Graduation from Least Developed Country Status within a Captive Global Value Chain [1]: Case study of the Solomon Islands

Abstract

Since the Least Developed Country (LDC) category was agreed by the international community in 1971 the number included has more than doubled while only a handful of countries have graduated. This situation, prior to the coronavirus pandemic, was expected to change dramatically in the first half of the 2020s as an unprecedented number of LDCs reach graduation thresholds, based mainly on income grounds and mostly comprising Pacific Small Island Developing States (SIDS). However, the graduation of Pacific SIDS remains highly contentious given their extreme vulnerability to climate change and unless carefully managed the process itself could result in an extreme trade shock, accentuating existing economic vulnerabilities. The fragility of trade within Global Value Chains (GVCs) and lack of resilience has been viscerally highlighted recently. This paper focuses on the Solomon Islands as a SIDS case-study to explore how existing economic vulnerabilities could be accentuated through the graduation process. It adopts the global value chains (GVC) framework to explore how the captive position of the Solomon Islands within the tuna fisheries value chain and the changes in market access as a result of graduation could have extreme consequences unless mitigated by entry into a reciprocal free trade agreement. Trade policy negotiation though pivotal to enable continued GVC participation would fail to address the fundamental asymmetries at play. Therefore, given the pre- and post-graduation conditions within GVCs characterised by captive value chain structures, much greater consideration is required of how the contractual relationships between firms and governance, enables or disables improvements in LDCs functional positions by the international community.

1. Introduction

The LDC category was created and accepted by the international community in 1971, well before the trading landscape was widely acknowledged as characterised by global value chains (GVCs) and the unfolding impacts of anthropogenic climate change. Since the 1970s the number of countries categorised as LDCs has more than doubled whilst the number of graduating out of this status has been paltry. The LDC category has changed substantially over time and it has long been recognised that it is only 'an official classification, not a neutral measure of poverty' (Page and Hewitt 2002: 91). Despite this, the category undoubtedly includes some of the world's poorest and vulnerable countries and affords material advantages to their economies, primarily in the form of ODA and preferential treatment in international trade.

Trade preferences for development were also initially agreed in 1971 when GATT Members agreed to a temporary Generalised System of Preferences (GSP) – an arrangement that formally allows developed countries to offer non-reciprocal and preferential access to their markets for goods from qualifying developing countries. The GSP was initially a temporary agreement, but it was extended for an indefinite period through the 'Enabling Clause' of 1979 (GATT 1979), which embedded the GSP in international economic law and set a key legal precedent for the special and differential treatment (S&DT) of developing countries.

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The GSP has been criticised for encouraging specialisation and rent seeking within specific sectors – particularly because rules of origin have redistributive effects (Jovanović, 2011) - as opposed to the intended advancement of economic diversification (Cirera et al., 2011). However, whilst there is a wide literature on the pros and cons of trade preferences for development, there is rather less on how these mechanisms actually target the specific characteristics of LDCs: high economic vulnerability, low human capital and extreme exposure and vulnerability to environmental shocks. Moreover, since the landscape of global trade has manifestly changed in recent decades, given the ascendency of GVCs, who benefits from trade preferences and how through the distribution of rents within the chain remains a pertinent research question that has not been addressed in a meaningful way.

Overtime the graduation criterion of LDCs has been tightened up. This means that LDCs with per capita incomes more than a certain threshold relative to other LDCs enter into the graduation process. This tightening up of the criteria along with the view of the CDP that LDCs with per capita incomes substantially above their thresholds is “deemed to have sufficient resources to address its challenges without recourse to LDC-specific support measures” (CDP, 2020), means that a greater number of LDCs located in the Pacific and classified as Small Island Developing States (SIDS) now meet the thresholds and as a result have entered into the graduation process.

However, the inclusion of such countries within the gradation process given their extreme vulnerability to climatic and other environmental shocks and their removal from targeted support mechanisms, including trade preferences for development, remains highly contentions. At the 2018 triennial review, the recommendation by the Committee for Development Policy for the creation of a category of countries facing extreme vulnerability to climate change and other environmental shocks was dismissed by UN members. This process identified those countries in a position to leave the LDCs but which remained reluctant to do so in view of the extreme environmental vulnerabilities (notably Kiribati and Tuvalu).

International agencies such as the World Bank and International Monetary Fund have historically failed to take into account the specific needs of LDCs, though this has been consistently advocated for by the United Nations Economic and Social Council. Given the somewhat fraught history of the LDCs and their relation to the international development support architecture – mainly because the international financial institutions predominantly rely on income measures of economic vulnerability in their lending - it is perhaps unsurprising that there remains a major reluctance by UN members to recognise the specific needs of SIDS or create any new sub-category within the LDC targeted global support architecture better tailored to their needs. However, now that Covid-19 has exposed all of our inherent vulnerabilities within an interconnected globalized world – jeopardizing the smooth graduation trajectory of the handful of forthcoming graduates from the LDC category, as recognized in the 2021 triennial review – greater acknowledgment of the devasting risks arising from environmental vulnerabilities must be forthcoming.

There is widespread recognition that SIDS face specific economic challenges to do with small size and physical remoteness and heightened vulnerability to natural disasters and climate change. Yet despite long-standing work within the UN system, including the Barbados Programme of Action (BPOA 1994), its decadal reviews, and the joint representation of LDCs and SIDS at the UN from an office in New York City, meaningful recognition of the SIDS concept has not taken effect in international economic law. This is for at least three reasons. First, historically, countries self-identifying as SIDS are highly heterogeneous, various attempts to generate definitions have met with analytical difficulties (Campling 2006). Second, and related, even agencies recognised by the UN system use different lists of SIDS – compare the 44 country membership of the Alliance of Small Island States with UNCTAD’s ‘unofficial list’ of 28 – resulting in politically important exclusions.

Finally, and most importantly, China and other large countries reject any further differentiation among developing countries that may result in the erosion of the 'value' of developing country status in international economic law, most notably at the WTO.

The need for urgent and concerted action in view of the unprecedented challenge of climate change for SIDS and the longstanding developmental challenges of LDCs has been consistently advocated for within the IPoA for LDCs and the Samoa pathway for SIDS,(a political declaration that calls for new partnerships for secure sustainable development). But the international system is currently preoccupied with the tensions between the dominant economic powers, trade wars and the undermining of global economic governance, and now the coronavirus pandemic. Nonetheless, longstanding challenges related to the entry into as well as upgrading within GVCs by all LDCs, as well as those graduating, remain pressing; indeed, the current crisis makes the vulnerabilities faced by SIDS and LDCs even starker.

The case-study analysis of the Solomon Islands explored in this article, which is both a SIDS and LDC, illuminates these issues. It examines the articulation of LDC status and associated duty free GSP access to the EU market, the Solomon Islands' position in the GVC that uses this duty-free access, and the implications of LDC graduation on a labour intensive export industry adversely affected by tariff impositions. We demonstrate the ways in which the captive position of the Solomon Islands within the GVC – itself an outcome of inherent characteristics similar to many LDCs – may be accentuated through the exit from LDC status. The article is organised as follows. First, the GVC perspective and methodological approach towards the trade impact assessment of graduation from LDC status is introduced. The case-study of the Solomon Islands and its major findings are explored in Section 3 and the implications of these findings and their implications for pre- and post-graduation support by international agencies discussed. Finally, this article concludes by calling for much more careful consideration by the international community of how the graduation process itself may contribute to an exacerbation of existing power asymmetries for LDCs trading within captive GVCs, therefore accentuating existing severe economic vulnerabilities.

2. Trading within Captive Global Value Chains by Least Developed Countries: Focus on the Solomon Islands

For late industrialisers, particularly the LDCs, the challenges of facilitating integration with GVCs through tax and other fiscal incentives, whilst directing efforts to facilitate upgrading processes, in view of severe capacity and capability constraints are formidable (Keane, 2019). As the global trading system has evolved to become more integrated, preference erosion has reduced the competitive advantage available for LDCs in developed country markets. It is generally recognised that the rise of the emerging Asian economies - including China - and their integration within the global trading system, has led to competition at entry level positions within GVCs becoming fierce, with available shares of value added becoming less over time (Gibbon and Ponte, 2005; Baldwin, 2012).

As of December 2018, there are 47 LDCs, all of which face severe structural impediments to their sustainable development. Of these, five will graduate by the end of 2024 which includes Angola (2021), Bhutan (2023), Sáo Tomé and Principe (2024), Solomon Islands (2024) and Vanuatu (2020).[2] Whilst Kiribati and Tuvalu have been identified as ready to exit the category, mainly on income grounds, they have been reluctant to do so in view of the absence of alternative support mechanisms to address severe environmental vulnerabilities. Despite their graduation being recommended by the CDP as contingent on the creation of a specific support mechanism, this proposal was not accepted by UN members reluctant to create any new category of developing country.

[2] **https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/ldc_list.pdf**

Only a limited number of LDCs have been able to effectively engage with the modern export sector and vertically fragmented trade as manifested within GVCs; this includes within GVCs such as processed fisheries. The available evidence on developing country producers upgrading through engagement with GVCs is mixed and temporally and context specific; there are few detailed comparative analyses of upgrading processes for LDCs within GVCs. But it is known that GVC governance tends to be hierarchical and – perhaps as a result of this – with limited upgrading achieved by local firms (e.g. Gibbon and Ponte 2005; Whitfield et al 2020).

Some of the main challenges to gainful trade in GVCs today are beyond the direct control of governments and go beyond tariff barriers (Keane and Melamed, 2014). It is a fact that some of the poorest countries in the world have been battling within the midst of the coronavirus pandemic against multinational firms to secure payment for goods contracted for and already in transit. The coronavirus crisis has laid bare the fragility of global supply chains and the nature of relationships with suppliers in poorer countries. With a few lead firms (buyers and traders) typically controlling access to end markets, suppliers have reduced market power that limits their capacity to adapt to demand shocks. Reduced inventory management as a result of just-in-time delivery has presented visceral limitations during the coronavirus pandemic. In view of the vulnerabilities exposed – such as shortages, the inability to source relevant equipment, imposed export restrictions and so on – many policy makers are now adapting trade policy to emphasise "resilience". But what does building resilience mean within the context of LDCs trade within GVC and future graduation?

The extremely limited nature of export (as well as import) diversification and insertion within what can only be described as captive Global Value Chains (GVCs), coupled with the fact that the international support architecture as currently construed fails to tackle these issues, would always have meant the exit from the LDC category could be bumpy road. Whilst the Sustainable Development Goals (SDGs) rightly give much greater prominence to the trade and development aspirations of the LDCs, the focus on GVCs as the modus operandi and integration within the agreed framework for development assistance is more implicit than explicit. The graduation of a greater number of LDCs is a specific objective of the Istanbul Programme of Action (IPOA) 2010-2020. However, whilst the SDGs specifically mention the trade targets of IPOA, they fall short of explicitly targeting LDCs within Aid for Trade targets, though remain wielded to the Doha Development Round's call for the implementation of complete duty free and quota free market access for LDCs by all World Trade Organisation (WTO) members. This matters because it shows how international support measures to support LDCs in their graduation and transition process are lacking.

2.1 GVCs and Graduation from LDC Status

The literature on LDCs and trade related issues to the graduation process is even more limited. The adoption of a GVC perspective to analyse LDC graduation remains an important area of research. Some studies have recently been undertaken to explore the implications of the exit of Bangladesh – one of the world's leading manufacturers of textiles and clothing –from the LDC category (Razzaque et al., 2019). Should this process continue – which the global pandemic throws into major doubt – it will shake up clothing supply chains, because of changes in tariffs and therefore relative market access offered to Bangladesh. In comparison, unlike Bangladesh, the Solomon Islands is far from a dominant player within the GVC it specializes - processed tuna fisheries – but it is still an important participant in view of its natural resources (tuna) and geographic position in the Western Central Pacific Ocean (WCPO).

Whilst there may be some similarities, the structure of value chain governance for the Solomon Islands exhibits "captive" characteristics. These different types of position within a GVC and their

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characteristics in terms of governance structures were first conceptualised by Gereffi et al., (2005). The captive type of value chain is defined as follows:

"**…**small suppliers tend to be dependent on larger, dominant buyers. Depending on a dominant lead firm raises switching costs for suppliers, which are "captive." Such networks are frequently characterized by a high degree of monitoring and control by the lead firm. The asymmetric power relationships in captive networks force suppliers to link to their customer in ways that are specified by, and often specific to a particular customer, leading to thick, idiosyncratic linkages and high switching costs all round." Gereffi et al., (2005).

Regarding changing GVC governance structures, the dominant framework used to understand value chain governance and upgrading opportunities (Gereffi et al., 2005) refers only to the coordination of activities between firms, whereas in the earlier literature the interplay between local inter-firm networks, business associations and public-private institutions was recognised (Humphrey and Schmitz, 2001); this focus is also the terrain of the Global Production Networks literature. The potential for downgrading within GVCs has been explored given the formidable challenges of changing value chain governance structures to more economically advantageous positions for producers in sub-Saharan Africa (Gibbon and Ponte, 2005).

However, downgrading within GVCs as a direct result of trade policy changes such as graduation from LDC status have not been explored. Some analyses have pointed towards this potential (Stevens et al., 2011); others have directly linked GVC participation to trade policy rents created (Stevens and Kennan, 2001); finally, others have established the centrality of trade policy to the commercial structure of specific GVCs (Curran 2015; Curran and Nadvi 2015; Curran et al. 2019)

Solomon Islands has achieved major accomplishments in relation to economic and social progress since the civil war ended in 2003 (UNDESA Impact Assessment). The process of graduation from LDC status which will complete by the end of 2024 is based mainly on increases in per capita income. This income figure itself can be skewed by many different factors. In addition to these concerns, graduation from LDC status will increase the competitiveness pressure on the processed fisheries sector, unless Solomon Islands accedes to the Interim Economic Partnership Agreement (IEPA) with the European Union, agreed in 2012, and the transitioned EPA (IEPA) with the UK which come into force on 1 January 2021.

Adoption of the GVC perspective to analyse changes in the functional position as a result of graduation within the processed fisheries sector was undertaken by Allard and Campling (2018) based on a methodology defined by Keane (2018) based on Stevens et al., (2011) and found that unless action was taken to achieve commensurate market access to that derived from LDC status - such as through a Free Trade Agreement – the Solomon Islands could be severely economically disadvantaged because of its high economic dependency on the sector for jobs and exports. The analyses undertaken demonstrate how the graduation process itself may contribute to an exacerbation of existing power asymmetries because of the captive position of the Solomon Islands, therefore accentuating existing economic vulnerabilities. The results have major implications for the continuation of international support measures for LDCs in transition from the status.

3. Adapting to graduation from LDC status within a Captive GVC

The potential economic effects of graduation from LDC status for Solomon Islands were analysed through the GVC perspective because of the country's specialisation within the processed tuna fisheries sector. Over the last few decades, the canned tuna industry has experienced substantial growth in vessel numbers, catch capacity and total catch; coupled with an increasingly complex structure due to an array of factors including resource sustainability, regulations, increased

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operating costs, developing consumer demand and changing preferential market access regimes (Hamilton et al, 2011). The WCPO, where Solomon Islands is located, hosts the largest number of industrial-scale tuna purse seine fishing vessels in the world. However, a tiny fraction of these are owned by the Solomon Islands and jointly with the dominant traders in the region, such as Taiwan, China and Korea.

In 2015, skipjack tuna accounted for the highest volume and value of catch at 1.82 million metric tonnes and US$2.3 million, or 68 per cent of total catch and 48 per cent of total value of all species caught in the WCPO. This is followed by yellowfin (23 per cent volume and 32 per cent value), big eye (5 per cent volume and 13 per cent value) and albacore (4 per cent volume and 8 per cent value). Since 1997, skipjack catch was the highest in volume and in only 2 years (2000 and 2003) did the catch value of yellowfin exceed that of skipjack in the WCPO. Skipjack is therefore the most important species for the region, both in volume and value.

Although the EU industrial purse seine fleet is the largest in the world, there are currently no vessels operating in the WCPO [3]except in Cook Islands. The primary reason is due to the reluctance on the part of EU vessels to sign an agreement with the Pacific States which incorporated the Vessel Day Scheme (VDS), the region's access agreement which provides an allocation mechanism of fishing days in pursuit of economic and environmental management objectives across the participating countries. However, the importance of the WCPO to EU based canning firms cannot be underestimated. Under the current arrangements, Solomon Island processed frozen tuna 'loins' qualify for duty-free-quota-free (DFQF) access to the EU market under the Everything But Arms (EBA) preferential scheme for LDCs. The export of tuna loins reflects the international division of labour and the system of tariff protection in canned tuna production in the EU (and USA). To save on labour costs, EU industry imports pre-cooked, frozen loins to be canned using predominantly capital-intensive machinery. These are largely imported from developing country suppliers with access to tuna fisheries and low-cost labour. EU firms can source raw materials at low cost, whilst keeping the capital intensive manufacturing processes on-shore, despite the higher costs of doing business in Europe.

Preferential tariff rates and rules of origin - as in other light manufacturing sectors such as textiles and clothing (Pickles et al., 2015), as well as high-value agriculture (Keane, 2013) – have actively shaped the distribution of producers, processors and traders through the conveyance of economic rents. Because of the extreme economic dependence on the processed tuna fisheries sector in Solomon Islands, the removal of preferential access and the resultant increase in trade costs has the potential to severely undermine producers in an already precarious position within the GVC, which exhibits captive features, described in the following sub-section.

The context in which Solomon Islands is graduating from LDC status, specifically the indicators it met, is pivotal to forming a more comprehensive picture of how it may adapt. In 2015, Solomon Islands met two of the three eligibility thresholds for LDC graduation, namely GNI per capita and the Human Assets Index (HAI). The UN CDP in its March 2015[4] report found that Solomon Islands' GNI per capita was $1,402, above the eligibility threshold of $1,242 and its HAI was 71.7, above the eligibility threshold of 66. The Solomon Islands' Ministry of Foreign Affairs and External Trade (MFAET) raised a number of important issues in this regard, specifically around the presence of the Regional Assistance Mission to Solomon Islands (RAMSI)[5] following the period of civil 'tensions' from 1999-2003, which has likely inflated income statistics; as well as the main industries in the economy,

[3] The EU's presence is predominantly in the Western Indian Ocean and Eastern Central Atlantic.
[4] UN Economic and Social Council, Committee for Development Policy (CDP) Report on the seventeenth session (23-27 March 2015) E/2015/33.
[5] The mission began in 2003 and formally ended in June 2017. Although there is still an international police presence (Australia and New Zealand) in Solomon Islands, this is significantly lower than previous years.

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which are predominantly extractive tending to concentrate substantial income earnings in the hands of a few.

Where there is greatest cause for concern, however, is with regards to economic vulnerability evidenced by the score achieved in the March 2015 CDP report, which found Solomon Islands' Economic Vulnerability Index (EVI) to be 50.8, well above the graduating threshold of 32. The EVI is calculated as the sum of two equally weighted sub-indices: exposure and shock. The Exposure Index is the sum of four equally weighted sub-indices: population size, location, economic structure and the environment. The Shock Index is the sum of two equally weighted sub-indices: trade (export diversification index) and natural resource (share of total exports). The March 2018 CDP Report found Solomon Islands eligible for graduation for a second consecutive time; both GNI per capita and HAI had improved over the 3 years, at $1,763 (average 2016-18) and 74.8, respectively. However, economic vulnerability had also increased, to 51.9. Despite marginal gains in income and human assets, Solomon Islands is becoming increasingly more vulnerable to economic and other shocks, which graduation from LDC status could exacerbate.

3.1 Associated GVC Governance Structures and Solomon Islands' Position

Tuna trading involves the procurement of raw materials from multiple fishing vessels and coordinating transhipment of catches for sale and delivery to tuna processors. Canning grade tuna trading companies have grown to a position of relative dominance in the supply chain primarily due to the effectiveness of the services offered to vessel owners and processors. Tuna trading reaps relatively small profits per shipment so trading companies rely on economies of scale to trade high volumes of product. In the WCPO there are two major trading companies that dominate the market – Tri Marine and FCF Fishery Co Ltd. FCF handles the largest volume of raw material and is the most prominent tuna trader in the WCPO; however Tri Marine International (TMI) has a much stronger global presence principally in the EU market with a more vertically integrated business model. The two tuna trading firms have a well-established presence in the WCPO which is unlikely to be challenged given the significant barriers to entry present (Hamilton et al, 2011).

TMI is the majority shareholder (51%) of Solomon Islands' local processing firm, SolTuna, with the remaining share owned by the domestic state-owned enterprise National Fisheries Development (NFD). Although its core business is tuna trading, TMI is involved in all aspects of the canned tuna supply chain (end-to-end management), namely fishing, trading, logistics, processing and marketing. The global and vertically integrated nature of the company allows it to effectively support these operations, ensuring a reliable cost efficient supply of tuna products to its major brand clients.

At the other end of the value chain, TMI has canned tuna brand partners in the US (Chicken of the Sea and Star Kist) and Europe (Bolton Group) and also supplies a considerable volume of raw material to tuna packers in Thailand and elsewhere. TMI has a long-standing contract with Bolton Group to supply high quality yellowfin loins, as well as small volumes of skipjack loins for the Rio Mare and Saupiquet canned tuna brands, which are processed – defrosted and packed into cans – in Bolton Group's Italian factory. The high-quality specifications of the processed tuna are important points to consider in the context of potential increased trade costs through a loss of tariff preferences as a result of LDC graduation for Solomon Islands; but given the value chain is driven primarily on cost, if too high, the tuna will be transhipped and processed elsewhere.

Thailand is the world's leading producer of canned tuna and the global market price leader for canning grade whole-round frozen tuna. The industry is dominated by five branded-processors which own the leading canned tuna brands in the EU and North America, i.e. Thai Union, Dongwon, Princes (owned by Mitsubishi), Bumble Bee (owned by Lion Capital, a private equity group), and the Bolton Group, which owns a minority interest in TMI. Thailand's tuna processors import almost all of

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their raw material needs, around 90 per cent of which is sourced from WCPO through trading companies. Given Thailand's processing capacity, global competitiveness, industry know-how and market share it will continue to dominate the global canned tuna processing industry. Thailand exports only a small volume of tuna to the EU because of the 24% tariff rate faced on its exports.

The EU also has a canned tuna processing industry but given the higher price of labour and other inputs, greater attention is paid to the size of the fish with canneries typically sourcing large whole-round fish and cooked, processed loins to boost labour productivity. Investment in processing facilities in the developing world is a central component of the business model of EU firms, which is closely connected to EU tariff preferences. The survival of EU firms is based to a great extent on protection from relatively low-cost imports via high tariffs and their ability to source raw materials from counties that qualify for preferential access into the EU market (Hamilton et al, 2011; Campling 2016).

3.1.1 Principal canned tuna markets

Canned tuna is a popular low-cost source of protein traded as a global commodity product typified by high volumes and low profit margins. The major markets are the EU and US but with consumption levels stable, there is an increasing focus on consumers in emerging markets such as the Middle East, Latin America, Eastern Europe and South Africa. It is the supermarkets in the EU and US that dominate canned tuna retail sales and therefore command the greatest market power in the value chain (Hamilton et al, 2011).

Supermarkets drive competition to such a degree because of their vast buying power. Often, canned tuna is sold on promotion by the large supermarkets to draw customers into the store, who go on to purchase their weekly shops. The oligopolistic nature of the value chain means supermarkets have the greatest market share and sales density with firms' buyers of canned tuna able to exert significant pressure on the value chain up-stream on price and other areas of competition including product and process standards (Campling, 2017).

Interestingly in the canned tuna industry, the supermarkets are not only able to squeeze the smaller producers in the value chain, but they are also able to disadvantage some of the larger companies that own canned tuna brands, deepening competition amongst the major suppliers, regardless of their market size. Supermarkets force big brands to compete, increase their overall sales and sell own brand tuna to capture more profit margin. The increasing market share of the largest retailers reflects the market power that a consolidating retail market generates. Big retailers fight for market share by drawing customers in with promotions and lower prices, the costs of which are passed on to suppliers (Havice and Campling, 2017). This translates into lower profit margins further down the chain, such as firms canning for brands or private labels and processing plants.

The increasing influence of private label tuna, as opposed to brands, is having a further impact on the power structure in the canned tuna global value chain. Private label tuna is taking an increasing share of key EU markets and because there are no marketing or branding costs, supermarkets can offer their own label at a lower price, squeezing branded-firms even further.
There are important differences between consumption patterns across EU markets. Italy, where the vast majority of Solomon Islands' tuna loins are sent for processing, is led by the big brands which are believed to be in a position to capture high brand rents (Campling, 2013).

3.2 Captive Position within the GVC

There is significant heterogeneity in the branding and manufacturing nodes of the canned tuna supply chain, and each company has distinct tactics for survival in an attempt to differentiate

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themselves from their competitors. Some firms focus on securing long-term strategic access to tuna fisheries via onshore processing investments; while others are arms-length from fishing focussed on branding and marketing. Some deploy a combination of the two. Of the branded firms, there are two main categories; those which are integrated backwards into fishing relying on their own manufacturing for supply as well as sourcing partly from non-branded manufacturers; and marketing companies, which rely on non-branded manufacturers to supply their branded product so they can concentrate on marketing and supply chain management, deriving their profits from brand rent.

Amongst non-branded firms, there are two main categories; co-packers, which receive contracts to produce private label and/or branded product according to buyer specifications, sometimes integrated backward into fishing; and contract processors, which generally do not own the fish but are paid a processing fee by tuna trading companies or branded firms which coordinate procurement, product specifications and sales of finished product.

Amongst processors, the major constraint is overcapitalisation, which creates problems for non-branded manufacturers that rely on high volumes to generate profit in a low-margin industry. Smaller developing countries like Solomon Islands tend to be at the bottom of the hierarchy in the international division of labour in canned tuna production. As a contract processor, SolTuna produces frozen tuna loins procured by canneries in high cost locations of tuna production and transformed into canned product. They are not in a position to capture brand rents and as a result, are price takers.

In the case of Solomon Islands, the ownership structure of NFD and SolTuna makes for a highly integrated fishing, processing and canning operation which is a major strength of the local tuna industry. NFD's main business is in fishing, supplying the majority of its catch to SolTuna. The remainder of its catch are shipped to Thailand for processing and a small amount of ultra-low temperature (ULT) freezing of whole tuna is sold in the lower grade Japanese sashimi market. NFD currently owns seven purse seine boats, five smaller and one larger vessel (with another one planned), and fishes in the archipelagic waters and EEZ of Solomon Islands, as well as outside under the Parties to the Nauru Arrangement (PNA). In the longline fishing, NFD has 30 of the 100 licenses provided to Solomon Islands under the quota scheme with the remaining being taken up principally by China and Taiwan. In the pole and line fisheries, NFD owns three vessels and at the time of writing was in the process of purchasing a fourth. Of the four fishing mechanisms, purse seine fishing offers NFD the greatest premium given the Marine Stewardship Council (MSC) Certification.

SolTuna operates the local brand with the processing and canning plant in Noro. The structure has changed over the previous years; whereas previously 85 per cent of SolTuna operations were loining and 15 per cent canning, the split is now 70 per cent loining, the majority of which go to the EU, and 30 per cent in cans, which go predominantly to the domestic and regional markets. In the loining business, where SolTuna is a contract processor, profit levels are known by SolTuna and this part of the business is the foundation for the company in terms of scale and overheads. The plant's canning operations is where the greatest profit potential lies, but only due to the foundation provided by the loining base. Whilst international volumes contribute, it is the local and regional markets which bring in the most revenue. SolTuna also supplies albacore to the US market, in the form of cans for the brand Ocean Naturals and cooked loins to the two US based canneries. Despite the preferential access of Solomon Islands to the US market as a LDC, sales comprise less than 5 per cent of SolTuna's total processing operations. Within the EU, Solomon Islands' processed tuna loins are canned and sold predominantly in Italy and Spain, where consumers typically demand a higher quality tuna of the variety supplied by Solomon Islands, than Northern European consumers.

For Solomon Islands and other PICs supplying the tuna market, processing activities that are directly connected to global corporate activity must increasingly fit into the overall business strategies of the

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large companies driving the industry worldwide. There is a widespread view that canned tuna is too cheap, given the way it is marketed and sold across supermarkets in the EU and US. To increase the price, and therefore the profit margins that can be funnelled down the value chain, supplier countries could attempt to restrict supply. PICs, as the owners of the world's largest canning-grade tuna resources, are in a strong position to drive up the price of canned tuna, by putting in place effective limits on fishing activity and controlling the volumes supplied (Hamilton et al, 2011). However, the region is divided between non-LDCs such as Fiji and Papua New Guinea (PNG) that were forced to sign a reciprocal free trade agreement with the EU to retain their preferential access as the Cotonou trade related arrangements ceased in 2007, and LDCs including Solomon Islands, which continued to enjoy similar market access arrangements and as such refrained from signing EPAs. These differences in trade policy reformulation have undermined regional integration processes; and, as countries across the Pacific start to graduate, the situation will become even more complex.

Despite the integrated nature of fishing and processing in Solomon Islands, the power structure of the supply chain and the marginal quantities supplied mean local firms are unable to influence the sale price of their tuna. Solomon Islands' presence in the processed fisheries GVC governance structure is therefore a captive one. Power asymmetries may become even more accentuated as a result of graduation from LDC status because of an increasing reliance on a single buyer predominantly supplying a European market. Exit from the LDC category no longer affords the opportunity to continue to export under preference to other major markets, including East Asian partners.

3.3 How to Adapt to Graduation within a Captive GVC

For Solomon Islands, preference erosion has already taken place and will continue as the EU negotiates more FTAs with competitor countries granting them if not entirely duty-free access, but certainly reduced tariffs or zero rate quotas. Many major competitors, both in the region and globally, can export tuna products to the EU duty free – Papua New Guinea signed the Interim Economic Partnership Agreement (IEPA) with the EU in 2007; Madagascar, Mauritius and Seychelles have been a party to the East and Southern Africa EPA since 2009, granting it zero duty on canned tuna and tuna loins; and Ecuador joined the EU's Trade Agreement with Colombia and Peru in 2017 granting it zero duty on tuna products[6]. The EU Single Duty Loins Quota introduced in 2004 allows for a predetermined quantity of pre-cooked tuna loins to enter the EU duty free from third countries on a 'first-come, first-served' basis (in 2014 the quota was 22,000 mt).

Typically, this quota is fully utilised by the end of the first quarter. However, in 2014 the quota was exhausted just ten days after opening – likely taken up mostly by Thai processors who are otherwise subject to pay 24 per cent duty on loins (Campling and Havice 2014). The quota has negative trade diversionary consequences for preference-dependent economies vis-à-vis cost competitive processors in South-East Asia.

Despite the increasing competition amongst suppliers of processed tuna in the EU, there is no alternative market that exists for Pacific Island exporters of canned tuna and limited opportunities for pre-cooked loins (Campling, 2015), due to the dynamics of market demand, existing suppliers, tariffs and duty available to PICs, non-tariff measures and freight costs. Potential alternative markets are already supplied by cheaper competitors, no more so than in freight costs. The proximity PIC producers have to the raw material is countered by the inflated costs of doing business in the region coupled with lower levels of productivity.

[6] Ecuador represented 21 per cent and 28.2 per cent of total extra-EU imports of canned tuna, respectively, between 2013 and 2015.

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The critical importance of the EU market to PIC producers cannot be underestimated; it appears to be the only sizeable market with high demand and a high price/quality ratio that PIC processors can competitively supply. The trade preferences offered under EBA, EPA and GSP+ continue to be the most commercially viable competitive advantage, particularly when factoring in the relaxed rules of origin in the EPA. In light of this, it is critical that PIC governments continue to dedicate adequate resources to ensure compliance with the EU's strict regulatory requirements for on-going market access (Campling, 2015). Greater support may be forthcoming within the Aid for Trade package likely to be forthcoming as the Solomon Islands accedes to the interim Pacific EPA.

However, there remain major questions regarding how graduation with momentum will be secured as the Solomon Islands exists the category. Maintenance of the status quo in terms of market access within the EU may not result in the desired structural economic transformation. Export concentration has increased over time along with a rise in economic vulnerability. It remains unclear how these patterns will be reversed as the Solomon Islands upgrades its trading relations to maintain similar levels of market access afforded to it by virtue of remaining within the LDC group.

3.4 Implications of Findings for Donors and International Agencies

For Solomon Islands, maintaining status quo market access to the EU was the priority upon exiting from the LDC category. Entry into the EPA, as opposed to the EUs GSP+ scheme, was considered a more amenable route to secure market access. This of course is not only a commercial but deeply political decision, which this article does not question. Instead, this article focuses on the competitiveness challenges arising for LDCs graduating within captive GVCs and how these might best be mitigated by international development partners.

For trade preference dependent GVCs, concerns regarding the ability to change value chain governance structures and outcomes from participation for severely capacity constrained LDCs is not only limited to LDCs which are also SIDS. For example, Razzaque and Rahman (2018) find that discontinuing tariff preferences in Bangladesh could lead to a potential export loss of more than US$1.6 billion; movement away from LDC status within the EU to the standard GSP could result in a tariff hike of 9.6 per cent which would put serious pressure on export competitiveness. The exit of Bangladesh from EBA and into standard GPS - since it is unlikely to be able to adhere to the social and environmental conditionality of GSP+ - will have ripple effects on the textiles and clothing GVC. This is because Bangladesh has edged itself up to be one of the world's largest manufacturers of textiles and clothing. Changes in the EUs rules of origin have contributed partly to this success which derives form specialisation and the particular nature of backward linkage development in Bangladesh (Curran et al., 2015).

Whilst the competitiveness challenges faced by Bangladesh because of graduation are formidable it is the ability of the manufacturing sector to adapt, through productivity improvements and other organisational changes within the value chain, which are invariably greater in comparison to natural resource-based preference dependent GVCs. Moreover, sourcing derogations within the GSP rules of origin for textiles and clothing have been beneficial to Bangladesh, whilst for LDCs specialising within the fisheries GVC they have been considered overly restrictive and especially so in comparison to those available within the interim Pacific EPA (which also could have gone even further in respect of products covered).

Adapting to the competitiveness challenge of graduation from LDC has been incorporated into trade diagnostic studies and systems developed to guide respective governments through the graduation process step by step. An inter-agency group has been established to coordinate responses from respective UN agencies and members of the multilateral trade governance structure, which includes

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the WTO. Some creative thinking regarding reform of the EU's GSP regime, since the current regime expires in 2023, is underway.

However, how to actively influence the terms through which LDCs participate within preference dependent GVCs and redress the competitiveness challenges arising from the graduation process requires consideration beyond conventional trade policy: since many of the levers to influence value chain participation and outcomes lie outside of the conventional trade policy tool makers toolkit. Within the conventional framework of value chain governance developed by Gereffi et al., (2005) movement from captive to more relational forms of governance requires the development of producers' capabilities. But the ability of governments within LDC SIDS, such as Solomon Islands, to finance the development of producers' capabilities - requiring large scale investments in energy and transportation infrastructure as well as public education – remain far beyond what the taxation base in the Solomon Islands could support. The government is also heavily invested within the sector already.

Extreme environmental vulnerability compounds the public debt challenges of LDCs with the costs of natural disasters knocking large percentages off Gross Domestic Product: the tsunami of 2014 which hit one of the Solomons Islands most economically developed and populated islands was estimated to cost 9% GDP. Higher exposure to climate vulnerability is increasing the costs of developing debt (Cling et al., 2018). In addition to these most pressing developmental challenges, the economics of the challenge of how to adapt to the accentuated competitiveness arising from graduation cannot be considered in isolation to the existing structure of intra- and inter- firm relations. Inevitably, for LDCs graduating and losing the trade preference rent, the incentives and scope for dialogue between the public and private sector towards this objective is ultimately reduced rather than increased.

This weakened negotiation position is the opposite of what has been analysed by Khan (2015) with specific reference to Bangladesh, where early trade preferences (prior to the Multifibre Agreement) provided Bangladesh with a form of learning rent which it was able to operationalise to direct the private sector to achieve specific developmental objectives, including the creation of an entrepreneurial class. It is therefore the combination of factors that are required in order to support the development of an entrepreneurial class (and State) and their absence in the case of LDCs like the Solomon Islands. Loss of the tariff preference rent means loss of leverage for host governments seeking to attract foreign direct investment based on preferential market access. This loss of leverage is acute for economically vulnerable LDCs such as the Solomon Islands, which as a SIDS also exhibits inherent vulnerability to environmental shocks.

Clearly, the issues explored in this paper have far more profound implications in view of how captive positions within GVCs, high export concentration and economic and environmental vulnerabilities interact within LDCs. Exiting the category without addressing these would seem a risk that perhaps even more LDCs may be not be willing to take; especially since the global pandemic has exposed the fragilities of GVC trade. In this last decade of action to achieve the SDGs, we begin a global recession and economic downturn because of the Great Lockdown which will be as severe as the Global Depression (Gopinath, 2020).

4. Conclusion

This article has explored the process of graduation from LDC status through the lens of the GVC perspective. It has used the GVC framework in order to identify a captive type of governance structure in operation. Whilst market access levels may be secured, post-graduation, through the accession of the Solomon Islands into the iEPA there is a need for greater consideration of specific policy measures to address asymmetries in trading relations. The vulnerabilities of all countries trading within GVCs has been viscerally highlighted by the global pandemic.

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For LDCs, trading within captive GVCs, boosting resilience means overcoming reliance on a single buyer. This is as opposed to reliance on a single source country - China - as in the current debate and rhetoric for developed countries. Export concentration over time has increased, not decreased, for the Solomon Islands. Whilst its graduation process is rightly celebrated and viewed as a major achievement in terms of improvements to human assets and incomes, economic vulnerability remains stubbornly high and has also increased, not decreased, over time.

The implications of these findings for the international community suggest that as opposed to the creation of a specific category of countries which warrant particular support, instead, working within the existing LDC criteria and more closely aligning specific support measures could be an alternative approach. For example, Aid for Trade resources could be prioritized by the WTOs Enhanced Integrated Framework for LDCs with EVI scores above a certain threshold. Trade preferences could also be maintained.

Whilst such a focus could assist in overcoming some of the issues explored in this paper, the UN system would also have to acknowledge the limits too. It may simply never be possible to move from a captive form of governance towards a relational type for LDC/SIDS through the use of existing support measures. Whilst export concentration could be addressed through more specific GVC focused interventions, as well as trade costs, the level of these indices may prove to be stubbornly high. This level of economic and environmental vulnerability may be less acceptable to an international community nowadays and international support measures could be more forthcoming: all countries, including high income, seek to reduce their economic vulnerabilities including through addressing the fragility of GVC trade.

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