

# Potentials and Future Prospects of Major Fruit Exports in Sri Lanka

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**Abstract** - Tropical fruits from Sri Lanka are highly rated worldwide due to their unique characteristics such as flavour, aroma, and colour. In terms of the fresh and processed fruit export industry, Sri Lanka has not tapped its full potential but only a speck of the total production reaches off-shore markets. Despite the significant evidence available on the fruit export industry in Sri Lanka, scant attention has been paid to its potential. Therefore, the overall objective of the study is to identify the export potential of Sri Lankan major fruit exports. Both primary and secondary data were used. Purposive sampling technique was employed in sample selection. According to weighted average score analysis pineapple has the most potential for export. The Gravity model found that the American region was the preferred destination for Sri Lanka's major fresh and processed fruit exports followed by Middle East and South Asia.

**Keywords:** *Export Potential, Major Fruits, Gravity Model, Weighted Average Score Analysis*

## I. INTRODUCTION

In Sri Lanka there is high potential for cultivating fruit crops for domestic and export markets. Compared to certain other countries in the region, given the favourable climatic and soil conditions, Sri Lanka has high prospects in the fruits. Moreover, specialties associated with Sri Lankan products such as superior flavours and vicinity and organic yield have elevated the industry's prospects. For instance, tropical fruits in Sri Lanka such as pineapple, rambutan, mangosteen and passion fruit are very popular around the world for their unique flavour, aroma and colour [1]. At present, the government of Sri Lanka hails export promotion as a key strategy to capture the international market. Further, the current local agricultural policy framework is aimed at modernizing Sri Lankan agriculture to draw a lucrative income from export crops. In this context identifying and addressing the issues that caused uncertainty in the fruit export subsector in Sri Lanka despite the growing world demand is a step in the right direction. With the recognition of proper niche markets, Sri Lanka may have the potential to develop exports of fresh and processed fruits. Therefore, scientific research directed at revealing the underlying reasons for market changes and potential niche markets is needed [2]. Therefore, this study was designed to analyze the export potential of major Sri Lankan fresh and processed fruits.

## II. MATERIALS AND METHODS

Both primary and secondary data were used for this study. Export data (from 2010 to 2020) collected from the Sri Lanka Customs was used. The primary data was gathered by using questionnaire surveys, key informant interviews, and case

studies. A purposive sampling technique was applied to select the sample from fresh and processed fruit exporters. Weighted Average Score Analysis was used to identify the most potential fruit crop for exporting. The Augmented Gravity Model was employed to estimate the export potential of Sri Lankan major fruits for the study period.

## III. RESULTS AND DISCUSSION

### A. Export Potential of Major Fruits in Sri Lanka

#### 1. Potential Commodities in Major Fruits in Sri Lanka: Weighted Average Score Analysis

Based on the methodology and the weightage given, the researchers have analyzed major fruits produced in Sri Lanka and calculated their individual scores. The individual scores of the major fruits are exhibited in Table 1.

**Table 1: Individual Scores of Major Fruits**

Fruit Crop	Individual Score Calculated	Rank
Pineapple	7.72	1
Banana	8.12	2
Papaya	9.82	3
Mango	10.02	4
Avocado	10.32	5
Lemon	10.35	6

Source: Authors' Own Calculation Based on Agricultural Statistics, Department of Census and Statistics and Sri Lanka Customs

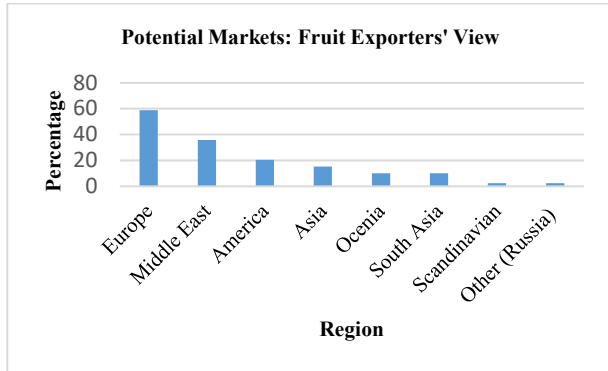
The scores depicted above are calculated on a ranking basis, therefore lower the score more the export potential of the crop is. The results revealed that pineapple has topped based on the scores above. Further, this is in accordance with the results shown in [3].

#### 2. Potential Markets for Sri Lankan Fruit Exports

As stated by key informants, China, Jordan, Singapore, Korea, Japan, and Russia are the potential new markets for Sri Lankan fruit exports. Figure 1 depicts the export regions that are believed to have export potential in the future for Sri Lankan fresh and processed fruits.

According to the majority (58.97%) of the surveyed fruit exporters, Europe has the highest potential for Sri Lankan fresh

and processed fruit exports, followed by the Middle East (35.90%), America (20.51%), and Asia (15.8%). A similar percentage (10.26%) of fruit exporters mentioned that Oceania and South Asia are potential regions as well. However, five percent of exporters indicated that Scandinavian countries and Russia can also be potential markets for Sri Lankan fresh and processed fruits in the future.



Source: Authors' Compilation based on Survey Data, (2021)  
Fig. 1. Potential Regions according to Fruit Exporters

### 3. Estimation of Export Potential through Gravity Model

Table 2. Estimation Results for Exports

Predictors	Coefficient	Standard Error	P value
Log (GDPit)	-1.855*	1.085	0.087
Log (GDPjt)	0.311	0.426	0.465
Log (POPit)	12.108**	5.229	0.021
Log (POPjt)	0.381	0.382	0.318
Log (PCGDPDijt)	1.788***	0.462	0.000
Log (DISTij)	-3.117***	0.403	0.000
Log (REERijt)	0.234*	0.132	0.075
Log (COLij)	-1.391***	0.513	0.007
No of Observations	165		
eta	0.113***	0.021	0.000
Gamma	0.628	0.430	

Note: \*\*\*Variables significant at 1% \*\*Variables significant at 5.0%  
\* Variables significant at 10.0%  
Source: Authors' Estimates

Importing country's GDP(GDPjt) and population (POPjt) have positive impact on Sri Lanka's fruit exports whereas distance (DISTij) has negative and significant impact on Sri Lanka's fruit exports. However, GDP of Sri Lanka (GDPit) shows a negative sign and is statistically significant while population (POPit) parameter is positive and significant. In addition, the difference between the factor endowments (PCGDPDijt) has a positive and significant impact on Sri Lanka's major fruit exports, which is in accordance with the Heckscher-Ohlin theory. However, real exchange rate (REERijt) has a positive and significant impact on Sri Lanka's fruit exports, implying that the exchange rate policy did not play a significant role in Sri Lanka's fruit exports. Therefore, the growth in Sri Lanka's fruit exports can be credited to effective export promotion programs and improvements in the production base. Coefficient for COLij has a negative sign and it is statistically significant. Further, this depicts that Sri Lanka's fruit export performance is not supported by colonial

relationships (COLij). Accordingly, most of the estimation results are in line with the existing literature even though some variables were found to be statistically not significant.

Maximum Likelihood Estimates of gravity stochastic frontier model was used to estimate the destination-wise potential of the fresh and processed fruit exports of Sri Lanka. Table 3 presents the region-wise results.

Table 3. Region-wise Export Results: 2010-2020 Average (Rs)

Region	Actual Exports	Potential Exports	Ratio of Actual to Potential	Unused potential (%)
European	45103993.04	196375842.6	22.97	77.03
American	161368319	186889959.8	86.34	13.66
Oceania	25318532.27	122639462.1	20.64	79.36
Middle East	660469137.2	1164703305	56.71	43.29
Asian	39362308.27	123320699.4	31.92	68.08
South Asia	33867801.6	59793556.34	56.64	43.36

Source: Authors' Estimates

### IV. CONCLUSION

The results depict that Sri Lanka has not tapped more than 50 percent of its potential in Oceania (79.36%), Europe (77.03%) and the Asian region (68.08%). Therefore, Sri Lanka can enhance fresh and processed fruit trade with above regions in place of the countries which have exceeded the trade potential. Weighted Average Score Analysis was used to identify the highest potential fruit crop for export from Sri Lanka. Pineapple has the highest potential for export. Therefore, government should encourage and facilitate commercial-level cultivation of pineapples.

### Acknowledgement

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