The Potential of Re-exports: A Probability for Fiji’s Trade Growth

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Abstract

This study investigates the significance of re-exports in Fiji. The dominance of the re-export of domestic exports is indisputable in Fiji; however, there is lack of literature concerning the performance of re-exports to total exports transiting the Fijian economy. This study aspires to fill that gap offering suggestions to strengthen the total exports of Fiji by diversifying the trade policies. Time series data is used for total exports, re-exports and domestic exports from 1985 to 2018 to establish an ARDL model. The model was subjected to diagnostic testing with a favorable outcome regarding the stability of the model for hypothesis testing. The findings re-affirm that re-exports are a significant predictor of Fiji’s total exports and trade growth. This research signifies the need for national policies to include the promotion of re-exports. Conclusively, the finding of this study is instrumental in updating or reshaping development policies for inclusive growth.

Keywords: Re-exports, Trade growth, Value adding, Trade balance, Inclusive policies, ARDL.

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1. Introduction

Re-exportation has coexisted with international trade, and in the last decade, re-export trading has immensely intensified. Ollus & Simola (2007) acknowledged that re-exports contributed 5%–15% of world exports in 2002, and Hong Kong’s share of re-exports grew from about 20% in the 1960s to 90% of current exports. The WTO (2017) reported that Hong Kong’s and China’s re-exports have increased from $179 billion in 2000 to $491 billion in 2016. Moreover, the strong emergence of re-exports has been aligned with growth in international trade, logistical efficiency, addressing asymmetric information, and a robust increase in global transport volumes, tariffs, quotas and taxation (Hanson & Robert, 2001; Ollus & Simola, 2007).

The logistical readiness reflects the ports’ efficiency in ensuring effective and competitive transport activities that guarantee low-cost goods delivery. In addition, the Hong Kong traders have acquired specialized knowledge on Chinese products that enable traders to market the products to the relevant destinations based on demand. On the other hand, Fisman et al. (2007), as cited in Ollus & Simola (2007), criticized Hong Kong traders for propagating a grey market and evading Chinese tariffs. Furthermore, in Latvia, re-exports have accounted for a significant share of the total merchandise exports attributed to globalization (Bětkovskis, Bērziņa, & Zorgtenfreja, 2016). An exogenous component for influencing the volume of re-exports is world trade, which was expected to grow by a modest 2.4% in 2017 with a forecast of 2.1%–4.0% for 2018 (WTO, 2017).

Re-exports represent commodities that are isolated from any further value adding in the intermediate economy; thus, it is re-exported in the original form in which it was imported. Moreover, there is a transfer of the commodity ownership to the purchasing economy. Hence, in transit trade, the ownership does not shift to the purchaser in the intermediate country. The dilemma of inclusion or exclusion of re-exports in trade statistics is subjective to the trade classification system. Ollus & Simola (2007) reported that under the general trade system, re-exports are recorded as both imports and exports; however, the special trade system (rechristened by the UN) warrants the exclusion of re-exports from exports and imports. In addition, failure to properly account for re-exports will distort an economy’s market share and sector competitiveness. Moreover, ignoring re-exports may cloud the potential contribution of domestic exports to an economy’s progress. On the other hand, transitting commodities generate revenue for the domestic government. Benjamin, Golub, & Mbaye (2013) disclosed that the trade duties from re-exports are a major contributor to government revenue of The Gambia and Benin in Africa. Re-exports also generate revenue through repackaging, resale, and costs related to the storage and transportation of these commodities (Gehlhar, 2010). It is now easier than ever to link economies due to economic globalization (the interaction and integration of goods, services, capital, technology and information). The OECD (2017) reported that globalization encourages firms to restructure their production processes through international outsourcing and offshore activities. Benefiting from globalization without violating the basic concept of comparative advantage shapes global value chains (GVCs). GVCs combine different stages of production processes or supply side outputs of multiple countries in producing finished goods that link local producers to international markets. Fung (2013) summed up GVCs by suggesting that products made today are “made in the world” rather than in a single country. In light of GVCs, multinational companies have been perceived as agents of re-exports; however, intrafirm trade involves the transfer of semi-finished products that must undergo value adding. According to Ollus & Simola (2007), only a fraction of intra-trade occurring between multinational companies can be regarded as re-exportation.

The Fiji Islands is a cluster of approximately 330 islands with a land mass of 18,333 sq km of which roughly a third is inhabited. During colonialism, Fiji gained access to the London market, revitalized its sugar industry that was highly capital intensive, addressed the labor shortage via the indenture system, and diversified into copra, bananas and gold to sustain trade balance with falling sandalwood, bêche-de-mer and cotton production (Gounder, 2015). The post-colonial era has been shadowed by political instabilities (the coups of 1987, 2000 and 2006). The dominance of the agriculture sector has subsided, and in the 2000s, Fiji’s gross domestic product was primarily carried by the service sector followed by the manufacturing and agriculture sectors, respectively. Fiji is an upper-middle-income country with a gross national income (GNI) per capita between $4,096 and $12,695 (World Bank, 2022). This study aspires to explore the re-export behavior in Fiji by examining the types and volumes of commodities transiting the Fijian hub. The study provides important insights for Fiji policy makers on how Fiji can converge and participate in the global re-exportation market. The rest of the article is organized as follows: Section 2 reviews the existing literature; Section 3 describes the empirical model and data; Section 4 discloses the empirical results; and Section 5 concludes.

2. Literature Review

Over the years, re-exports have been a substantial component of total exports surpassing the volume of domestic exports not only in Fiji but in numerous other countries as well. The contribution of re-exports to the gross domestic product (GDP) has nearly doubled in the past twenty years. Although the re-exportation of goods does not transform the commodity in any way but value is added to it in terms of labelling and repacking, commonly termed as the re-export mark-up. It is basically the divergence from the import unit value and the export unit value (Dawer & Jain, 2015). Even though re-exports are considered a part of domestic exports, this inclusion may have several implications for the exporting country.

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1 The grey market constitutes distribution of commodities through channels that are legal but unintended by the original manufacturer. Moreover, the economic activity via the grey market is not accounted for in official statistics.

2 Transit trade is never recorded in the trade statistics (Ollus & Simola, 2007).

3 Intra trade involves trading products that belong to the same industry which are both exported and imported.

4 There were two coups in 1987—May 14 and September 23. The 2000 coup was on May 18. The fourth coup was on December 5, 2006.

5 See the conference paper on re-exports in the US and India which clarifies policy guidelines with reference to the aforementioned countries.
A substantial amount of exports from Finland to Russia is made up of re-exports. Ollus & Simola (2007) examined the re-export behavior from Finland to Russia in 2005. High-value goods such as electronics and vehicles were under scrutiny. It is believed that re-exports misrepresent volumes of trade when they are not separated from exports, thus distorting the image of a country’s market share and consequently its competitiveness in the export market. Re-exporting goods has become increasingly important for the Dutch economy over recent decades. Furthermore, re-exports have grown more rapidly during the past two decades than exports of Dutch-produced goods (Statistics Netherlands, 2016). Rusters & Verbruggen (2001) substantiate the claim that re-exports have been growing rapidly by studying the trends in the Dutch economy. However, they argue that the products that are re-exported are not produced in the domestic country, thus the service, commercial and transport sectors will mostly be affected. The levels of employment and income are affected in the respective sectors of the economy as the commodities/transactions originate from another country. It is believed that recording re-export transactions should not have an impact on the trade balance since they would be crossed out, but the import prices may not always match the export prices, thus giving rise to over or understatement of the prices.

Moreover, as re-exports have conventionally been the drivers of economic growth, re-exports can mask the link between trade and economic growth thus altering the market share of a country. Additionally, as mentioned earlier, re-exports are included in determining the total merchandise trade value, but for some countries, such as Hong Kong, China, the volume of re-exports is so extensive (around $498 billion in 2015) that it has been excluded from the world and Asian aggregates. Burger, Thissen, Van Oort, & Diodato (2014) found that the classification of re-exported commodities as a component of total exports not only distorts the trading pattern but also affects the magnitude of trade. At times, the re-exports are double-counted as the final destination may differ from the registered destination leading to a fallacious volume of trade. A country’s internal trade is also impacted as large re-exports underestimate the proportion of domestic trade in a country. This study uses a new and coextensive dataset consisting of goods and services for 25 European countries and their dominant trading partners to examine the trade variations in commodities and services while controlling for the re-export of goods explicitly to determine the volume of trade in goods and services. It was concluded that although more goods are bilaterally traded in comparison to services, distance does not deter trade in services.

Lankhuizen & Thissen (2014) argue that the data on bilateral trade flows are not adjusted for re-exports when estimating models of international trade, which indicates that a re-exporting country is taken as the country where trade has originated from as well as being the final destination of the trade flow. By not accommodating for re-exportation, the trade data may result in distance decay of trade being erroneously valued, a country’s major trading partners may not be properly recognized and the volume of total world trade is therefore overvalued. Moreover, this may lead to a misguided export promotion policy by the policy makers and overvaluing the volume of trade will result in misrepresenting trade in achieving economic growth and development. This study attempts to correct these trade patterns by collating data from 40 countries listed in the World Input-Output Database with 59 categories of products from 2000 to 2012. The data was corrected for re-exports by employing a controlled non-linear accession method. The results revealed a significant difference in the trade of goods between countries (over 5% on average), and the distances are miscalculated, thus having consequences for a country’s trade policies.

It is indisputable that lower trade barriers increase the movement of goods across the globe. A study by Rettab & Azzam (2008) took port expenses and their effect on the concentration of re-exports into consideration. They postulated that shipping costs and coordination are major factors influencing the clustering of re-exports. A relative statics model was formulated that measured the degree of the effect of port costs on the re-export concentration, and further developed predicaments under which the re-export intensity was inversely related to the port costs. The costs and re-export intensities were analyzed for five Asian ports, namely Mumbai, Dammam, Dubai, Hong Kong and Manama. The costs at ports included services offered there and the cost of storage, transport and documentation. They discovered that the transportation costs and logistics had the most significant impact on re-export intensity.

Another study by Mellens, Noordman, & Verbruggen (2007) revealed that the growth of re-exports in the Netherlands has been growing and so have the re-exports in world trade. A total of ten European countries’ trade data was analyzed for this study by using the export performance index and market performance index. The result of this study indicates that the re-export values are double-counted in the global trade figures. This depicts that the volume of world trade is expanding at a faster rate than the production of exports, which is clearly a misrepresentation of world trade. Despite these discrepancies, there are motivations for engaging in re-exportation activities, especially for some multinational firms. One major benefit highlighted in this study is that multinational companies often engage in these activities to avoid tax/tariffs or infringe quotas set by the government. An intermediate country is used by the country of origin to supply products to the destination country without being concerned about the tax/tariff regulations because it will be bypassing them. Apparent revelations about the trade indicators are that the growth of the export market is magnified, and there is an amplified loss of market share for manufacturers in the Netherlands. However, Beškóvskis et al. (2016) found that including re-exports not only magnifies the total exports market but also has other serious consequences. A study that examined Latvia’s re-exports used an anonymized firm-level trade database which provides data from 2003 to 2013 with detailed information on international trade. The study revealed that when re-exports are part of total exports, the actual impact of shocks on certain commodities and trading partners are not measured accurately. There are more implications for the domestic economy as the real impact may be over or understated regarding certain commodities and trading partner countries. The study emphasized that re-exports should not be undermined since the average mark-ups on re-exports were significant, and that engaging in re-export activities may contribute to a country’s GDP.

Despite the impediments of recording re-exports as part of domestic exports, this phenomenon has continued to grow. It has been observed that re-exportation costs as import countries act as transport hubs, receipt of trade in goods and they are well developed and have excessive storage space and transporting avenues. Large storage spaces and ease of transportation together with tariff avoidance are the factors that incentivize the growth of re-exportation. Moreover, as an intermediary, a re-exporting country may possess better knowledge on the product sources and

* See World Trade Statistical Review, 2016
markets in which the product is in demand, therefore reducing asymmetric information between the buyers and the sellers. Re-exporting generally applies to differentiated goods, such as machinery or electronic devices. Furthermore, it enhances efficiency and increases the ease of doing business between traders (Hanson & Robert, 2001).

3. Data and Empirical Model

The period of study is 1985–2018 with data sourced from the Fiji Bureau of Statistics. In compiling the data, there were two-phase interviews conducted by the researchers. The interviews involved consultation and deliberation on Fiji’s re-export market with personnel from the Fiji Bureau of Statistics and the trade unit in the Ministry of Industry, Trade and Tourism. The dataset includes revised trade balances for 2016 and 2017 with provisional values for 2018. Annual time series data on total exports (FJ$ 000), domestic exports (FJ$ 000), and re-exports (FJ$ 000) was sourced from the Merchandise Trade Statistics release of the Fiji Bureau of Statistics.

In ascertaining the importance and significance of re-exports, the explained variable of total exports is determined using re-exports and domestic exports. To establish the appropriate model, a unit root test using the augmented Dickey–Fuller (ADF) test was utilized to check the stationarity of the variables. The series were found to be stationary at level I(0) and at first difference I(1), thus it is appropriate to use the autoregressive distributed lag (ARDL) model. The ARDL model can capture both long-run and short-run relations of the cointegrated variables. The following model is used with data in log (LN) form:

\[ \text{LNTEXP}_t = \beta_0 + \beta_1 \text{LNEXP}_t + \beta_2 \text{LNREXP}_t - \text{Disruptions}_t + \mu_t \]  
(1)

Where LNTEXP is the total exports that represent annual merchandise export for Fiji, LNEXP is domestic exports capturing the commodities that were produced domestically in Fiji; and LNREXP signifies re-exported commodities that are isolated from any further value adding in the intermediate economy and is thus re-exported in the original form in which it was imported. Furthermore, it is expected that both domestic exports and re-exports will have a positive sign. In addition, disruptions capture the potential distortion to total exports. Disruptions used in this model are political instabilities, cyclones, drought, flash floods, and global economic crises, where the presence of disruptions = 1 and the absence of disruptions = 0. It is highly anticipated that disruptions will have a negative sign.

The error correction version of the above is as follows:

\[ \Delta \text{LNTEXP}_t = \beta_0 + \sum_1 \beta_1 \Delta \text{LNTEXP}_{t-1} + \sum_1 \beta_2 \Delta \text{LNEXP}_{t-1} + \alpha_1 \text{LNEXP}_{t-1} + \alpha_2 \text{LNREXP}_{t-1} - \text{Disruptions}_t + \mu_t \]  
(2)

The ARDL (2,2,1,0) model was selected based on the Akaike Information Criterion. The above models were estimated using EViews 9.0.

4. Empirical Results and Analysis

This section presents the findings in two subsections. Subsection 4.1 displays graphical measures, and subsection 4.2 presents the ARDL analysis.

4.1. Graphical Measures

Fiji’s total exports were immensely outlined by domestic exports until the late 2000s (see Figure 1). However, re-exports have abruptly re-shaped the total exports since 2009. As such, the fluctuations in re-exports narrated the movement in total exports, while domestic exports displayed calm and marginal disruptions. A momentary observation may favor re-exports outweighing domestic exports and criticize government efforts to promote domestic exports. However, the ratio of domestic exports to total exports dominates the total exports with the exception of the period from 2012 to 2014 (see Figure 2). Furthermore, re-exports have seen a substantial growth as a percentage of total exports from 2009. A notable finding is that re-exports have the capability of escorting total exports when domestic exports contract. An explicit case is the declining domestic exports percentage from 2009 to 2011 due to the floods in Fiji in January 2009, while escalating re-exports neutralized the anticipated drastic fall in total exports (see Figure 2).

![Figure 1. Fiji’s total exports, re-exports and domestic exports (FJ$ 000), 1985–2018.](https://example.com/fiji_exports.png)

The disparity between the domestic export percentage and the re-export percentage to total exports in 1985 was 40.46% and was dominated by domestic exports (Figure 2). However, in 2018 the disparity between the ratios is 12.56% with the domestic export ratio at 56.28% and the re-export ratio at 43.72%. This highlights the significant proportion of total export share captured by re-exports over the years.

![Figure 2](attachment:figure2.png)

Figure 2. Fiji’s domestic exports to total exports (%) and re-exports to total exports (%), 1983–2018.


The findings do not imply that re-exports are superior to domestic exports or that re-exports can replace domestic exports. An investigation was carried out to re-affirm significance of re-exports as a probable cause for Fiji’s trade growth. The Reserve Bank of Fiji (2017) disclosed that Fiji acts as the regional transshipment hub for petroleum products as regional countries do not have the storage capacity to import petroleum. In 2007, the national growth document, Sustainable Economic and Empowerment Development Strategy (SEEDS) 2008–2010, advocated diversifying the domestic export markets to improve Fiji’s involvement in the global market and its economic advancement. Furthermore, the Roadmap for Democracy and Sustainable Socio-economic Development (RDSSED) 2010–2014 outlined tools for domestic export promotion, such as the National Export Strategy and Demand Driven Approach. In 2014, the Green Growth Framework for Fiji: Restoring the Balance in Development that is Sustainable for Future complemented the RDSSED. An interesting phenomenon is the absence of including re-exports in national policies.

### 4.2. Regression Analysis

Table 1 presents the results of the ARDL test statistics specified in Equation 2 with total exports as the dependent variable. As anticipated, domestic exports and re-exports are highly significant positive determinants of total exports both in the short and long runs (see Table 2). Furthermore, the outputs below substantiate that re-exportation is a significant predictor of total exports in Fiji. It is highly recommended that an inclusive national policy is implemented to explore the potential of re-exportation in Fiji.

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Estimates</th>
<th>T-statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-run estimates Equation 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>α (Constant)</td>
<td>0.797***</td>
<td>2.092</td>
</tr>
<tr>
<td>β (LNEXP)</td>
<td>0.755***</td>
<td>21.049</td>
</tr>
<tr>
<td>δ (LNREXP)</td>
<td>0.227***</td>
<td>12.095</td>
</tr>
<tr>
<td>Disruptions</td>
<td>-0.012</td>
<td>-0.612</td>
</tr>
<tr>
<td>Short-run estimates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Constant</td>
<td>0.751***</td>
<td>1.056</td>
</tr>
<tr>
<td>Δ LNEXP</td>
<td>0.808***</td>
<td>17.745</td>
</tr>
<tr>
<td>Δ LNREXP</td>
<td>0.223***</td>
<td>14.860</td>
</tr>
<tr>
<td>Disruptions</td>
<td>-0.009</td>
<td>-0.062</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>---</td>
<td>0.99</td>
</tr>
<tr>
<td>Durbin–Watson statistic</td>
<td>---</td>
<td>2.15</td>
</tr>
</tbody>
</table>

Note: *** Significant at the 1% level, ** Significant at the 5% level.

Moreover, disruption is negative and not significant (see Table 2). It may be that political instability does not influence total exports because during political instability, when the traditional trading partners imposed trade sanctions, Fiji was able to successfully collaborate with Asian and North American markets. Thus, the export market was not compromised. In addition, the few possible justifications put forward for the adverse effects caused by cyclones, droughts and flash flooding are insignificant as these natural disasters do not affect all the divisions in Fiji simultaneously, the relief aid from other countries fast-track the recovery period, and the global prices of commodities that Fiji export may have revised upwards. In addition, spillover from the global economic crisis may have been marginal for Fiji. Fiji is a Small Island Developing State and its participation in the global export market may have been too minimal to feel the full effects of the global crisis.
Table 3 outlines the various residual diagnostic test results. The model generally satisfies the diagnostic criteria, such as the residuals being free of autocorrelation based on the Breusch–Godfrey serial correlation LM test. In addition, the model has the correct functional form (no misspecification) based on Ramsey’s RESET test and the residuals were normally distributed based on the Jarque–Bera test. Furthermore, the model is desirable (constant error variance) based on the Breusch–Pagan–Godfrey test. The error correction model cointegrating coefficient was -0.76, thus the long-run adjustment is 76% and significant. The model cleared the bounds test where the F-statistics rejected the null hypothesis at all significance levels establishing a long-run relationship between the cointegrating variables.

Table 3. Diagnostic tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Obs. Resquared</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial correlation</td>
<td>2.548</td>
<td>0.0796</td>
</tr>
<tr>
<td>Heteroscedasticity: BPG</td>
<td>13.213</td>
<td>0.1532</td>
</tr>
<tr>
<td>Heteroscedasticity: ARCH</td>
<td>1.480</td>
<td>0.2236</td>
</tr>
<tr>
<td>Functional Form</td>
<td>---</td>
<td>0.8178</td>
</tr>
<tr>
<td>Residual Normality</td>
<td>---</td>
<td>0.3813</td>
</tr>
</tbody>
</table>

5. Conclusion and Policy Implications

Total exports encompass the re-exports and domestic exports in international trading accounts. Domestic exports include merchandise that is locally produced, while re-exports are commodities that are exported in their original imported form. The importance of re-exports to Fiji’s trade balance over the past few years is evident as re-exports have dominated total exports overshadowing domestic exports. Countries only have an interim possession of the commodities that are exported but the gains from trade are attained at the macro level. These gains are in terms of the tax revenues generated by the government, revenues gained from the marked-up prices of the commodities, and revenue arising from transportation and storage costs as many ports act as hubs. Moreover, the benefits are not only limited to the gains realized by the exporting country but the costs for the trading partners are also reduced.

Re-exportation further reduces the predicament of asymmetric information among trading partners. Taking into consideration the contributions of re-exports to total exports, the study entails an investigation to determine the significance of re-exports to Fiji’s total exports. Therefore, the short- and long-run effects of re-exports to total exports were analyzed using the ARDL approach and the results suggest that re-exports are a significant predictor of total exports in the short run as well as the long run. Currently, there is no policy on trade promotion with regard to re-exports in the National Export Strategy of Fiji, therefore, policies should be designed and directed towards enhancing the re-exports base to gain higher benefits from trade. Improving the storage capacities of Fiji’s ports will permit more bulk buying and on-time delivery of goods. Also, improving the infrastructure of the airports and the wharfs to cater for more cargo planes and vessels to facilitate faster delivery of goods to the destination countries will enhance the growth of the re-export sector in Fiji. Being the hub of the South Pacific, Fiji can reap the benefits of international trading by expanding its re-export capacity as the results suggest a high correlation between re-exports and total exports in the short and long runs.

References


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