14: Impact to ICT/BPM Companies from turbulence

This gives us evidence that overall, 70% of the ICT/BPM companies have been negatively impacted by various turbulences in Sri Lanka from 2010 to 2020. From qualitative responses, it was evident that this had affected perception towards Sri Lanka, country brand being tarnished, risk profile increased, clients pulling out, new clients not signing contracts and projects winding down over time.

If an ICT / BPM Company is a Startup, the chances of them being impacted by Turbulence, can be analyzed. Note that only 140 ICT/BPM companies have revealed if they are startup or not.

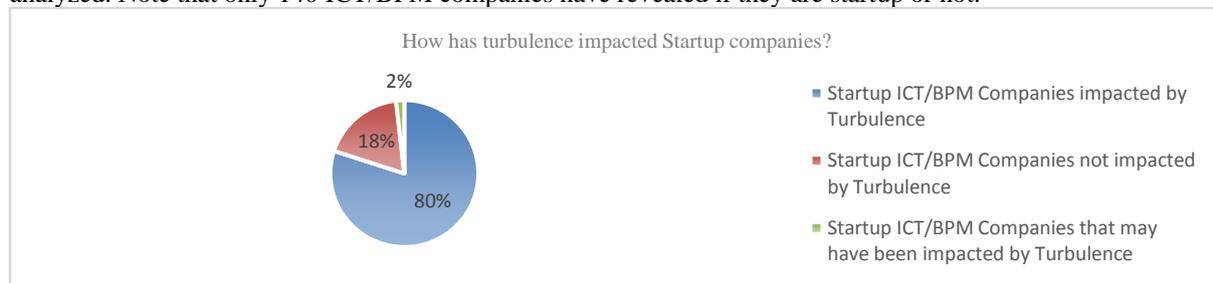


Figure 15: Analysis of impact from turbulence on ICT/BPM Startups

Startups, which play a critical role in industry growth and expansion have been significantly impacted by the turbulences. This percentage is as high as 80%, which is quite alarming.

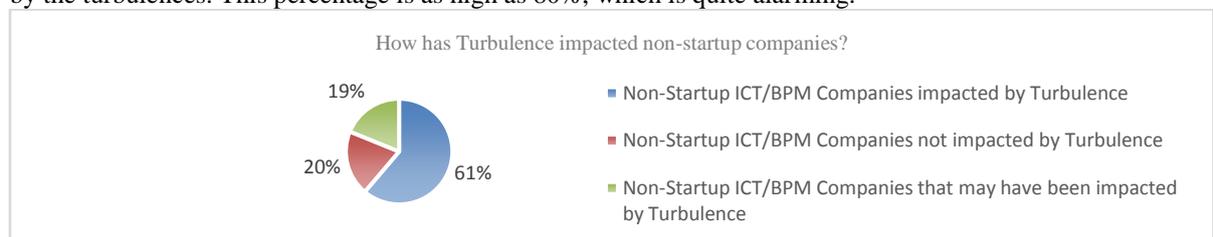


Figure 16: Analysis of impact from turbulence on non-startup ICT/BPM Companies

Non startups, which are relatively mature than startups have a lesser impact. The negative impact still is as high as 61%. This can be further studied by company size based on their number of employees.

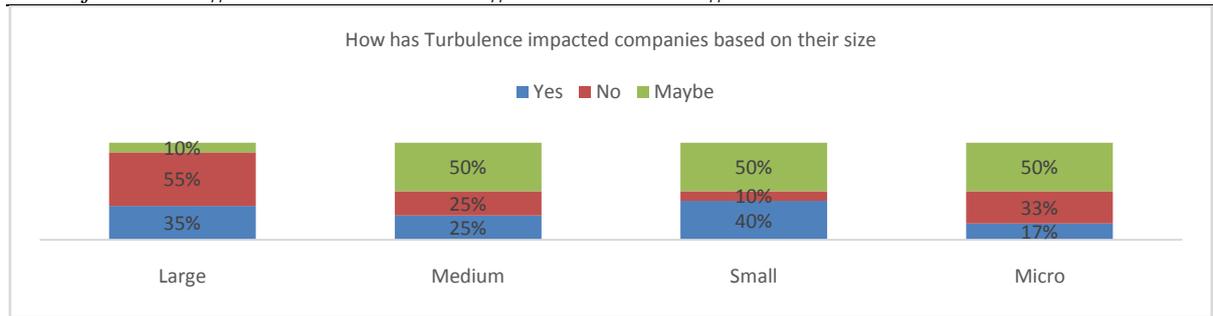


Figure 17: Analysis of impact from turbulence

Small companies have the largest impact at 40%. Micro companies have had a lesser impact (17%). However, this can also be interpreted that they did not exist for that long, therefore have not experienced the worse of the turbulence. It can also be interpreted as they are being much more agile than larger company sizes. It is noteworthy that there is a significant percentage (50%) in Medium, Small and Micro company categories where companies said there “May” have been an impact. It is difficult to judge if this is Yes or No, but it indicates that there is a doubt in people’s minds whether these turbulences actually have had a negative impact on their businesses. COVID 19 is also an extension to turbulence.

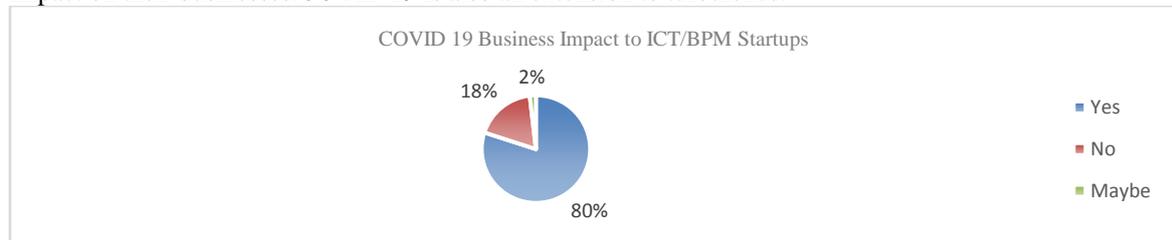


Figure 18: Analysis of impact from COVID 19 on ICT/BPM Startups

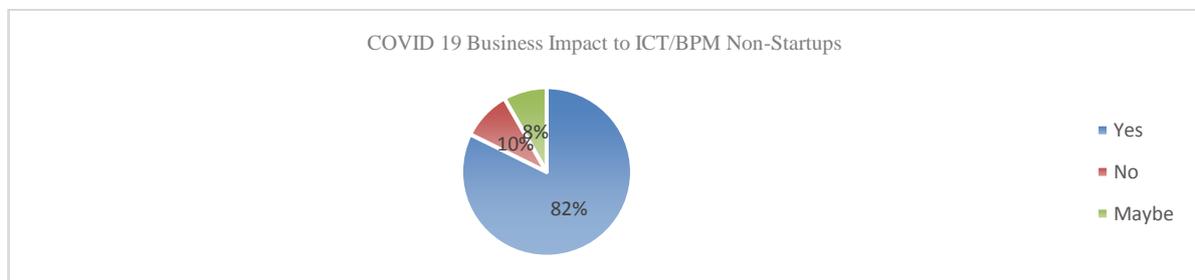


Figure 19: Analysis of impact from COVID 19 on ICT/BPM Non-Startups

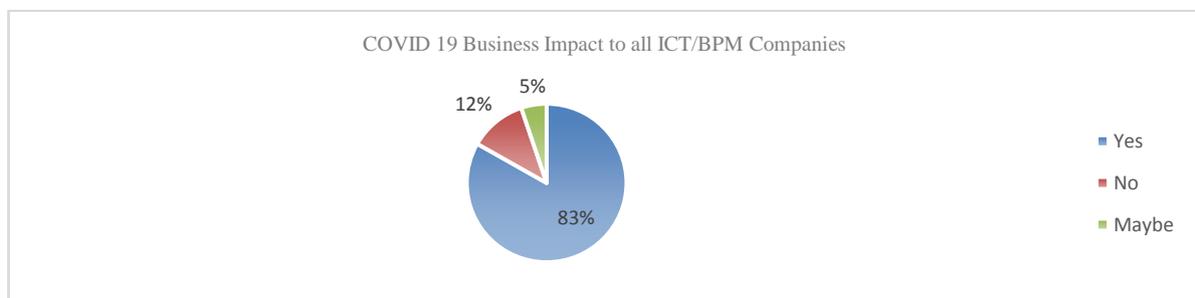


Figure 20: Analysis of impact from COVID 19 on ICT/BPM Companies

How has COVID 19 impacted ICT/BPM Companies based on company size? Analysis of impact from COVID 19 on ICT/BPM Companies depending on size based on employee count is as follows.

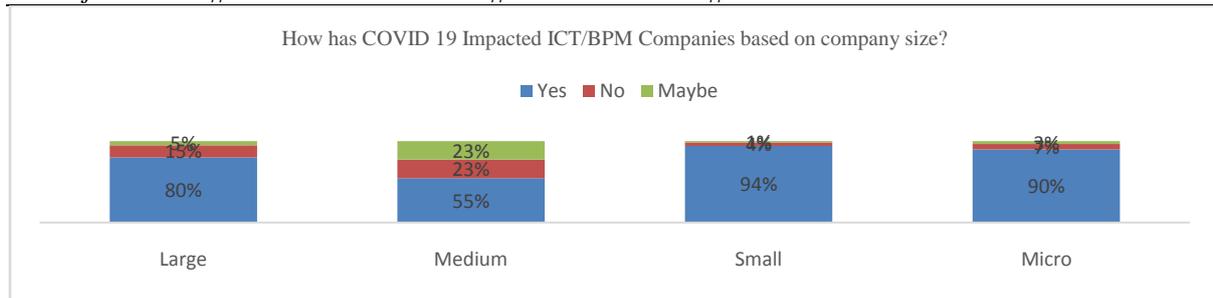


Figure 21: Impact from COVID 19 on ICT/BPM Companies depending on size

The ICT/BPM Companies that said they were impacted by COVID 19 (“Yes”) responses can be separately analyzed as follows depending on size based on employee count.

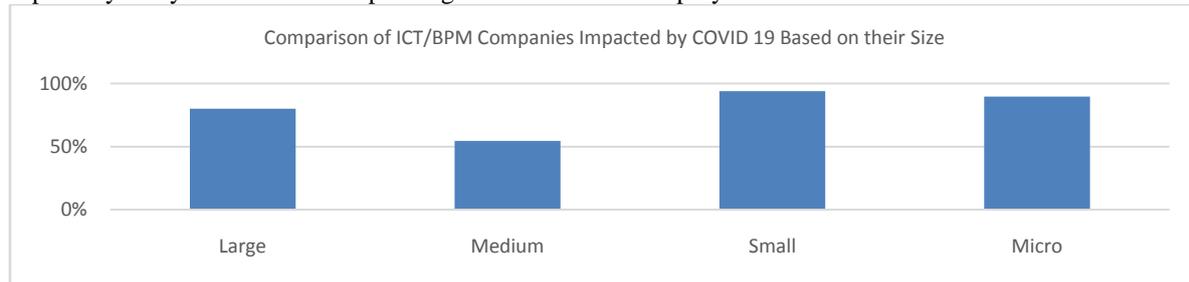


Figure 22: Impact from COVID 19 on ICT/BPM Companies depending on size

Therefore, it is evident that COVID 19 has had a serious impact on a very high percentage of businesses. This is extremely high for Small (94%) and Micro (90%) businesses. 80% of the Large companies also are negatively impacted while only 55% of the Medium sized companies have said that they are impacted.

The 3 billion USD revenue target for the industry by 2025 was set by new President in his election manifesto for November 2019 election whereas COVID pandemic started in March 2020. Therefore, the revenue target as well as employment target of 300,000 will be directly impacted by the COVID 19 as the a very high number of responding ICT//BPM companies have indicated that there is an impact to their businesses. This needs to be factored in progressing growth in the coming years.

It is obvious from the analysis that Sri Lanka’ country brand for ICT/BPM Services is quite weak. This proves the failure on the part of the government as well as the industry with various branding efforts, especially the ‘Island of Ingenuity’ branding exercise that has proven to be failure.

Based on the responses, we can analyze that following are the markets for ICT/BPM companies.

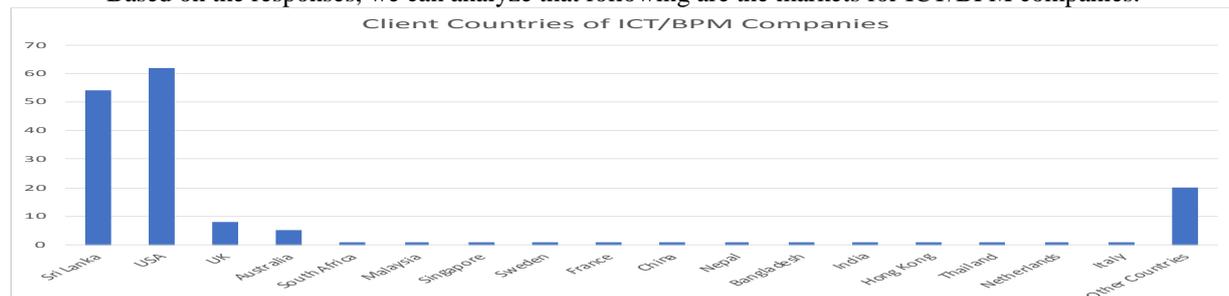


Figure 23: Client Countries of ICT/BPM Companies (Target Markets)

Some respondents had marked that they only service one market (i.e.: country), whereas vast majority of them said that their clients come from multiple countries. The above table represents all those multiple selections by each company.

From qualitative responses, it was revealed that many companies end up targeting Sri Lanka also because they have less ways to access foreign markets. Hence, it can be observed that there is a high number of ICT/BPM Companies targeting Sri Lanka just because there is market access.

It is also evident that countries like UK and Australia are heavily untapped. These are countries where significant Sri Lanka expats live, however we have not been able to tap into those connections. Indian ICT/BPM industry grew in 2000s due to a high number of influential Indian expats in the USA. However, Sri Lanka has not been able to do that.

Also, the country spread showcases that while depth is insignificant, market breadth is also limited. This is where Sri Lankan missions in countries can be utilized to attract clients for this sector.

Discussion on Growth Factors in Order to Develop a Model

Based on the Literature Survey, it was determined that there are 7 factors that previous researchers had identified as limiting factors towards growth of Sri Lankan ICT/BPM Industry. These were further validated with qualitative interviews prior to the survey. Under Positivism Testing, these seven factors were included in the survey and the importance of Growth Factors were ranked based on quantitative analysis as per Table 9. These were further validated with quantitative analysis as per Figure 17-23. These were cross checked with qualitative input via the survey as well. For the analysis, two segments of respondents (i.e: ICT/BPM company responses and all respondents) were used and compared in various aspects as a way of 'parallel forms' testing which is a reliability testing methodology. This parallel forms testing for ranking has proved to be consistent between the two groups.

Based on this quantitative research evidence and qualitative responses, we can establish below as the order of importance.

1. Stability of the country = STABILITY
2. Strength of Country Brand = BRAND
3. Global Sales and Marketing = SALES
4. Quality of Service = QUALITY
5. Skills Availability = SKILLS
6. Ease of doing business = EASE
7. Startup eco-system, new product/service scalability = EXPANSION

Based on ranking, the research proposes to break these 7 into 3 layers depending on importance rank.

PRIMARY FACTORS

1. Stability of the country = STABILITY
2. Strength of Country Brand = BRAND

SECONDARY FACTORS

1. Global Sales and Marketing = SALES
2. Quality of Service = QUALITY
3. Skills Availability = SKILLS

SUPPORTIVE FACTORS

1. Ease of doing business = EASE
2. Startup eco-system, new product/service scalability = EXPANSION

This can be visually represented as follows.

What each of these factors entails is explained below based on qualitative analysis and literature survey. Definitions for each Growth Factor are explained in below sections.

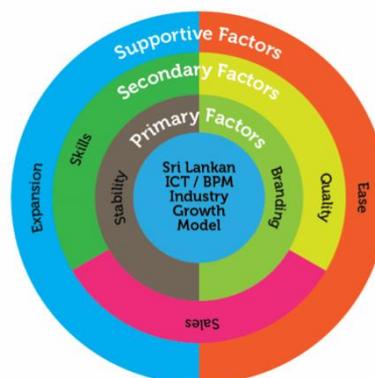


Figure 24: Sri Lankan ICT/BPM Industry Growth Model

A. Stability of the country = STABILITY

Quantitative Analysis has made it clear that 70% of ICT/BPM Companies were impacted by the Turbulence in Sri Lanka. This can be further analyzed as 80% of the Startup being impacted, proving that it is harder for starter companies to face such circumstances. It is important to recognize that STABILITY was ranked as one of the two most important growth factors by ICT/BPM Companies. Qualitative responses revealed

several ways as to how Turbulence negatively impacted the business and some of the key ones are summarized below.

1. Loss of foreign investments and clients
2. Reduced sales
3. Country branding negatively impacted
4. Loss of confidence
5. Due to service interruptions clients tends to go to stable service providers
6. Companies reluctant to choose Sri Lanka owing to risk profile
7. Office closures/not being able to access workplaces
8. Ban on Social media and other sites affected our ability to conduct the work.

Also, COVID 19 pandemic that has impacted businesses across the world has impacted Sri Lankan ICT/BPM sector. The Analysis and Discussion Chapter reveals this both quantitatively and qualitatively. COVID 19 is can be considered as a continuation of turbulence that Sri Lanka's ICT/BPM industry faces. 83% of the ICT/BPM Companies have been impacted by the COVID 19 pandemic negatively. This negative impact is much higher for Small (94%) and Micro (90%) sized companies.

Based on this, both quantitatively and qualitatively we can conclude that it is one of the most important factors to maintain political stability, health stability and peace in Sri Lanka to be able to grow ICT/BPM industry.

B. Strength of Country Brand = BRAND

From the study results (Chapter 4), it is apparent that Sri Lanka's brand for ICT/BPM destination quite weak. 70% ICT/BPM Companies have responded that Sri Lanka is not branded strongly for ICT/BPM services. If respondents who now not working in ICT/BPM companies but have a background in the said sector are also added to the pool, it was analyzed that a consistent 70% respondents state that the country is not branded strongly enough.

In the ranking analysis of growth factors, it was analyzed that the Country Brand is seen as one of the two most important factors for growth by the ICT/BPM companies.

In the qualitative sphere, it was noted that some respondents had noted that country branding is a sad story.

The research looked at the country brand that was developed by Sri Lanka for this sector themed "Island of Ingenuity", which was discussed in Literature Survey. However, from the quantitative analysis it has been overwhelmingly proved that that effort was a failure. The researcher's personal opinion is also that the said branding was poor. "Ingenuity" itself is a tough word and does not strike much with most persons even in the western world. The colours selected for the brand were not attractive to the relevant target market.

Therefore, this research includes Branding as a primary factor in the model that is developed from this exercise.

C. Global Sales and Marketing = SALES

This was ranked as the third most important factor in the rankings as a result of quantitative analysis. Hence in the factor hierarchy, this is maintained at the third position.

This is a factor that has relevance to all spheres of the ICT/BPM industry, that is the Government, Industry (industry bodies etc.) and Companies. At a Company level, it is revealed from qualitative responses that entities need to put more effort into global sales and marketing. Industry bodies need to work more on opening up channels and opportunities. The government also can help by supporting via foreign missions and inter-governmental relationship. It is important to note that this will need a component of funding at a macro level as well as at macro level.

D. Quality of Service = QUALITY

Quality of Service was placed at fourth (4th) place in all methods of rankings that the Analysis section has explained. Even if an ICT/BPM company attracts clients, for them to retain those clients the service levels have to be impressive. Additionally, in business new clients are attracted towards service providers based on positive referrals and word of mouth. For that to trigger, the quality of service is important. There were qualitative comments from respondents supporting this, for example – "Service quality resulting in referrals".

There were qualitative comments supporting that Sri Lankan ICT/BPM Service quality is good, however is not branded well properly. Example:

"Clients who work with Sri Lankan IT workers know we are more reliable and quality conscious than neighboring countries."

Given the size of Sri Lanka's human capital, it is important to focus on high quality niche areas, so that the industry does not compete at high volume and low valued business. Whilst service providers are responsible for ensuring quality of services through rigorous Quality Assurance processes, there are other dependencies such as quality of recruitment and quality of output from the educational system.

Another way of ensuring quality is by hiring recognized professionals and ensuring professionalism in the sector. This is the role of professional associations. In Sri Lanka, the local and national professional association for ICT is CSSL. For BPM, such a body does not exist.

E. Skills Availability = SKILLS

From the quantitative analysis in this chapter, Skills availability was ranked at fifth position consistently. The importance of it was well supported by qualitative responses as well. A few important examples are given below:

1. Brain drain
2. Language skill set of the workforce available is a limiting factor.
3. Lack of skilled resources as education system does not match industry needs
4. Lack of availability of niche skilled resources
5. Lack of soft skills
6. Need to have a strategy to extend and grow skills beyond Colombo

This reinforces the various facets of skills development that the ICT/BPM sector needs to look at. It entails skill types, skill quality, skill levels and skill volumes. Chapter 6 discusses this in detail.

F. Ease of doing business = EASE

Ease of doing business (EASE) was ranked at 6th or 7th position in different ranking methods utilized in this chapter. The other factor that was placed at 6th or 7th position is "Startup eco-system, new product/service scalability = EXPANSION". Therefore, both have been identified at equal importance level within Supportive Factors layer. Ease of doing business come in a multitude of ways (based on qualitative inputs) such as:

1. Clear and simple contracting laws and processes
2. Well defined corporate laws
3. Effective and Efficient investment processes
4. Efficient banking processes
5. Clear, Simple and Efficient Company Registration and maintenance processes
6. Simple, Efficient, Lawful and Effective processes to move funds in and out of the country
7. Availability of office spaces and other support services

G. Startup eco-system, new product/service scalability = EXPANSION

Startup eco-system, new product/service scalability = EXPANSION was ranked at 6th or 7th position in different ranking methods we utilized in this chapter. Therefore, this has been placed as a Supportive Factor, and placed at seventh position and at equal level with Ease of doing business (EASE). This includes ease of contracting, ease of setting up, banking processes, investment processes, taxation and other administration processes, that help the smooth start, running and closure of a business. Industry bodies together with the Government needs to take a special interest in growing the startup ecosystem, improve innovation and facilitate scale ups as well these will enable the growth. Many initiatives within an overall strategy should be launched to facilitate startups as well as scale ups. Innovation also plays a key role in a conducive eco-system.

This model is the key outcome of this research. This is a nationally valid, researched model of Growth factors for Sri Lankan ICT/BPM industry. The researcher expects this to become the national standard for the growth of the said industry. The researcher expects that the industry of ICT/BPM and the government together will fully utilize this model to grow the industry to achieve set targets.

V. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this section is to summarize the findings and importantly present the end model to be used by Sri Lanka to grow the ICT/BPM industry based on the researched factors. It also intends to provide recommendations for the Government, the Industry and the Companies as to how they should utilize the Model, in order to grow the business for the Companies, and in turn help Sri Lanka achieve national targets for the ICT/BPM industry.

It became apparent from the research that Sri Lankan ICT/BPM industry has not grown to its maximum potential. However, the growth that it has achieved also has to be appreciated.

The research was able to unearth the factors that are limiting its growth. The research was able to go a step further and utilize those factors to develop a growth model for the Sri Lankan ICT/BPM industry growth.

Evidently turbulences in Sri Lanka from 2010 to 2020 have negatively impacted ICT/BPM companies, thereby slowed down the growth of the sector nationally. This may not have been that evident as the society adjusts and continue to live on, however a research helps us to unearth the invisible, and this research certainly has done that.

COVID 19 also had a severe impact on the industry. This is not a shocking revelation as this is globally known. However, this gives a reminder to the policy makers, the industry, companies as well as professionals to be mindful to find new avenues of opportunities to grow the business.

Sri Lanka's country brand for ICT/BPM is extremely poor. The research found out that the companies in the sector are broadly unhappy about the country branding.

Skills for the ICT/BPM industry is continuing to be a challenge. Attracting new talent, developing new talent, loss of talent due to migration and difficulties of attracting the expats back into the country were observed during the research.

The research also found out that global sales capacity of the industry is quite weak. This is true both at company level as well as at industry level.

Ease of doing business is also a challenge in growing the sector. This is prevalent in particular when large players attempt to setup in Sri Lanka or outsource work to Sri Lanka.

The Government funding for the overall industry promotion as well as the monitoring and leadership for the achievement of goals for the sector are weak.

The progress with developing the startup eco system is a positive, however, Sri Lanka is not yet recognized even as an emerging startup destination according to global standards. Expansion can be observed, which is quite organic, and the country has failed to leap frog or showcase any major disruptions.

The growth model was developed as a result of this research. This model is the key outcome of this research. This is a nationally valid, researched model of Growth factors for Sri Lankan ICT/BPM industry. The researcher expects this to become the national standard for the growth of the said industry. It is important to note that the model must be used in consultation with descriptions provided for each of factors.

The researcher recommends adopting the model proposed by this research as the national ICT/BPM industry growth model. It will guide the country, government, industry, companies as well as professionals in shaping up their activities and initiatives in a way that overall goals can be achieved.

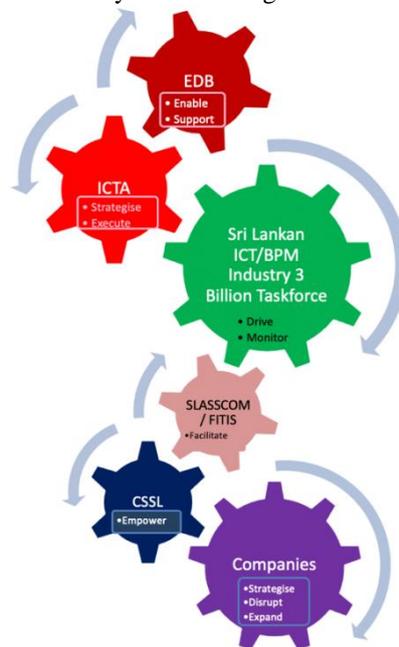


Figure 15: Execution Model

It is recommended that a high-level task force is formed with the auspices of the President of Sri Lanka to spearhead the implementation of the model, in order to achieve the industry targets, set by the government. It is worth noting that there was a research finding as discussed in Chapter 5 that there is no Cabinet or State Ministry of ICT/BPM (or just ICT) in the newly formed Sri Lankan government. It is recommended to review the process of managing the growth of this industry from an administrative structure perspective, as the ownership and accountabilities have to be drawn up clearly. It has to be noted that the research could not find an

administrative or strategic structure of which a certain unit was owning the achievement of previously set 5 billion USD a year annual export revenue target. The 5 billion number had initially been proposed by SLASSCOM, other stakeholders have accepted it as the number, however a point of ownership or accountability for achievement of it was lacking. Therefore, it is recommended that the same mistake is not made with the newly set 3 billion USD a year target. Qualitative research found that now ICTA is leading the effort with the support of other stakeholders.

However, the researcher proposes to ensure that this ownership and accountability is clear, the roles of each stakeholders are defined and appropriate funding is allocated by the GoSL for the execution of the program. For this, the 'Sri Lankan ICT/BPM industry growth model' developed by this research can help. To further support, the following execution process has been developed.

High-level responsibilities also have been given as a guide. Proceeding points in this recommendations section details the aspects that needs to be looked at by such an execution model/process. These recommendations are based on the research outcomes.

It is recommended to re-visit the country branding. Since there is overwhelming proof that the branding exercise has been a complete failure, it is recommended that "Island of Ingenuity" brand is critically reviewed altogether, and a new branding exercise is carried out. This is a revelation from the research that should prompt the Export Development Board (EDB) of the Government, ICT Agency of Sri Lanka, industry bodies SLASSCOM and FITIS and the professional Association for ICT – CSSL, to take up immediately. The researcher recommends having Sri Lanka tourism board and Ministry of Foreign Affairs also as stakeholders in the process to see if there are brand synergies.

Develop a new strategy for making skills available parrel to the growth of the industry. Skills development usually presents whether it the chicken or the egg first situation. If we develop too much human resources, will they have enough jobs as industry may not have gone to that level. If we bring too many projects from clients, will we have enough resources to work on those assignments? Therefore, it has to be a parallel exercise to develop the resources as well as grow the ICT/BPM industry. In this a holistic strategy should be developed to plan talent sources. These should include government universities, private universities and institutes, vocational sector and school leavers. ICT/BPM industry is very broad, hence talent at various levels can be inducted into the sector. The vocational sector can be revamped to make it a significant human resource source for the tech sector. Redundant graduates in areas such as Arts can be converted for this sector. Acceptance, recognition and affordability are the areas that the government needs to pay attention in regard to utilizing private education effectively. Some of the previous attempts in this area in the last decade did not prove very successful as tactics did not become a part of a well driven overall strategy.

Within Skills Development, it is also to factor in Soft Skill Development. This was reflected in our research findings. This industry depends heavily on how people can communicate and work with each other as well as with clients from overseas. Soft Skills as well as the language skills play a crucial role in facilitating that. English language is very important for someone to be part of the ICT/BPM industry that services international clients. Sri Lanka's education system still produces an output that is not highly conversant in English. This definitely needs to be thought through in Government policies relating to Educational reforms, within which Skills development reforms stand.

Migration also is a factor that is affecting businesses. This is related to skills. As people gather experience, they migrate to countries such as Australia. There is a significant brain drain from this sector. It is difficult for the industry or the companies to find solutions to this, the government needs to review policies around personal tax rules, transportation and logistics to make it attractive for professionals to continue to live in Sri Lanka, and also attract expats to return back to the country. While there have been programs to attract the expats back to the country, those were mainly industry initiatives and were not well supported by the GoSL. It is recommended to recommence a concerted effort. This will not only bring skills back, but it will also bring in new ICT/BPM opportunities into the country as these expats will have contacts with potential clients. Tax concessions, job facilitation, accommodation services, transport services and schools for children are some of the aspects that needs to be looked at. At the time of writing this thesis, Sri Lanka has controlled COVID 19 pandemic to a great extent whereas many other countries still suffer from it. This presents a window of opportunity to attract back the expats as well as skilled migrants. It is recommended to look at tapping into this opportunity.

Re visit all aspects of ease of doing business, to ensure ease of doing business. This includes operations at Board of Investments, Registrar of Companies and Banks via Central Bank of Sri Lanka. It also involves re-visiting legal and regulatory framework that facilitates business processes. The research findings show that large companies find it harder to setup or outsource work to Sri Lanka, in comparison to smaller clients. There have been discussions around a single platform to support investments, company registrations, necessary approvals

and logistics and this has not come into action yet. Such a platform will be very supportive of helping the industry grow. It will also support the growth of other industries as well.

The research findings also indicate that payment methods and payment gateways can be further improved to facilitate foreign remittances. It is important to note that some of the international players like Paypal needs to be engaged in this as partner of growth. However, there are local players attempting to disrupt in this area, the government, policymakers and regulators needs to empower them.

Maintaining national security and peace is far important for this segment than most other factors. While it is an overarching premise, it is Government's utmost responsibility to ensure no more disturbances, tensions or turbulences erupts in the country.

The research revealed that clients are considering the cost as an extremely important factor in the location decision for outsourcing. There was qualitative feedback that Sri Lanka's cost is slowly increasing in terms of labour cost. This is something the industry needs to closely monitor on. While individual salary increments are important, the industry needs to be mindful of the overall pricing that the country can offer.

Low end BPO work attracts lower revenues, whereas high end ICT and KPO work attracts better value. Given that Sri Lanka has relatively smaller populating resulting in a lower human capital, it should be used in high value adding services as much as possible. This is not to say that low end work should be avoided. Given that different skill sets can cater to different requirements, BPO work also needs to be supported, however, as a country the portfolio needs to be managed in a way that higher bandwidth is used for high end service provision. In terms of product portfolio and country brand building, it will also be important to highlight a few areas that Sri Lanka is really good at and have reasonable skills in. AI, IOT and Cyber Security are few areas that the researcher recommends in pursuing. In some of these areas, it worth positioning Sri Lanka as a Centre of Excellence and build the offering around that.

Overall policy and legal framework also plays a conducive role in helping a sector grow. There were qualitative research findings that indicate certain new legislations can help the growth, especially from a perspective of building the trust of all stakeholders.

Infrastructure also plays a key role in the growth of ICT/BPM industry. Telecommunication industry is quite strong as per the qualitative analysis. However, smaller players are finding it hard with office space at reasonable cost in the capital of Sri Lanka. Our literature survey revealed that most countries have embarked on developing tech parks and cities with government and industry collaboration to solve this problem. It is recommended to review and develop a plan for technology parks and cities. These parks will not only provide the office space, but also the eco-system necessary to nurture a human capital centered industry like ICT/BPM.

Finally, while this research is focused on Sri Lanka, the findings are supported by global research through the broad literature review. Therefore, this model as well as findings can benefit other similar countries as well, in particular the countries in South Asian Association for Regional Cooperation (SAARC) region. The researcher expects that researchers and industrialists from the ICT/BPM industries in other countries also will utilize this model, research findings as well as recommendations, and also extend the research into their respective countries to enrich the research in this domain.

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