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Global production network for secondhand clothes

from New Zealand to Papua New Guinea

2018

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A thesis submitted to Auckland University of Technology in partial fulfilment
of the requirements of a Master of Business

Abstract

It is not general public knowledge that each year, thousands of tonnes of secondhand clothing donated by New Zealand households is exported to Papua New Guinea. After donation by households, secondhand clothing is collected, sorted and retailed by charity organisations and one largescale for-profit firm in New Zealand. Garments are then exported to Papua New Guinea where they are retailed by a single for-profit firm. Some garments are purchased by street sellers from this retailer who then resell items to earn a living.

This thesis has literally followed secondhand clothing from donators in New Zealand to consumers in Papua New Guinea using a Global Production Network framework. I have applied case study methodology, and woven principles of talanoa methodology into research design. Households and charities in Auckland, as well as SHC retailers and consumers in Port Moresby have been interviewed, observations made, and available trade data and online media content analysed. The purpose of this research is to find out about the pathways and quantities of traded secondhand clothing, understand the experiences of trade actors and the value they are able to extract from this commodity. Outcomes and mechanisms of this trade are described, and recommendations made for improving its sustainability.

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of another degree or diploma of a university or other institution of higher learning.

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Acknowledgements

Ethics Approval

The AUT Ethics Committee approved this research on 31 October 2017, and approved additional amendments to this research on 7 December 2017. Ethics application number 17/302.

Chapter 1 – Introduction

There has been a dramatic increase in consumption and disposal of clothing in developed countries, which can be attributed to fast fashion and an increasing population. These factors have in turn fuelled the global secondhand clothing (SHC) trade. Many individuals who donate their SHC are unaware that their unwanted garments undergo a global process of commodification, where value is recreated and extracted through sorting and baling processes, and garments are often destined for buyers in developing countries (Brooks, 2012).

It is estimated that around 20 per cent of clothing consumed in developed western countries enters a second cycle of redistribution and consumption. SHC begins its life as unwanted or excess items donated by individuals. Across the developed world SHC collection is predominantly carried out by charities, who generate income from this resource to fund their charitable missions, and some SHC collection is also undertaken by for-profit firms. An estimated 20 per cent of the clothing collected is sold in its country of origin, some is recycled or landfilled, a small amount is sent overseas during disaster relief, and around two-thirds is commercially exported for re-use in developing countries (Norris, 2015). Value from SHC is extracted and recreated along Global Production Networks (GPN) which include actors such as charities, sorting firms, exporters, importers, wholesalers and retailers before finally being purchased for use by buyers. As garments flow along GPNs, they can cross one or more international borders before reaching their final destination (Watson et al, 2016).

Literature that looks at the mechanisms of global production and distribution of SHC and the impact of this trade at global, regional and local levels is being developed. Research into SHC distribution mechanisms has largely come from the Global North (particularly the United Kingdom, Nordic countries and the United States). Attention has also been paid to African nations as destinations for SHC, and the impact that this trade has for that region's economic development.

Some research following SHC trade flows from developed to developing countries has looked at the supply network in a holistic way, whereas other research has focused on the behaviours or impacts of SHC trade for a certain geographic area or particular actors. There is little empirical research about SHC trade flows, although a number of case studies have been conducted. Data is usually collected through interviewing actors involved with SHC trade, analysing statistical databases such as UN Comtrade, and surveys conducted with SHC donators and consumers. In recent years there has also been increasing attention paid to ethical issues and the impact associated with the SHC trade – particularly for established local textile and apparel manufacture industries in African nations (Norris, 2015).

The Global Production Network (GPN) framework is a heuristic framework that emerged from economic geography during the early 2000s and is useful for understanding global trade flows and the connectedness and uneven development of the global economy (Coe, 2011). This approach is also useful for mapping the impacts of globalisation through linking a commodity's

design, inputs, production process, transport, export, import and sale (Brooks, 2013). The GPN framework has largely been used to describe the production of new goods and services, however it has also been extended by authors such as Brooks (2013) and Crang et al (2013) to describe global reuse and recycling networks, their governance frameworks and value extraction processes. A GPN framework has been applied to this research, which is appropriate because it has been used in other research thus allowing for comparison. A GPN framework is also able to analyse this trade's power dynamics and governance, and allows for discussion of different actors' experiences. Research will be conducted using case study methodology with principles of talanoa woven throughout.

It is not general public knowledge that much of the clothing donated by New Zealanders – either to charities or via clothing bins is traded overseas. In 2017, New Zealand exported almost 9,000 tonnes of SHC, with almost 8,200 of this destined for Papua New Guinea where it is largely retailed for profit (Statistics New Zealand, 2018). Little academic or public attention has been paid to SHC trade from New Zealand to Papua New Guinea, or any other trade routes throughout the Pacific region. This absence is surprising considering the large volumes exported, and the fact that New Zealand accounts for more than half of all SHC imported by Papua New Guinea. Although there are some similarities between Pacific SHC GPNs and those from the Global North, its mechanisms are also mediated by our geographically and culturally distinct context. New Zealand has unique relationships and holds a leadership role within the Pacific, and this should influence how all trade – including SHC trade is governed. New Zealand's relationship with Papua New Guinea is described by the Ministry of Foreign Affairs and Trade ("MFAT") (n.d.) as being long-standing, friendly and growing, while also being characterised by trade and aid (MFAT, n.d.).

There is a long history of clothing being given to the poor by the affluent and this narrative dominates public perceptions of SHC donations today. This narrative also shapes the interpretation of charities' role in collecting and redistributing SHC, and the social and cultural construction of what happens during SHC redistribution (Brooks, 2013). The general understanding of what happens to SHC after donation is strikingly disconnected from the reality of this largescale global trade. Norris (2015) considers that charity collectors and commercial re-processors contribute to the public perception and discourses of SHC recycling and reuse which not only stimulate clothing donation, but also feeds into public policy. The perception that by donating your clothing you are doing "good" frames SHC as an ethically laced commodity, which is morally-charged and has powerful redemptive capacity (Norris, 2015). Through these narratives, donating is transformed into a behaviour that is environmentally and socially sustainable. There is little attention paid in countries of origin to the scale of SHC trade, its geographical distribution, or the social and economic impact for developing countries. This is despite it being claimed by some to grow industry and support livelihoods for some of our globe's most vulnerable and least resourced peoples (Norris, 2015).

There are positive and negative environmental, social and economic impacts from SHC trade. It connects unwanted things that are still of value to places where it is wanted, and gives people

with low income in countries with low purchasing power the opportunity to purchase good quality clothing (Watson et al, 2016). In many developing countries where cost is an especially important consideration for consumers, SHC is both desired and needed (Hansen 2000). The global SHC trade also raises money for charities to continue working towards their social missions. As well as this, it is an important mechanism for reuse and recycling, with strong environmental and resource management implications. On reaching developing countries, however, SHC trade can also have negative impact on local clothing manufacture and it can have negative environmental repercussions, particularly for countries that have poor waste management infrastructure (Watson et al, 2016). Along with the positive and negative impacts that come from SHC trade, it can also mask the true global cost and prevalence of overproduction and overconsumption of clothing (Farrant et al, 2010).

1.1. Research Background and Motivation

The motivation for this research is to shed light on the flow of SHC from New Zealand to Papua New Guinea, increase knowledge and understanding of this trade for the general public as well as inform decision and policy-making for New Zealand and our Pacific Island neighbours. This case study also contributes to empirical understandings and theory building about supply networks that redistribute unwanted and surplus items across the globe, and it provides insights into this trade from a Pacific context.

The SHC GPN from New Zealand to Papua New Guinea has existed with very little public interest or investigation. This trade has implications for Papua New Guinea's economic development, environmental and social wellbeing. This trade also appears to be largely governed by one for-profit firm – Savemart. Savemart does not pay for the SHC it receives through its clothing bins or via charities, although they do provide some philanthropic support to charities such as the Child Cancer Foundation and others that give them clothing. Savemart also donates money to schools and other organisations where their clothing bins are located. Signage on clothing bins are worded in a way that most people believe donations go directly to charity, particularly the Child Cancer Foundation or children with cancer. Savemart then sell clothing either in their outlets in New Zealand and export garments to Papua New Guinea where they are sold through a commercial retailer.

The findings of this research have the potential to promote open and honest discussion about the true commerciality and globality of garments that New Zealanders purchase and discard, as well as assessment of this trade for people and the environment in Papua New Guinea. There is no doubt that importing SHC benefits people in Papua New Guinea by providing a valuable commodity and stimulating the economy. On the other hand, however, there may also be problems related to the oversupply of SHC, the prevalence of poor-quality items being exported and eventual fate of SHC as waste. This research is designed to suggest possibilities for creating cultural change about how we produce, consume and give clothing in ways that are sustainable and have the best possible outcomes.

1.2. Research questions and objectives

Based on the research background and motivation described in section 1.1, this thesis addresses the following research questions:

- What are the pathways and quantities of SHC exported from New Zealand to Papua New Guinea?
- What are SHC flows captured in export statistics?
- What is the knowledge, experiences and expectations of actors along this SHC GPN?
- How is value captured along this GPN distributed between actors?
- Is the export of SHC from New Zealand economically, socially and environmentally sustainable?
- Are there any recommendations which can be made for actors and stakeholders who are part of, or are affected by this trade?

1.3. Research outline

This thesis is made up of six chapters as follows:

- **Chapter 1:** Includes summaries of SHC GPNs, the motivation of this research, specific research questions and objectives, and the outline for the thesis.
- **Chapter 2:** Contains a literature review that focuses on three areas of existing research.
- **Chapter 3:** The methodology chapter sets out background information about case study and talanoa research, providing a methodological framework for this research. This chapter also sets out methods used to capture and analyse data.
- **Chapter 4:** Findings are presented and analysed.
- **Chapter 5:** A discussion of findings is provided, as well as an overview of recommendations and consideration for future study.
- **Chapter 6:** Provides a conclusion for the thesis.

Chapter 2 – Literature Review

Relevant literature for this thesis is presented in three topic areas. These topic areas have informed my research question and shaped the way I have designed research. The first topic area in section 2.1 is an overview of the global secondhand clothing (SHC) trade. This is discussed within a Global Production Network (GPN) framework. Because much of the research about SHC GPNs has occurred through case study often focused on a particular type of actor in this supply network or a particular GPN thread, experiences of actors are set out in section 2.2. In the final section 2.3, I review literature about the impacts of SHC trade both globally and locally.

2.1 The scale of Secondhand Clothing Trade

Unwanted things are often externalised in capitalist economies – with many waste items dealt with in marginalised spaces before reappearing as a re-valued commodity (Alexander & Reno, 2012). High income western countries are described as the predominant exporters of used and scrap goods, and the predominant importer of these items are low income countries. The past two decades has seen the international trade in used goods and discarded materials expand significantly as a result of the globe's growing population, increasing consumption per capita, and increasing ease of movement between borders (Crang et al, 2013). Finding and harvesting discarded items to become a secondary resource has become a multi-billion-dollar global business, with some estimating that global employment in this sector exceeds agriculture (Gregson & Crang, 2015).

The production, consumption and disposal rates of clothing are considerable. By 2014, the global retail textile industry had reached a value of over $1.2 trillion (Diop & Shaw, 2018), and it is estimated that around 20 per cent of unwanted and discarded clothing will go through a second cycle of production and consumption – with millions of tonnes of SHC circulating the globe every year as part of this trade (Crang et al, 2013). The world's largest exporter of SHC is the United States, which trades over half a million tonnes each year. The United Kingdom is the second largest SHC trader, trading over 300,000 tonnes of SHC each year (Brooks, 2013). Other significant SHC exporters include Germany, South Korea and Canada. A large amount of SHC is exported to places where people are poor, and is often destined for African nations. Other significant SHC destinations include Poland, India, Malaysia and Pakistan, although many of these nations are also significant re-exporters (Crang et al, 2013). The scale and global reach of SHC trade can be seen in Figure 1 below, which shows the geography of primary and secondary exports (Brooks, 2012).
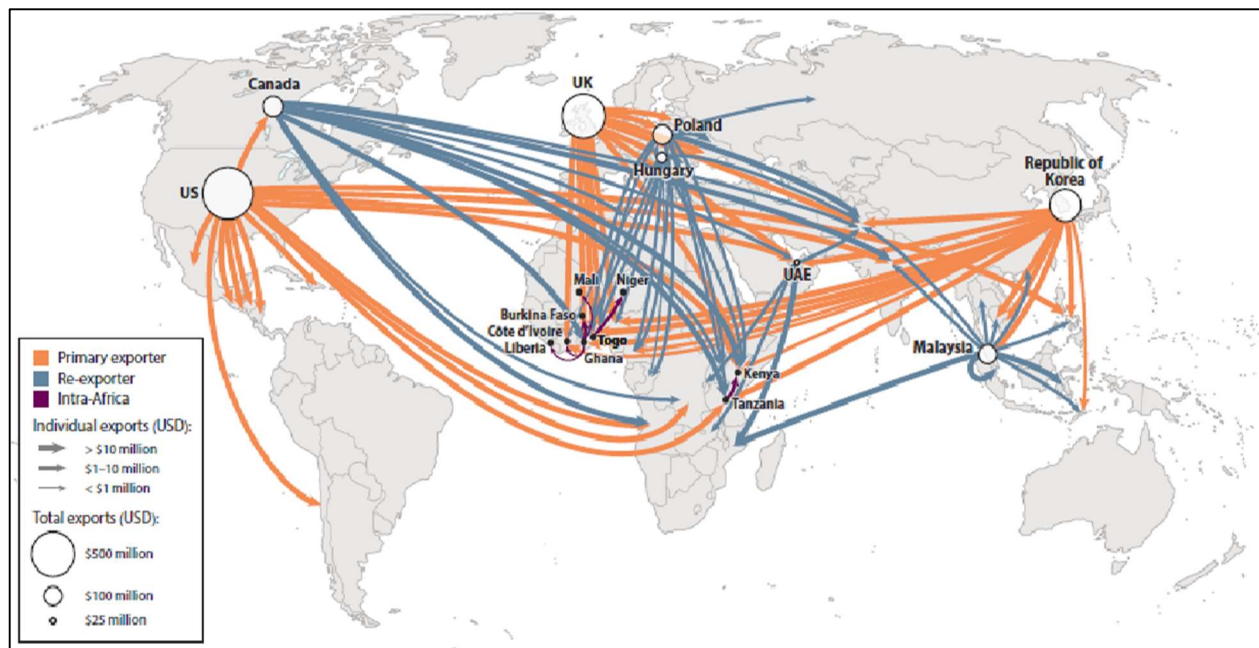
Figure 1.   Global flows of SHC (shown in USD) (Brooks, 2012)

The increasing scale and globality of trading used goods creates a need to empirically map and theoretically discuss how commodities are re-made through secondary processes of production. Gregson et al (2010) described an approach of "following things" to draw links between spatially distinctive production and consumption nodes. This approach looks at the geographic lives of commodities and people who interact with them by literally tracking things along their supply chains. Most studies that "follow things" have connected western consumers with unknown, unseen and unheard producers in developing countries. Studies provide commentary on the uneven distribution of value creation between actors in supply networks as well as negative social and environmental impacts. The aim of many of these studies is to counter commodity fetishism and critique consumption in the west. Following used and scrap things from developed western nations to consumers in developing countries provides similar commentary and critique on western consumption. Many of these studies that followed SHC have described flows from the United States and European countries to Africa and Asia (for example Watson et al, 2016; Brooks, 2013), leaving an opportunity to look at the mechanisms of commodity flows in other parts of the world. There are a multitude of patterns of consumer behaviour and value creation from a variety of cultural contexts which would add to empirical knowledge about GPNs for used things.

A Global Production Network framework is useful for describing and analysing the flow and intricacy of networks that move SHC and other used things globally. This is because it takes into account the distribution of power and embeddedness of actors across global networks, as well as where and how value is recreated (Brooks, 2013). GPNs for used things also challenge prevailing political economic approaches that look at uni-directional movement of goods from poor countries to rich ones, and of raw material becoming a finished commodity (Brooks, 2013; Crang et al, 2013). Academic interest in the mechanisms and impact of SHC GPNs only began

in the early 2000s, and despite work by a few key researchers in the past 20 years, this topic remains relatively understudied. It is important that more research is conducted in this field, considering the global reach of this trade and the number of lives that it impacts.

2.1.1. The Secondhand Clothing Trade – A Global Production Network of Actors

A Global Production Network (GPN) is defined as an organisational arrangement of actors in different regional and national economies. These actors cooperate and compete for a greater share of value creation, transformation and capture during the development of goods and services for worldwide markets (Yeung & Coe, 2015; Coe, 2011). GPNs are considered by Yeung and Coe (2015) to be the most critical organisational platform through which worldwide production is coordinated and organised, and are now part of the long-term structural architecture of the global economy. They are politically and economically complex, and reflect broad geopolitical, ethnic, cultural and gendered power relations (Levy, 2008).

GPN economic activity is understood as a "meshwork" of interconnected activities, rather than a linear value chain approach (Lepawsky & Mather, 2011). The GPN framework emphasizes governance, power and value dimensions of a supply network, and analysis focuses on GPN actors and their relationships with each other. Other distinct features of GPN analysis are that it discusses a broad range of organisations at multiple scales, and can describe complex governance characteristics and developmental impact (Coe, 2011). The GPN framework was proposed as a tool that would be capable of analysing the international distribution of production and consumption in an increasingly globalized world, and understands the world as both a 'space of places' and a 'space of flows' (Henderson et al, 2002). Looking at GPNs for used things extends the notion of final consumption beyond the initial economic activity producing new goods or services. In secondhand GPNs, a value chain is opened up at one end for another round of value creation and consumption, to then be closed at a different point (Lepawsky & Mather, 2011).

In developed countries, SHC usually enters its second cycle of production and consumption via household donations to charitable organisations or commercial recyclers. SHC then follows complex and varied routes before being sold in final markets, and the financial side of this trade has largely eluded public scrutiny. Actors involved within SHC GPNs often do not have an overview of the networks they are a part of, this being particularly true for clothing donators who often believe that their donations will be given to those in need (Norris, 2015). There is a discourse of giving in the west, which makes major charitable organisations look like patrons in a worldwide clothing donation project (Hansen, 2000).

There are multiple layers of actors involved in SHC GPNs after clothing is donated, including charities, agents, brokers, importers, wholesalers, retailers and remanufacturers. Actors are located in different countries and are involved in sorting and re-sorting garments for consumers in a variety of destinations (Crang et al, 2013; Brooks, 2013). They extract value from this commodity while trading across social, cultural and economic borders, both legally and illegally.

A simplified schematic representation of SHC GPNs from donators through to final purchasers (Baden and Barber, 2005) is provided in Figure 2. SHC flows can be difficult to document because patterns and trade of SHC export is widespread, varied and often unreported. Exports can also visit a number of hubs or processing zones, obscuring trade routes and final destinations. As well as this, illegal and morally ambiguous practices are commonplace within certain nodes making trade processes challenging to investigate (Brooks, 2013).
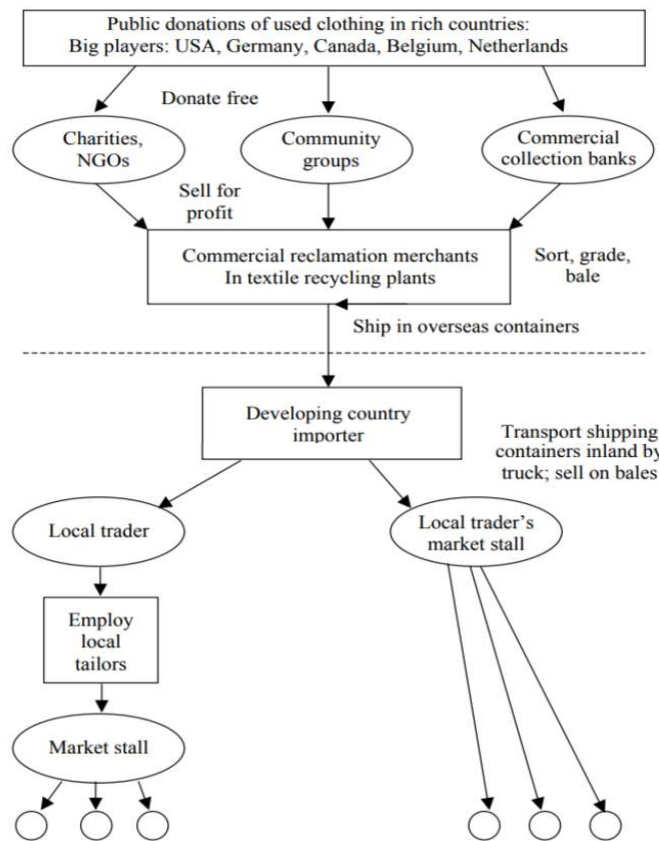
Figure 2.   Schematic representation of a SHC GPN (Baden & Barber, 2005)

The overall value of SHC, which sells at around 10 to 20 per cent of the price of new clothes, has decreased because of increased clothing production, reduced cost of new clothing, and lower quality garments being manufactured (Crang et al, 2013). SHC GPNs are driven by surplus of clothing in developed countries and are heavily influenced by the heterogeneous materiality of goods and varying cultural practices of valuing this materiality. As well as being heterogeneous, SHC is post-consumer, low value, high volume and largely non-hazardous. It's supply is relatively inelastic, and the amount of SHC entering the market is rising. This trend can be attributable to the fast fashion movement, affluence and surplus of clothing from developed countries, increased consumption, increased population and encouragement from charitable advertising. More recently, it can also be attributable to increasing awareness of environmental sustainability and endorsement by policy makers that SHC donation and redistribution is a self-financing recycling system (Brooks, 2013; Crang et al, 2013). Supply of SHC is mediated by stockholding, the percentage of discarded clothing collected, international trade regulations, the cost of transport and the relationships which develop across borders. SHC buyers in final

destinations have no control over fabrication, specification, condition or prior use of the goods they purchase (Crang et al, 2013).

Brooks (2013) considered that SHC GPNs should be analysed as shifting processes, rather than fixed structures. Its flow is fluid and diverse, and operates on brokered forms of coordination and trust as actors respond to changing conditions, and shifting end markets (Brooks & Simon, 2012). Access to destination markets can be volatile because of civil war, changing political drivers, legislation guiding entry or prohibition of SHC import. For example, Hansen (2000) pointed out how quickly African SHC markets can change, using Rwanda and Zaire as examples of abrupt import restrictions.

Research has been critical about the role that charities play in this supply network – with critique focusing on the public's perception of charity's role compared with the hidden commerciality of this trade (Sandberg 2018; Norris, 2015; Hansen, 2000). Charitable organisations are the largest collector of garments and fuel international trade in SHC, although SHC is also collected by community groups and for-profit firms. It is estimated that charitable organisations are only able to sell around 20 per cent of collected SHC domestically through their own shops. Because of the sheer volume of SHC donated, the domestic market cannot absorb the full SHC flows (Morley et al, 2009). It is generally estimated that other than the 20 per cent of SHC sold locally, a further 60 per cent is sold overseas for reuse, around 15 per cent is mechanically recycled and the remaining SHC is landfilled (Brooks, 2013; Crang et al, 2013; Norris, 2015).

Transportation is also a key factor for GPNs. Rodrigue (2010) considered that the role of transportation in globalization and GPNs had traditionally been overlooked, and that cargo and logistics providers play a strategic role in GPN networks. Improvements in transport and distribution have contributed significantly to changes in the geographies of production and globalization as a whole (Rodrigue,, 2010). Because SHC is a high volume, low value commodity, shipping costs can make up a large part of operational costs and this means that the final retail price of SHC contains proportionally high transportation costs. The cost of transport and access to markets also dictates the overall pattern of exports, making infrastructure such as shipping routes, container hubs and road networks extremely important (Brooks, 2013).

2.1.2. Coordination of actors

In 2013, the United Nations Conference on Trade and Development (UNCTAD, 2013) estimated that 80 per cent of international trade was organised through GPNs coordinated by lead firms. Yeung and Coe (2015) considered that a lead firm was a central and necessary prerequisite for a GPN, binding together multiple locations and economic relations between other actors. Crang et al (2013) and Brooks (2013) considered that governance for SHC GPNs differ from GPNs for new things because their global flows are not dominated by a lead firm. Rather, flows are coordinated from the middle by small, influential brokers embedded in key locations. These brokered forms of governance relate to the heterogeneous nature of secondhand goods, and

the connecting of various regimes of value. Being able to link a multitude of potential distant markets is crucial for extracting value and given the fixed nature of supply, dealers must develop increasingly differentiated markets for SHC. In SHC GPNs intermediaries are vital to reach final retailers – and brokers are often small, family run organisations that have the knowledge and capital to interact with western sorting companies and charity organisations, as well as redistribution networks in the country they are being exported to. Because detailed knowledge of potential customers is required, a large number of attentive actors is favoured (Crang et al, 2013). Their success is highly dependent on global contacts which can take years of nurturing in order to have markets to sell their sorted goods (Hawley 2006).

The national origins and ownership of key actors exerts strong influence on GPN dynamics, and their territorial, societal and network embeddedness impacts on the drivers and behaviour of actors. Territorial embeddedness refers to a GPN firm being anchored in a spatial place. Societal embeddedness refers to the level that a GPN firm absorbs and become shaped and constrained by a place's economic activities and social dynamics, including influence by government policy. Network embeddedness refers to the network structures and connectivity within a GPN, for example how stable actors' relationships are and level of trust built (Henderson et al 2002). The embeddedness of actors within societies and territories influences the relationships between actors, and how SHC is valued and moved. Migrant and diaspora populations and cultural connections play a key role in coordinating SHC GPN activities across the developed and developing worlds (Brooks, 2013). Because much of the SHC GPN research to date is from the USA and Europe with SHC destined for Africa and Asia, empirical descriptions of these GPNs are embedded within those cultural contexts. This means that empirical evidence created may be less applicable to GPNs that form in other parts of the world. Other GPNs will be impacted by different world views, geographies and histories. Other than a brief mention by Brooks (2015) of having seen SHC sold in Papua New Guinea, I have not found any other research that discusses this trade or any other secondhand items traded within the Pacific region.

2.1.3. Value capture by GPN Actors

Value creation, enhancement and capture by GPN actors is heavily mediated by power in its various forms, including corporate, institutional and collective power (Henderson et al 2002). Value is seen as changeable and many stranded, and value extraction depends on which actors are involved at a particular point of the production network (Coe, 2011). Value chains and networks for secondhand things have different dynamics of supply and demand than that for new items. Supply of secondhand goods generally starts and items are disposed of with little to no concern about end users and heterogeneous products are supplied in secondhand GPNs, which means that they often cross and connect different sectors, products and markets during value creation (Crang et al, 2013).

Processes of value creation, enhancement and capture are central to GPN analysis, and include both Marxist notions of surplus value and the concept of economic rent (Coe, 2011).

Value is conceptualized as the proportion of a final price captured by a given actor or location within a GPN (Lepawsky & Billah, 2011). Economic rent is the extra amount earned from a resource by virtue of its present use, and firms are able to generate more or less economic rents through asymmetric access within the market (Coe, 2011). GPNs for secondhand and used things differ from production networks for new items, because secondhand items' value is not added "up" the supply chain. Rather, value is created through labour and categorization and is then extracted along supply networks through a process of connecting different value regimes across the globe. The ability to rekindle value for secondhand things is also geographically uneven and actors in donor countries are able to extract more value from items than those in importing countries (Brooks, 2013; Crang et al, 2013).

When SHC is donated, it contains use-value created during original labour to make the clothing. People who donate SHC may recognise that their donated clothing has *use-value*, but because the clothing is surplus to the donor, they may not recognise the SHC's latent *exchange-value*. When SHC is donated or discarded, it is devalued of exchange-value, and new labour time through collection and sorting is required to realise the latent use-value still embodied in SHC, and to infuse the SHC with new exchange-value (Brooks, 2013). The material properties of SHC are crucial at every stage of the supply network because garments are repeatedly re-sorted along value chains, with each stage retrieving useable and recoverable items of lower value through systematic downcycling and recycling (Crang et al, 2013).

2.1.4. Lack of robust qualitative data on volumes and global flows of SHC

Robust data about global flows of SHC is much needed, and trade data alone is not able to tell the whole story. This is why much of the research conducted to date relies on case study evidence, using qualitative research in conjunction with available export trade data. Holistic research through case study helps to make up for the limitations of export statistics by supplementing this data.

It is estimated that 20 per cent of overall textile consumption enters into a second cycle of consumption, however much of the detail of the SHC trade remains undocumented in both local and international trade statistics (Brooks & Simon, 2012). As well as this, misdeclaration, illegality and miscategorisation are common, meaning available data are often not trustworthy (Gregson & Crang, 2015). Seeking empirical information about SHC flows is also challenging because some literature describes the monetary value of SHC exported, and some describes the volume exported. Research can also include different export codes for data capture (include either used clothing or rags, or both, and some includes shoes and other textiles), and not all research has specified which export codes have been analysed. Export code 6309 is for textiles fit for reuse, and 6310 for textiles intended for recycling – however, if unsorted textiles are being exported, they would contain both 6309 and 6310 (Watson et al, 2016).

Although it is the most comprehensive trade database, it is widely accepted that United Nations Statistical Division (UN Comtrade) statistics do not account for all SHC trade practices and there

are many missing records. Data sets are also not able to tell the story about how SHC is valued, or the value that actors are able to extract from this commodity (Brooks & Simon, 2012). Weaknesses in the data sets produced in UN Comtrade means that there are fundamental problems with the robustness of research conclusions made from this data (Brooks & Simon, 2012). Watson et al (2016) considered that figures can both under- and over-estimate exports of SHC. For example, exports which are intended for aid relief rather than for sale are typically not included in these statistics, and new clothes are sometimes illegally categorized as SHC to reduce tariff duties. Re-export to neighbouring countries is common and illegal shipments of SHC also create problems with international data records (Brooks & Simon, 2012). The lack of robust data about SHC contrasts with records kept about new textile products, under which there are over 400 product and fibre types coded and data kept (Watson et al, 2016)

2.2 Global Production Network actors

2.2.1 SHC Donators

An increase in consumption of new clothing and the growth of fast-fashion in developed countries has produced an abundance of excess garments (Morais & Montagna, 2015). Research about clothing donations in the United Kingdom and USA have found that clothing is discarded when it is no longer considered fashionable, is outgrown or too worn. Being given to charity is the most common disposal route for SHC as self-reported by research participants; 39 per cent said they give to charity shops, 18 per cent through charity bags and 13 per cent to clothing bins. SHC otherwise gets passed on to friends and family, or used in the household as rags or landfilled (Brooks, 2013; Waste Reduction Action Project ("WRAP"), 2017). Fortuna and Diyamandoglu (2017) found that the use-value SHC donators attributed to items, as well as having convenient options for donation were the most important factors for donator behaviour. Fortuna & Diyamandoglu also found that participants self-reported donating an average of 10 items of clothing each year.

Unwanted clothing is culturally framed as waste or surplus in affluent countries and households are increasingly encouraged to divert these unwanted items from the local waste stream by donating it for reuse and recycling. Campaigns to raise public awareness and to reduce the environmental impact of clothes are also becoming increasingly popular. For example, in the United Kingdom, WRAP's (2017) research and resulting public campaign was based on provided consumer education around environmentally friendly ways of buying, caring, repairing, exchanging or donating garments when no longer required. While the consumption of clothing in the United Kingdom has continued to rise, volumes of textile waste sent to landfill fell from 350,000 tonnes to 300,000 tonnes between 2012 and 2017.

We are told that donating and recycling are the right thing to do – it is environmentally responsible behaviour that conserves resources, supports the charities we donate to and provides for those in need (Norris, 2015). Research to date describes how SHC donators often believe they are donating their clothing for the poor and needy locally, and that their unwanted

items, once donated will do 'good work' (Norris, 2015). This ethical framing of SHC is an old narrative of it being donated for local sale to raise funds and help less able people (Norris, 2015). The narrative comes from the historic role that many charities have played, and it is used to stimulate donations. It is an important part of the imagery that sustains the socially embedded roles of charities in SHC GPNs, despite only a small percentage of SHC being locally retailed. Most donators are not aware of the true mechanisms of SHC trade, including the global commodification processes involved. Brooks (2013) considered that people may stop donating clothes if they knew this trade's true commercial nature, which may be why many SHC collectors are unwilling to discuss its mechanisms.

For donators, environmental and sustainability reasons are a newer narrative which stimulates donation of SHC (Fortuna & Diyamandoglu, 2017). On a per capita basis, the share of product waste to landfill (such as textiles) has grown significantly in many western countries, and the reuse and recycling of these products plays an important role in frameworks for waste prevention and sustainable material management. Because national and city-wide diversion targets increasingly work towards higher recycling and recovery rates, there is an increased positive coding of SHC donations by policy makers (Fortuna & Diyamandoglu, 2017).

The estimate of 20 per cent of discarded SHC becoming part of a second cycle of production and consumption is at least five years old. This estimate may have increased as people take on increasingly sustainability focused narratives (although this estimate also varies between countries with Scandinavian countries reporting much higher percentages of SHC donation) (Morais & Montagna, 2015). The amount of SHC donated through charities and clothing bins is unknown for New Zealand, and there is a need to further understand SHC donation behaviour here.

2.2.2 Collecting and sorting

The process of collecting SHC by both for-profit and non-profit organisations is similar across developed countries, most often via clothing bins, donation bags and at charity stores. Not all organisations that collect SHC also sort it – and it was common practice for collectors as described in Global North studies to either outsource SHC sorting, or sell unsorted SHC. For example, Watson et al (2016) found that some Nordic collectors will only sort enough SHC donations to yield enough high-quality clothing for sale in shops, estimated at between 10 and 20 per cent of donations.

Brooks (2013) considered that tools such as charity publicity material, collection bags, and the prevalence of charity stores use ethical marketing imagery to stimulate donations. Hibbert et al (2003) described how charities' historic and cultural role are profitably utilized as the first production node in SHC GPNs, which also allowed them to generate more income from SHC than traders further along the GPN. They capture value through collection and sorting activities, and given the heavy reliance on used goods to generate income Hibbert et al (2003) considered

that charities were very aware of the need to procure high volumes of good-quality merchandise from the public.

Largescale for-profit SHC processing plants are also commonplace in the Global North and Brooks (2013) described their main labour activities of sorting and packing SHC as complex and sophisticated, with plant processes having modern factory architecture to enforce worker discipline and enhance production. Sorting companies needed careful and knowledgeable sorters and graders to extract maximum value from SHC donations. This allows them to export SHC to places where the most profit can be extracted, and maintain sorter reputations to the countries they export to (Hawley, 2006). Since buyers purchase unopened bales, branding and trust are essential for business: to command a good price, content must measure up to expectations (Botticello, 2012).

A case study of a largescale United Kingdom SHC collector and sorter was provided by Botticello (2012), who reviewed its operations, working conditions and the skillset of SHC sorters. This large for-profit firm in the United Kingdom processed an estimated 170 tonnes per week of donated clothing from retailers and individuals, which workers sorted into 160 categories. The 'best' clothing included well-known labels and newer items destined for the Eastern European market (around 2 per cent of items). The 'useful' category comprised about 80 per cent of sorted SHC – often destined for Central Africa and Pakistan, and the 'worst' category consisted of SHC that could be mechanically recycled. Around 5 per cent was unrecyclable and unreusable waste (Botticello, 2012).

Botticello (2012) also described the working conditions in a largescale sorting factory. During the first part of the sorting process, SHC moved quickly along a conveyer belt with rubbish items such as plastic bags and lolly wrappers, and any clothing which was wet, mouldy, substantially dirty, or covered in blood and excrement removed. Despite the health and safety risk, workers in the factory were forbidden from wearing gloves because they need to be able to feel for fabric content, and otherwise could not tell if clothing was wet or mouldy (Botticello 2012). Botticello (2012) found that a variety of decision-making methods were used by sorters to classify clothing. Because of the high speed that decisions are made, classification became an abstraction which is tacit, physical, based on intuition, envisioning and other qualitative tools. Sorters also had their "little ways" to decide how clothing should be classified, for example one employee described putting items on her neck to see if they are wool, because wool makes her itchy.

Collectors' and sorters' knowledge about what happens to SHC following export often had gaps in it. From Europe, it was becoming increasingly common for virgin SHC to be exported to Eastern European countries for sorting. This trend was in response to increased processing costs in developed countries, and cheaper labour available at offshore processors. It is likely that SHC would be re-exported again, however next destinations were less well known (Watson et al 2016). Watson et al (2016) found that many Nordic collectors prefer exporting to sorters who are also active in retail and some had required codes of conduct from buying partners. Due

to increased understanding of SHC trade impacts on destination countries, some charity organisations had begun more closely monitoring and managing where SHC stock is exported to, and who trading partners are (known impacts of SHC trade will be discussed further in section 2.3 below). For example, Brooks (2013) found that the Salvation Army in the United Kingdom will only export SHC to a limited number of large buyers in Eastern Europe, and will not export to African countries where there is concern about damaging the local textile manufacturing industry.

Beyond descriptions of SHC collection by charities and clothing recyclers, Sandberg et al (2018) discussed SHC collection models in Sweden, where it was common for clothing retailers to play a role through SHC take back schemes. Bins were commonly placed in retail stores where customers could bring unwanted SHC. In return, some retailers would also give customers discounted merchandise. Retailers will then work directly with recyclers or charity organisations to have clothes reused or recycled, often paying these organisations to take SHC. Sandberg et al (2018) considered that the incentive for retailers to be involved was the creation of positive environmental outcomes and building customer loyalty.

Research about charity and for-profit collector roles has focused on the income they are able to generate through this trade, their role in hiding its commerciality, as well as the practicalities of collecting and sorting SHC. These may be less relevant in other parts of the world because of cultural and situational differences. Also, because there is a growing understanding of the negative environmental effects of textile overconsumption, our understanding of charities' role may need updating. Collectors may be changing their perceptions of this trade, and may also be facing new challenges due to increasing donations and reduced quality of garments donated.

2.2.3 Crossing borders

Exporters are concerned with matching supply with demand from a wide range of international partners (Sandberg et al, 2018). Successful international SHC traders have global contacts, and relationships are cultivated over many years – sometimes several generations. End destinations for SHC are often determined by the quality of textiles, the tastes, income, body shape and size of end users, and the climate in end destination countries (Botticello, 2012). Literature looking at SHC export has mostly focused on SHC flowing from the Global North to African nations. Some African countries import a disproportionately high volume of SHC relative to their population size, although this may be due to re-exporting to neighbouring countries.

There are a variety of relationships present along GPNs that move SHC from one geographic location to another, and I consider that empirical evidence available relates to the cultural context and history of these relationships. Brooks (2013) described trading relationships types as existing on a continuum – at one end they could be 'coordinated' (with higher levels of trust and close relationships) and at the other 'non-integrated'. Trust can be more easily established between exporters and importers who share cultural identity, kinship or family ties and transnational diasporic networks can link supply to demand in their 'home' countries. Long

established networks in many GPNs demonstrate how patterns of trade cannot be explained by neoclassic model of market equilibrium between supply and demand. Rather, successfully maintaining GPNs often involves often subtle processes of regulation and maintenance of both material and social relationships. Perfect cost minimization is non-existent when firms and individuals invest in relationship building (Brooks, 2013).

During relationship building and management, trust and relationships can be difficult to establish, resulting in non-integrated SHC GPNs. In a non-integrated GPN, Brooks (2013) found that firms from the Global North are more powerfully embedded in the trade network than importers from the Global South. This is because they have strategic assets in the Global North, such as access to the supply of donated SHC and collection and sorting facilities. Brooks (2013) considered that actors in the Global North in non-integrated GPNs were also able to profit from combining shipments of the most demanded SHC with compulsory purchases of less desirable items. For example, Brooks (2012) review of SHC trade in Mozambique found that Mozambican market vendors did not have close relationships with Indian importing firms and that, as a result, "unhappy surprises" were commonplace.

A number of countries have restricted or banned SHC imports because of concern over local manufacturing industries and the problem of importing waste items. Countries which have banned SHC import include Botswana, Malawi and Morocco. Some countries will also only allow import of SHC for recycling in order to protect their local textile and garment manufacturing. Watson et al (2016) also found that free trade agreements can make it more difficult to impose restrictions, even when they are desired. There are also unintended consequences of import bans, such as reportedly widespread increase in illegal smuggling of SHC, particularly from neighbouring countries (Watson et al, 2016).

Beyond finding markets where SHC can be reused, value can also be extracted through reprocessing to recover the material constituents. Crang et al (2013) discussed the fabric recycling industry in a part of India, where almost 9000 tonnes of SHC are imported each month. There, clothing is again resorted, with buttons and fittings removed for resale, and fabrics reconstituted into new fabric.

2.2.4 Revaluing SHC

When destined for developing countries, SHC is revalued in a completely different socioeconomic context to that which it was donated, and garments are worn in ways that affirm self or group identity and meet local needs (Boticello, 2012). SHC is known by local terms that mean "dead white men's clothing" in Ghana, "died in Europe" in north-western Tanzania, "shake and sell" in Senegal, and "to pick" in Malawi (Hansen, 2000). There is strong demand for SHC in many parts of the world and this commodity has clear benefits for consumers, particularly in countries with low purchasing power and for people with low incomes (Watson et al, 2016).

Some literature describes developing countries as a dumping ground for surplus western clothing. However, this is too simplistic a view, implying that customers in importing countries

are passive. Rivoli (2005) holds, instead, that these customers have particular demands for quality, service and price, and their business relationships have been cultivated through contract and negotiation. Research conducted to date about importing countries has largely come from case studies conducted in African nations, where SHC is most often retailed in markets and boutiques. The ability for retailers to earn profit was constrained because they do not have key connections with reproducers of SHC in the Global North, and must manage uncertainty associated with purchasing stock in closed bales (Baden & Barber, 2005).

Studies have found that SHC is consumed across all socioeconomic groups in many African countries, and was particularly popular amongst the younger generation. Affordability was the reason most cited for choosing SHC over other clothing options, although it was also said to be of higher quality than new imports from Asia (Baden & Barber, 2005).

Hansen (2000) considered that although economic hardship and deteriorating purchasing power of countries in sub-Saharan Africa explain why this region is the world's largest importer of SHC, it does not account for its popularity. Reasons why SHC has grown in popularity include fashion choices in many African countries shifting away from traditional, African clothing to more Western-style clothing, and increasing substitution away from locally made tailored clothing to both new and used ready-made imports (Baden & Barber, 2005). Diop and Shaw (2018) also considered that materialism and social comparison have gained social importance in developing economies; and differentiating oneself and mimicking western attitudes had become more prevalent. How SHC is revalued, meets local needs, how it shapes local behaviour, and how it interacts with local cultures will differ in different parts of the world. It also appears to both drive and be an answer to increasing consumption (Diop & Shaw, 2018).

2.3 SHC trade impact and ethical considerations

SHC is vitally important to millions of people where it is traded to. It satisfies a basic human need for clothing, warmth and protection, while providing a valuable cultural resource used to express social identity (Brooks & Simon, 2012). There are both positive and negative social, economic and environmental impacts from global SHC trade. These occur both locally and globally – although it is difficult to assess impact because of a lack of clear data, the multitude of practices that happen and because this trade can have positive benefit for one group of people or place, while negatively impacting on another group of people or geographic location. Much of the literature about the impact of SHC import on developing countries has occurred in the context of African nations focusing on their local garment manufacturing industries (Brooks & Simon, 2012; Baden & Barber, 2005; Amankwah-Amoah, 2015).

Clothing has environmental impacts at each stage of production and consumption, which is case-specific and depends on types and mix of fibres, associated production, use and disposal methods (Dahlbo et al, 2017). Watson et al (2016) considered that at the global scale, the collection, reuse and recycling of SHC has net positive environmental benefits compared with incineration or landfilling, and Farrant et al (2010) found that activities such as collection,

transporting and processing have insignificant effects when compared with the environmental benefit from reusing SHC. Even if SHC is good for local people where it is traded to, it will eventually become waste that will need to be dealt with in the importing country – the burden of which will be greater for places with poor waste management systems. Farrant et al (2010) estimated that 100 secondhand garments would have the same life span as between 60 and 85 new garments. Since SHC has already had some use before export, its life is shortened, meaning that users will need to purchase greater volumes to satisfy their needs, further burdening their waste management systems.

SHC imports create economic opportunities that compensate for the absence of investment, infrastructure development and formal employment in developing countries. SHC import supports thousands of livelihoods in developing countries – creating income through the distribution, trade, repair, restyling and washing of clothes (Baden & Barber, 2005). Haggblade (1990) found that earnings tended to be relatively high in the SHC sector. On the other hand, there have also been concerns raised about the long-term sustainability of livelihoods in this informal trade because employment does not have social or legal protection and livelihoods are at the mercy of global trends and governance decisions. SHC retailers and connected businesses are also precarious because they lack influence on the provision of SHC imported from the Global North and have little agency to improve profits from their businesses (Brooks, 2012). Baden and Barber (2005) found that it can become more difficult to make a living from SHC if the quality of used clothing declines or tariffs and barriers increase. Brooks' (2012) analysis showed that although SHC trading offers an income that is higher than the average levels of extreme poverty in Mozambique, the periods of extensive losses inhibit the opportunity for further capital accumulation or upgrading of livelihoods.

SHC imports have been cited as a causal factor in the decline of the textile and clothing manufacturing industry in Africa, although this is a complex issue with multiple influencing factors. Because formal textile and clothing sectors have historically provided a first rung on the industrial ladder for developing countries, the loss of production in many African nations had been a serious blow to prospects for industrialization. Over 90 per cent of cotton produced in West Africa is exported as raw fibre and it had been a major ambition of policy makers to stimulate employment and industry through transforming fibres into finished products at a larger scale (Baden & Barber, 2005). The decline of local clothing industries however can be attributable to factors beyond SHC imports, including economic liberalisation, increased import of cheap new textiles from Asia, technological limitations of firms, and privatisation of state-owned textile factories which could not compete in an open market (Brooks, 2013; Watson et al, 2016; Baden & Barber, 2005).

Looking at the impacts of the SHC trade also raises questions about whether exporting countries owe a duty of care to the countries they export to; what they could do to improve outcomes for local people and the environment in destination countries, and who should be involved in regulating trade and why. Low income consumers in the Global South purchase items cast off from the Global North, and if we consider that they may have made but cannot

afford to buy these new, then the whole cycle can be seen as characterised by social and economic inequality (Norris, 2015).

In discussions about ethical consumption, people in the Global South are often positioned as objects of care-at-a-distance for people in the Global North. In these narratives, ethical consumption becomes the responsibility of consumers in the Global North (Gregson & Ferdous 2015). Norris (2015) considered that instead of this narrative, a more holistic approach to minimising the harm of clothing needs to be taken. An example of this sort of holistic approach might be developing models of clothing production, consumption and disposal that focus on transforming waste into a resource through a closed loop system. This could include producer take-back schemes, or regional circular economies as ways to control resource flow and monitor social and environmental impacts (Norris, 2015).

Research has also looked at ways that trade practice and ethical interventions can enable better outcomes for importing countries, enabling traders at the end of GPNs to earn a more sustainable living (Norris, 2015). There are many opportunities to do this. For example, many of the charities that collect SHC in developed countries also work in importing countries and have an ability to take practical action (Baden & Barber, 2005). Baden and Barber (2005) considered that although individual charity organisations were unlikely to significantly influence world price or supply of SHC by either exporting or not exporting, they could make trading practices more ethical by extending their involvement further along the supply chain. Examples of this include choosing not to export to countries which are likely to re-export or are involved in textile and clothing manufacture, and only exporting to countries with effective customs regulation (Baden & Barber, 2005).

Charities also have an opportunity to extend benefits further along the supply chain by working in collaboration with local non-profit firms or by providing small loans for business. Positive local socioeconomic impacts for importing countries can be enhanced when charities are directly involved, and have goals of providing local jobs through the supply of SHC (Baden & Barber, 2005). For example, Oxfam United Kingdom reported job creation in receiving countries they were involved with (Watson et al, 2016). Using the proceeds from SHC exports directly to support textile and clothing producers in importing countries would also be beneficial, for example through advocacy or practical support for livelihoods. Lastly, Baden and Barber (2005) considered that charities could prioritize providing access to SHC in rural areas, where it can be more difficult to obtain.

Watson et al (2016) argued that government intervention was also needed to create large-scale activities around textile waste recycling. This was in line with discussion by Thomas et al (2017) who considered that governments needed to increase effort to alter behaviour through price signals, extending individual and corporate responsibility, and advocating for sustainable change.

The relatively unchallenged position of the first cycle of production is also increasingly being questioned, with growing demand that producers play a role in the second cycle of consumption and the fate of textiles as waste (Appelgren & Bohlin, 2015). The principles of the waste hierarchy are increasingly being extended to producer responsibility and Dahlbo et al (2017) considered that producers could reverse the trend of fast fashion by improving quality and durability of clothing, and implementing producer responsibility schemes to increase collection of SHC. Assertions about their responsibility are underpinned by environmental ethics correlated with a 'proximity principle', where waste should be managed and minimised by those who made them, rather than being exported and becoming someone else's problem (Gregson & Crang, 2015).

Beyond looking at specific SHC GPN actors, Fortuna and Diyamandoglu (2017) focused on how to create systematic and cultural change for sustainable consumption and disposal of secondhand products, preventing waste and building a circular economy. Research about the globality, commerciality and impacts of the SHC trade began over 30 years ago. Although there has been increased media and academic interest in this trade, this increased knowledge has largely not penetrated public discourses about how clothing is consumed and discarded, or the prevailing narrative of SHC being redistributed locally by charity (Norris, 2015). The general public are largely not aware of the commerciality or globality of this trade or the trade's impact for destination countries (Brooks, 2013). Part of the reason for this could be because narratives about SHC donations have not been constructed in a way which are salient to everyday lives, our understanding of our worlds or take into account our lived experiences (Lejano et al, 2013). I consider that storytelling and a narrative approach to enhancing pro-socioenvironmental practices can be applied to how we "story" the SHC GPN in a way which is closer to what really happens to clothing we donate, and who it impacts. SHC GPNs can also be storied in a way which reintegrates the role of individuals into their historical, social and cultural settings (Brown, 2017).

The true mechanisms of SHC GPNs have the elements of a "good story", including an interesting sequence of events or plot, and rich specific characters (Lejano et al, 2013). How we story the systems around us determines how we understand and behave, how we define risks and impact, who important actors are, who speaks, who is heard, which topics are important, and what policy options should be considered (Hards, 2012).

Overall, literature about SHC GPNs has provided a good outline for the mechanisms of this trade. However, I consider that it is not adequate to explain or predict the mechanisms of trade for SHC or any other used goods in the Pacific. Some aspects of this trade are similar to those described in study from the Global North, while other mechanisms are culturally, geographically and historically distinct to the Pacific region. I also consider that current research about SHC flows is inadequate to empower cultural change about how we consume, reuse and recycle clothing or build a circular economy in New Zealand or for the Pacific region.

Chapter 3 – Methodology

3.1. Research design

Case study methodology is appropriate for this research because the supply network for SHC from New Zealand to the Pacific Islands is a contemporary phenomenon that sits closely within its real-life context, and boundaries between this trade as a phenomenon and its context are not yet clearly evident (Yin, 2009). A case study is also useful for explaining dynamic issues and asking "how" and "why" questions from multiple perspectives (Gray, 2014). Through case study methodology, a holistic description for this SHC GPN is provided which accounts for multiple perspectives of GPN actors' experiences using rich empirical descriptions, and discusses processes while staying close to data (Siggelkow, 2007). Talanoa principles are also taken into account during research because this topic is of significance and interest for the Pacific region, data was collected in both Auckland and Port Moresby, many research participants are from the Pacific Islands, and I am Samoan.

Existent research (largely from the United Kingdom and United States) has addressed the supply network for SHC and other used things from the Global North. This study has a strong grounding in related literature (Eisenhardt & Graebner, 2007), and will fill gaps in research to provide new understanding about this trade from a Pacific perspective, as well as extend the overall understanding of SHC's global flows. The types of participants and secondary data sources chosen in this research design have been used in other SHC GPN research about this trade (for example Amankwah-Amoah, 2015; Brooks & Simons, 2012) which will allow for comparison of my findings to that of other case studies (Gray, 2014).

It is widely accepted that quantitative research alone (particularly using data from trade statistics) is not able to tell the whole story about SHC GPNs. Trade data is incomplete, and miscategorisation, misdeclaration and illegality are common in SHC GPNs (Gregson & Crang, 2015). As well as this, quantitative research cannot describe the complexities of trade or experiences of GPN actors, particularly regarding how or why power dynamics and value creation occur along production networks. In this dissertation, I follow similar research processes as existing research about this topic which has primarily employed case study to fill gaps in quantitative information. For example, a case study of a SHC GPN from the United Kingdom to Mozambique was conducted by Brooks (2013), describing power relations between supply chain nodes; and Crang et al (2013) conducted content analysis of case studies for secondhand goods GPNs, developing empirical theory about product flows and value creation.

Historic realism ontology is adopted during this research, as this case study takes into account wider social and political influences. This perspective considers that reality cannot be separated from human perceptions or values, it is not independent of the researcher, nor is truth or reality absolute or static (Guba & Lincoln, 1994). It is shaped by social, political, ethnic, cultural, and gender values, and these historically situated structures can be limiting and confining (Guba & Lincoln, 1994). As well as this, ideas and knowledge are mediated through power relations,

sometimes resulting in some groups of people being oppressed by others (Gray, 2014). New Zealand and Pacific Islands have had a long, close and eventful relationship. I consider that it would not be possible to conduct research about the distribution of a resource from New Zealand to the Pacific Islands without taking into account our rich history, many relational ties and power dynamics.

A subjectivist epistemology is adopted because data collection and findings in this research are mediated by my interactions and relationships with participants (Guba & Lincoln, 1994). A talanoa research approach is aligned with this perspective because it also discusses how truth and knowledge can be co-created between the researcher and subject (Vaioleti, 2006). Much of my work experience has been in the waste industry, and I consider that the distribution of resources and waste are politically and socioeconomically mediated. I consider that my strong belief in the importance of creating a circular economy and that people should treat each other and resources ethically, my working in resource recovery and with charities and my Samoan heritage will influence the creation of knowledge during this research. My knowledge will be influenced and informed by research participants, and I consider that my values and knowledge will also influence them.

This research is conducted under two research paradigms – critical theory and talanoa – which are complimentary. The aim of critical theory inquiry is to understand socio-political structures which constrain and exploit people, with advocacy and activism as key concepts. Knowledge grows and changes incrementally, eroding ignorance and misappropriation (Guba & Lincoln, 1998). A critical theory paradigm was chosen because it is consistent with historical realism and more specifically, I believe there is inherent inequality between GPN actors' power and ability to extract value within this supply network.

Similar to methods used in other case studies about this topic, this research uses mixed methods design, including interviews, observations and online media research in conjunction with trade statistics. This allows for comparison of my findings to previously conducted case studies, provide new empirical insights, while also standing as its own analytic unit. Although this research is context specific for the Pacific region, it will add to known thematic patterns about SHC GPN, and add to theory development by providing replication, contrast and extension (Vissak, 2010). This research also differs from other literature available about SHC GPNs because it focuses on narratives created by actors along this supply network, and how these stories contribute to behaviours and outcomes.

Talanoa Principles

Principles of talanoa are woven through this research. Talanoa is often described as a methodology, sometimes a research method, sometimes a paradigm, and sometimes all three. It represents one of many research frameworks within the Pacific Studies academic discipline, sitting alongside similar approaches such as Kakala, Fa'afeletui, Fonofale, Kaupapa Māori, Vanua and Tivaevae (Tunufa'i, 2016). All approaches are designed by Pacific researchers,

seeking meaning and significance for Pacific world views, values and experiences (McFall-McCaffery, 2010) while taking into account the richness and challenges that can occur during research conducted by Pasifika about Pasifika (Vaioleti, 2006). An additional challenge in defining Pacific research occurs because being "Pacific" is not homogeneous – this region represents diverse cultures and languages with different cultural practices and customs (McFall-McCaffery, 2010).

Talanoa can be referred to as a conversation – an exchange of ideas and thinking – both formally and informally, which is usually carried out face to face with both multi-level and multi-layered critical discussions. Part of this approach is understanding power dynamics and the *va* (the space between during a relationship) embedded within the researcher's relationship with research subjects (Vaioleti, 2006). The word talanoa comes from the Tongan language, and has the same or similar meaning in some Pacific cultures, while is a foreign or borrowed concept for others. It reflects a process of inclusive, participatory and open conversation in which people share stories, build empathy and make good decisions (Tunufa'i, 2016). Communication is aimed at finding understanding and working towards building and enhancing relationships. Prescott and Hooper (2007) described the main difference between talanoa and unstructured interview as being that unstructured interview is primarily focused on gaining knowledge, and the relational element central to talanoa is not embedded in this process. During research, all of my interactions with participants included an underlying attempt to build trust, understanding and open communication, often with a dose of humour.

During talanoa the researcher and participants are regarded as equal and inseparable, and this cannot be achieved if the researcher takes a neutral or distant position – both contribute to discussion and benefit from the experience (Prescot & Hooper, 2007). For me, this research was often deeply personal. Many participants were friends and family, or were introduced to me through my networks. As well as this, I was privileged to speak with people about their life experiences, and share mine – both in New Zealand and Papua New Guinea. Conversation often included discussion about life, values and beliefs. I was mindful of managing and building relationships, honouring perspectives and sharing my knowledge – including during the many conversations I had where data was not recorded. I also work in the non-profit sector and have an understanding and respect for work in this sector, as well as the challenges they experience.

Research principles of talanoa, like other Pacific approaches, attempt to critically engage with what it is to be Pacific, reclaim cultural identity, work towards decolonizing research and developing cross cultural research tools that create value and capacity build Pacific research in meaningful ways (Suaalii-Sauni & Fulu-Aiolupotea, 2014). The use of talanoa principles is important for my research because it provides a holistic view of Pacific knowledge systems and conceptual frameworks, and acknowledges the importance of providing perspectives for Pacific people to be represented in culturally appropriate ways (McFall-McCaffery, 2010).

When research involves Pacific Island peoples, consideration of attitudes and perceptions of research, values, culture, ethnic diversity, education, language and relationships need to be

addressed. I attempted to structure research design and methodology accordingly. For example, I prepared for my time in Port Moresby by first speaking with people I knew from Papua New Guinea or who had lived there, a friend translated my research information into Pidgin, and I checked that questions were appropriate. When collecting data I always went out with at least one Papua New Guinean national who acted as translator and often provided introductions. In Port Moresby I would often discuss findings with people I was staying with to calibrate my perceptions, and we not only discussed my research topic, but also had conversations about life in general. I also gave everyone I spoke to something to say thank you for their time. This was usually a small amount of money (between K10 and K20), chocolate and/or I would buy something from them (such as betel nut for the person driving me). Luckily, people seemed genuinely interested in discussing my research topic, which made it easy to recruit participants (Prescot & Hooper, 2007).

Pacific research methods like talanoa include imagery of weaving together strands of conversation and making sense of these through a Pacific cultural lens (Suaalii-Sauni & Fulu-Aiolupotea, 2014). As well as a natural fit with the holistic view taken through a critical theory paradigm, historic realism ontology and subjectivist epistemology, talanoa principles fit well with case study methodology. For this research I found that talanoa and case study methodology both relate to building a holistic picture from many strands – case study through multiple methods, and talanoa through open dialogue with a Pacific perspective.

An exploratory approach – following secondhand clothes

Because SHC GPNs are largely unstudied in this part of the world, exploration began with my limited understanding of the mechanisms of this supply network and relationships between actors involved. There was a level of uncertainty about what I would uncover, although my overall aim was to follow the trade route of SHC from donations in Auckland to a Pacific Island destination.

I started by interviewing people close to me, including family, friends and acquaintances about their clothing purchase and disposal habits, and about their understanding of what happens to garments after donation. From there, I interviewed non-profit organisations where donators said they donated clothing to. I had also contacted Savemart, a largescale New Zealand owned for-profit firm that collects SHC via surplus donations from non-profit SHC collectors and through clothing bins they manage. After analysing trade data available, it was clear that the secondhand clothing trade route to Papua New Guinea is the most well-defined with the largest volumes of secondhand clothing exported there from New Zealand. I had initially planned to follow SHC trade to Fiji because I thought it would be an easier destination to collect data. However, after being unable to ignore the huge volumes of SHC exported to Papua New Guinea, I requested an amendment to my ethics application which was approved. In Port Moresby I interviewed employees at large retail stores that sell SHC from New Zealand and Australia, and recorded observations. I also interviewed SHC street sellers whose livelihoods depend on imported SHC, and Papua New Guinean nationals that not only consume this

product, but also give it to others in need. Further detail about participant recruitment and data collection methods are provided in section 3.2 below.

In this case study, rich qualitative data collected is analysed and presented as a complete narrative, which will be intertwined with theory to demonstrate connection between empirical evidence and emergent theory (Eisenhardt & Graebner, 2007). Findings and discussion are addressed in the same sequence that I followed SHC – from donator to charity collector/Savemart, export, overseas retail and consumption.

3.2. Data collection and analysis

The unit of analysis for this case study are the actors who are part of the SHC GPN from New Zealand to Papua New Guinea. Interview questions were about each actor's role in the production network, their understanding of other network nodes and the value they are able to extract from SHC. Interviews are the primary data source for this case study, which is often the case during data collection for building case-based theory, because interviews are highly effective for collecting rich empirical data (Eisenhardt & Graebner, 2007). During data collection, challenges can arise because respondents self-report behaviours and understanding, and can present their decisions and actions in a favourable light (Vissak, 2010). This study limitation has been diminished by including interviewees from a wide range of perspectives and at different points at the supply network (Eisenhardt & Graebner, 2007). Other challenges I experienced during research were because I had collected a large amount of empirical evidence. With over 44 interviews across the supply network, quantitative data from trade databases, and online media research, I needed to minimize overly complex, wide and descriptive theory or text and provide a clear focus (Vissak, 2010).

I have used multiple data collection methods within this case study and talanoa principles to increase the likelihood of research reliability through multiple triangulation, reduce respondent bias, increase depth of knowledge and increase support for my conclusions with an appropriate cultural lens (Vissak, 2010). Combining methods allows for one method to compensate for weaknesses or blind spots in another (Gray, 2014) and reliability of this study is provided through transparency and ability for replication, including documentation of research procedures (Gibbert et al, 2008).

This case study is a unit for theory development, and can be cross analysed with other case studies about GPNs for used things to enhance analytical generalization, which is a process of generalisation from empirical observations to theory. Methods of data collection and analysis described below provide the reader with a chain of evidence that will allow reconstruction of how I went from the initial research question to final conclusions (Gibbert et al, 2008).

The table below sets out the mixed methods of data collection used during this study, as well as participants and data sources:

Participants / data sources	Data collection method	Analysis
Used clothing donators in Auckland	- Interviews were conducted with 13 individuals who live in Auckland. - A semi-structured interview was conducted where participants discussed behaviours and beliefs about acquiring and discarding garments, as well as their knowledge about other actors in this supply network. - Interviews were face-to-face, recorded and transcribed, and generally lasted between 10 and 25 minutes. - As this is exploratory research, participants were chosen for cultural and ethnic diversity, age diversity and varying number of years lived in New Zealand. Interviewees were single or in a relationship, and some were parents and grandparents. - Research limitations: Participants were recruited from my social networks, meaning that they may not be a representative sample of Aucklanders.	Thematic
Non-profit collectors, sorters and retailers of SHC in Auckland	- Interviews conducted with seven individuals who were managers, retail store staff and volunteers from non-profit firms that collect, sort and retail SHC in Auckland. Non-profit firms ranged from very small and local to large national and multi-national. - A semi-structured interview was conducted where participants discussed experiences collecting, sorting and retailing SHC, as well as knowledge about other actors in this supply network. - Interviews ranged from between 15 minutes and one hour, and were either conducted over the phone or face-to-face. Face-to-face interviews were recorded and transcribed, and notes taken during phone interviews. - Participants were recruited by phone, email and requests through my social networks. - Research limitations: Participants self-selected to take part, and this may be because of their personal interest in this supply network. There were initial challenges recruiting participants from non-profit firms, and the sample of participants recruited may not be representative of views within this network node. Seven participants is also a small sample, particularly because of the diversity of non-profit organisations that collect and sort SHC.	Thematic
Savemart Limited and associated for-profit companies owned by the Doonan family involved in SHC collection, sorting and retail	- Contact was made multiple times requesting participation with a representative from Savemart, with no response. - Online and media research conducted using company websites, media articles, New Zealand Companies Office information and Australian Securities & Investments Commission. - Research limitations: Limited information available online about this network node.	Content
SHC importers and largescale	- I attended all stores in Port Moresby that sold SHC imported from New Zealand, with observations recorded. - Interviews conducted with four individuals who were store managers and employees at largescale SHC importers and	Content

retailers in Port Moresby	retailers in Port Moresby that imported SHC from New Zealand and Australia. • A semi-structured interview was conducted where participants discussed experiences receiving, sorting and retailing SHC, as well as knowledge about other actors in this supply network. • Interviews ranged between 10 and 25 minutes. All were face-to-face and were either recorded and transcribed, or notes were taken. • A Pidgin-English translator provided support for some interviews. • Participants were recruited by visiting stores and requesting interviews. I had also attempted to recruit participants by leaving a letter for management at stores. Once I believed that store managers and employees from New Zealand-supplied stores were told not to speak with me I immediately stopped trying to recruit participants. • Online research about Pagini Clothing Limited, the largescale clothing retailer that sells SHC from New Zealand in Papua New Guinea. • Research limitations: Four interviewees is a very small sample size, meaning that thematic analysis of interviews could be undertaken.	
SHC Street Sellers in Port Moresby	• Interviews conducted with seven individuals who sold SHC at the street side or market stalls in Port Moresby. • A semi-structured interview was conducted where participants discussed experiences purchasing, sorting and retailing SHC, knowledge about other actors in this supply network, and their ability to maintain a livelihood through this trade. • A Pidgin-English translator provided support for some interviews. • Interviews were between 10 and 20 minutes, all face-to-face with notes taken. • Participants were found through local knowledge from individuals providing me with translation and transportation support about where street sellers were located. If sellers were not busy we stopped to request a short interview on the roadside. • Research limitations: Although attempts were made to reduce miscommunication and misinterpretation that can happen during cross-cultural research, particularly across different languages, this might still have occurred.	Thematic
Residents in Port Moresby	• Fifteen residents in Port Moresby that purchase secondhand clothing were interviewed, including one who worked for an NGO that had received SHC donations through Pagini Clothing. • A semi-structured interview was conducted where participants discussed behaviours and beliefs about acquiring and discarding garments as well as other actors involved in this supply network. • A Pidgin-English translator provided support for some interviews. • Interviews were between 10 and 25 minutes, all face-to-face, and were either recorded and transcribed or notes taken. • Research limitations: although attempts were made to reduce miscommunication and misinterpretation that can	Thematic

	happen during cross-cultural research, particularly across different languages, this might still have occurred.	
Trade data statistics	• Statistical data collected about SHC volumes and value (NZD) exported to the Pacific Islands from Statistics New Zealand. • Statistical data collected about SHC volumes exported from Australia and to Papua New Guinea using UN Comtrade database. • Research limitations: Trade data is incomplete, and miscategorisation, misdeclaration and illegality are common in SHC GPNs.	Content

Both qualitative content analysis and thematic analysis approaches are used in this research. Content analysis was used to analyse text, and thematic analysis used to collate interview data in a way that is rich, detailed and complex. Both are inductive qualitative descriptive approaches to identify, analyse and report patterns or themes within data (Vaismoradi et al, 2013).

Thematic analysis was used to review GPN actors' interview data by searching for and identifying common threads and patterns of perspectives and experiences that extended across interviews. Four sets of data were analysed individually – SHC donators, non-profit organisations, SHC street sellers and residents in Port Moresby to fit holistically with this case study (Braun & Clarke, 2014).

First, I developed familiarity with interview data by transcribing interviews and typing up interview notes. I then read and reread data while taking note of initial ideas and highlighting important quotes throughout interview transcripts. Initial codes, which can be defined as words or short phrases that symbolise or capture the meaning of a portion of data (Saladana, 2016), were generated across each group of actors' data set in an excel table, with examples, insights and quotes collated with each code. After this, codes were collated into potential themes that emerged across data sets, that were important for the phenomena and associated with my research question, ensuring that all data relevant to each potential theme was grouped with it. Themes were checked again to see whether they fit with coded extracts and the entire data set, and a thematic map was generated (Braun & Clarke, 2014; Vaismoradi et al, 2013). A set of themes was developed for each category of actors, and then overarching themes were generated from these to fit holistically with this case study.

Names for themes were then further defined, with further rounds of analysis to check their fit with the overall narrative described in interviews. During this process I provided clearer definitions and names for each theme, and removed excessive data. During write up of findings, a final analysis was done of information provided, ensuring that examples and quotes were not lost when developing themes, and findings were reviewed against the research question and literature reviewed (Vaismoradi et al 2013).

An example of how I have developed themes can be seen from a participant's quote about what she believes happens to clothing that goes in to clothing bins, "*well you can see that's what they are advertising. It's for cancer patients or children with cancer or whatever so that's what I assume it's going to.*" At face value, this quote describes the participant's belief that clothing she donates is going to help children with cancer. This quote shows that she has chosen to donate garments as she believes will benefit others in need. It also shows that she has made this assumption about how clothing will benefit others from labelling on bins, and her assumption of what happens to donated clothing is incongruent with the reality of what happens to garments. This quote is included as an example of the theme that donators have limited knowledge about what happens to SHC after donation.

Data from written sources including websites and media articles were analysed using an inductive qualitative content analysis process. This is a method of analysing written, verbal and visual messages in a systematic and objective way to identify common ideas and broader themes. Elo and Kyngas (2008) considered that an advantage of this method is that it can deal with large amounts of textual data from different sources – with data moving from the specific to the general. I read through multiple media articles about SHC donations in New Zealand, attempting to make sense of the data as a whole, as well the narratives within types of data sources.

3.3. Context for this case study

New Zealand is a Pacific nation, which is linked to other Pacific Islands nations through history, culture, politics, and demographics. The Ministry of Foreign Affairs and Trade (MFAT) considers that New Zealand is able to wield more influence and have more of a positive impact in the Pacific than any other region (MFAT, n.d.). New Zealand's engagement in the Pacific is shaped by three interrelated concepts. The first acknowledges New Zealand's strong Pacific identity and interconnectedness. The second acknowledges New Zealand's national security as affected by the Pacific region's stability and trans-boundary security challenges. Thirdly, that Pacific Island nations having strong economic and social wellbeing improves resilience and self-reliance (MFAT, n.d.). MFAT (n.d.) describes New Zealand's relationship with Papua New Guinea as being long standing, friendly and growing, and characterised by political consultation, a large aid program, business and commercial connections and defence cooperation.

Papua New Guinea is a Pacific Island nation, which sits between the Pacific and Asia regions. There are more than twice as many people and twice as much land in Papua New Guinea than all of the other Pacific Islands put together (Johnstone, 2011). It's land mass is 463,000, and there are over 600 islands, which are governed through 22 provinces (MFAT, n.d.). The population is estimated at over 8 million people (World Bank, n.d.) with over 1000 tribes, and more than 830 distinct languages spoken. Most of the population in Papua New Guinea are subsistence farmers, with 15 per cent of people living in urban areas (MFAT, n.d.).

Papua New Guinea has been influenced and colonised over 250 years by the Sultanate of Tidore, Holland, Germany, Britain, Japan and Australia. World War II also brought about

dramatic change and loss of life in Papua New Guinea – with over a quarter of a million people killed there during the war. Papua New Guinea eventually won independence from Australia in 1975 (Johnstone, 2011). Papua New Guinea is a developing economy and its growth is largely driven by natural gas and mining (MFAT, n.d.). As well as international aid, there is also a large amount of overseas investment in Papua New Guinea, with investors capitalising on Papua New Guinea's rich natural capital and burgeoning economy (Johnstone, 2011).

Papua New Guinea is New Zealand's second largest goods export market in the Pacific (after Fiji). New Zealand also has a well-established aid program which works with Papua New Guinea to achieve sustainable economic growth, reduce poverty and become a more secure and prosperous nation. In the 2018/2019 financial year, New Zealand will provide $51 million through this program, working with Papua New Guinea government and local agencies to achieve outcomes on providing clean, affordable and reliable energy, increased economic and food security from agriculture, strengthening law and justice systems, strengthening economic governance, improving government service delivery and increasing economic opportunities (MFAT, n.d.).

3.4. Ethical considerations

Different ethical considerations have been accounted for during different parts of this study. This included the challenge of collecting data about commercial enterprise, because research was conducted across multiple cultural contexts, and involved the livelihoods of vulnerable peoples. As well as my research approach incorporating principles of partnership, participation and protection (as per my ethics application and approval by AUTEC), I found that incorporating talanoa principles also provided me with an ethical compass during research. Talanoa principals ensured I took into account the rich perspectives of all people interviewed, and ensured that the importance of relationships and my duty of responsibility and care for participants remained top of mind. Across all interviews, I felt privileged to be invited into peoples' homes, offices and street stalls to discuss this topic and their lives, and to hear about their thoughts and experiences.

This research looks at an income stream for charities in New Zealand used to further their social missions. I have excluded any specific commercial or financial information provided during interviews, and the commercial nature of this trade may also be why I initially had some challenges recruiting participants from charities. Many of those interviewed also discussed their ethics of care for their beneficiaries, and wanting to minimise social and environmental impact of this trade.

I also experienced difficulty finding research participants who were part of Pagini Clothing. I had some initial success, however after leaving letters at stores requesting an interview I think it was likely that employees were told not to speak with me (I was hung up on and had my number blocked by one store manager and another store manager refused to come out of their office space). After I realised this, I immediately stopped trying to recruit research participants

employed by this retailer. I did not want to cause any employment issues or embarrassment for further potential interviewees.

Many Papua New Guineans live in poverty. Although some of the people I interviewed in Port Moresby were affluent, they were very mindful of the hardship faced by others. The vulnerability and precariousness of livelihoods by many people I interviewed were of importance to me during the research process, and I did my best to ensure that conversations maintained their dignity and captured their experiences. I was also careful to manage expectation about the wishes of some street sellers who hoped to find a connection in New Zealand and Australia to purchase SHC bales from directly. More than once I had to apologise and say that I was just a student looking at this topic, I was not able to help them as I am not involved in this trade.

I chose to research this topic because of genuine care for the wellbeing of Pacific peoples and for the environment. Having conversations about this topic with a huge variety of people – many of whom are an extension of my networks – was always inspiring. I also felt lucky and privileged to go to Port Moresby, and experience local culture, generosity and hospitality.

Chapter 4 – Findings

The question "*how do distribution networks of used textiles from New Zealand to Papua New Guinea operate, who are the main actors, and what kind of value and impacts are created?*" is answered by literally following this supply network for SHC. I began by seeking information about quantities of SHC exported from New Zealand and Australia to Papua New Guinea via export databases, as detailed in section 4.1. In section 4.2 is a schematic representation of SHC GPNs from New Zealand to the Pacific region, which also provides an overview of findings from this study. Interviews were conducted with GPN actors, thematic analysis of which is provided, and pseudonyms used. Thematic analysis of interviews with SHC donators in Auckland is in section 4.3. An overview of SHC collectors in New Zealand is provided in section 4.4, with thematic analysis of interviews with charity employees in section 4.4.1. I also conducted online research looking at media reports about SHC donations in New Zealand (section 4.4.2). Section 4.4.3 covers online research on private firms in the supply network between New Zealand and Papua New Guinea. Thematic analysis of interviews and observations in Port Moresby – including with SHC retailers, street sellers and consumers – is set out in section 4.5.

4.1. Quantitative data

Clothing retail sales in New Zealand has increased over the past ten years. As shown in Table 1 (Statistics New Zealand 2018) below, since 2008, the amount spent on clothing has increased by over $500 million, from $3.08 billion to $3.64 billion – which per capita, is an increase in consumption from $720 in 2008 to $752 in 2017. Although figures show an increase in sales they do not describe the volume of textiles sold. An element of the fast fashion industry is the low sale prices of clothing, meaning that a higher volume of clothing can be purchased per dollar. These figures also do not take into account increased online shopping from overseas, and are overall likely to underestimate the growth in clothing retail and volumes sold.

Table 1. Sales of clothing, footwear and personal accessory retailing in New Zealand from 2008 to 2017 (Statistics New Zealand, 2018)

Sales – Clothing, footwear and personal accessory retailing (billions)										
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Sales (billions in NZD)	$3.08	$3.07	$3.20	$3.40	$3.39	$3.33	$3.31	$3.36	$3.50	$3.64
Population (millions)	4.28	4.33	4.37	4.40	4.43	4.48	4.55	4.65	4.75	4.84

An increase in clothing sales in New Zealand as shown in Table 1 above correlates with the amount of used textiles exported overseas. Figure 3 and Table 2 below (Statistics New Zealand, 2018) show the total global exports from New Zealand for both worn textiles and clothing (export code 6309) and sorted and unsorted used or new rags and textiles scraps (export code 6310). As can be seen in Figure 3 below, the majority of used textiles exported

from New Zealand are destined for Papua New Guinea. There has also been an increase in the total proportion of textiles being sent to Papua New Guinea when compared with other countries. In 2008, 84 per cent of all exported used textiles (codes 6309 and 6310) were destined for Papua New Guinea, however by 2017, this had increased to 93 per cent of total global exports from New Zealand. From 2008 to 2017 this represents an increase of 67 per cent of SHC sent to Papua New Guinea from New Zealand.

Figure 3.   Tonnes of textiles exported from New Zealand (export codes 6309 and 6310) from 2008 to 2017 (Statistics New Zealand, 2018)

Table 2. Tonnes of textiles exported from New Zealand (export codes 6309 and 6310) from 2008 to 2017 (Statistics New Zealand, 2018)

Tonnes of New Zealand Export of SHC (codes 6309 & 6310)									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
PNG	5,485	5,337	5,952	6,145	6,817	6,789	7,171	8,111	7,509	8,174
Global	6,519	7,375	7,397	8,315	9,091	9,545	9,190	8,958	7,968	8,762

I was unable to find publicly available trade data about imports of textiles reported by Papua New Guinea. However by scanning information about exports reported by other trading partners to Papua New Guinea on the United Nations Comtrade database (2018), data was found. Figure 4 provides information about reported volumes of textiles (codes 6309 and 6310) exported to Papua New Guinea. Australia and New Zealand are the main trading partners for this commodity to Papua New Guinea, although there is also a small amount of used textiles imported from other parts of the world (mainly Asia). There was a large spike of used textiles imported from Australia in 2002, although this appears to be largely rags (UN Comtrade, 2018).

Tonnes of textiles exported to Papua New Guinea (export codes 6309 and 6310)

AU = Reported by Australia

NZ = Reported by New Zealand

GL = Reported by the rest of the world
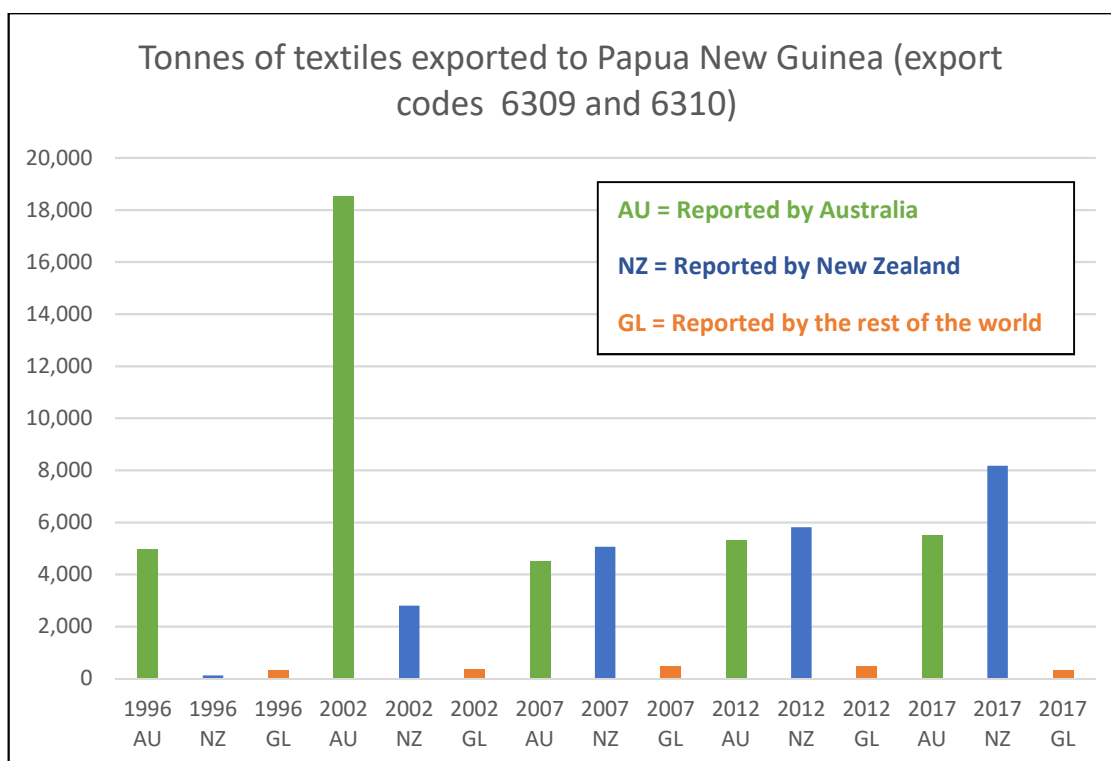
Figure 4. Tonnes of used textiles (export codes 6309 and 6310) exported to Papua New Guinea from 2008 to 2017 (UN Comtrade 2018)

Although this research follows the SHC GPN from New Zealand to Papua New Guinea, I also looked at used textiles traded from New Zealand to other Pacific Islands. Table 3 shows a general increase in reported quantities of used textiles (codes 6309 and 6310) exported to all Pacific Islands (Statistics New Zealand 2018). Volumes sent to other Pacific Islands are small compared with what is exported to Papua New Guinea – however the population of other Pacific Islands are also much smaller than Papua New Guinea.

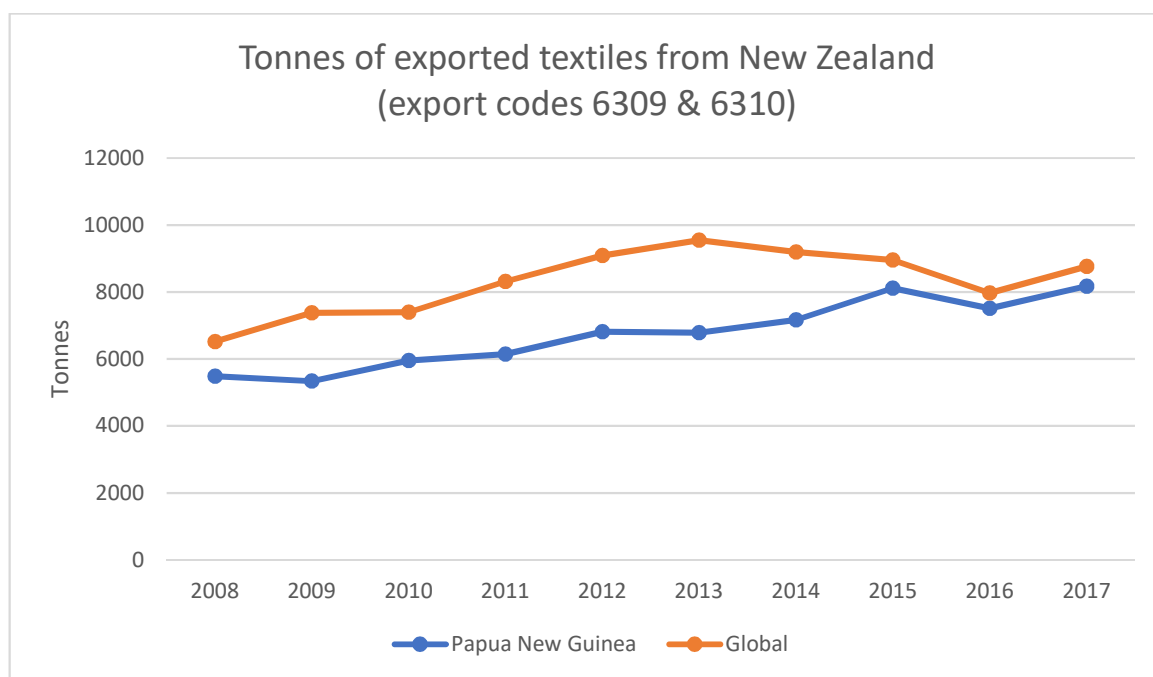Table 3. Tonnes of used textiles exported to Pacific Islands (export codes 6309 and 6310) from 2008 to 2017 (Statistics New Zealand, 2018)

Tonnes of textiles exported to Pacific Islands (export codes 6309 and 6310)										
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Cook Islands	0.3	0.7	1.4	2.5	11.3	3.1	1.3	1.4	0.3	1.6
Fiji	1.0	1.0	1.8	0.3	4.6	13.6	12.4	3.8	61.1	87.8
French Polynesia	0.4	-	0.7	0.4	0.7	0.2	0.1	0.5	0.7	0.9
Kiribati	-	-	0.6	5.5	4.3	48.1	21.1	1.3	32.4	49.1
New Caledonia	-	1.8	-	0.2	-	0.1	0.9	3.5	6.0	6.8
Niue	0.2	-	0.1	0.1	0.3	1.3	-	0.2	2.6	0.4
Samoa	5.5	11.9	1.7	5.6	0.9	1.5	3.3	4.8	7.7	13.0
Solomon Islands	-	-	6.1	84.3	78.9	9.8	18.8	24.5	45.7	55.1
Tonga	1.5	5.0	1.7	1.3	9.5	47.7	30.6	4.5	28.5	42.9
Tuvalu	0.3	0.8	0.2	0.6	0.7	0.4	2.6	3.1	0.6	0.1
Vanuatu	0.4	0.3	9.6	0.2	0.5	0.1	0.2	9.1	0.3	1.8

As well as exporting used textiles, New Zealand also imports large volumes of rags each year. Trade data for the amount of rags imported to New Zealand each year is shown in Figure 4.6 (Statistics New Zealand, 2018).

Table 4. Tonnes of rags imported into New Zealand (code 6310) from 2008 to 2017 (Statistics New Zealand)

	Tonnes of rags imported into New Zealand (code 6310)									
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Tonnes	2098	2341	2310	2802	3296	2865	3495	2875	3447	3889

4.2. A production network for SHC

The following sections will discuss the GPN which takes SHC from household donations in New Zealand to Papua New Guinea – a schematic representation of which is shown in Figure 5 below. I developed this schematic from interview data obtained, and it shows the complexity of what happens to clothing when it is no longer wanted by Auckland households.
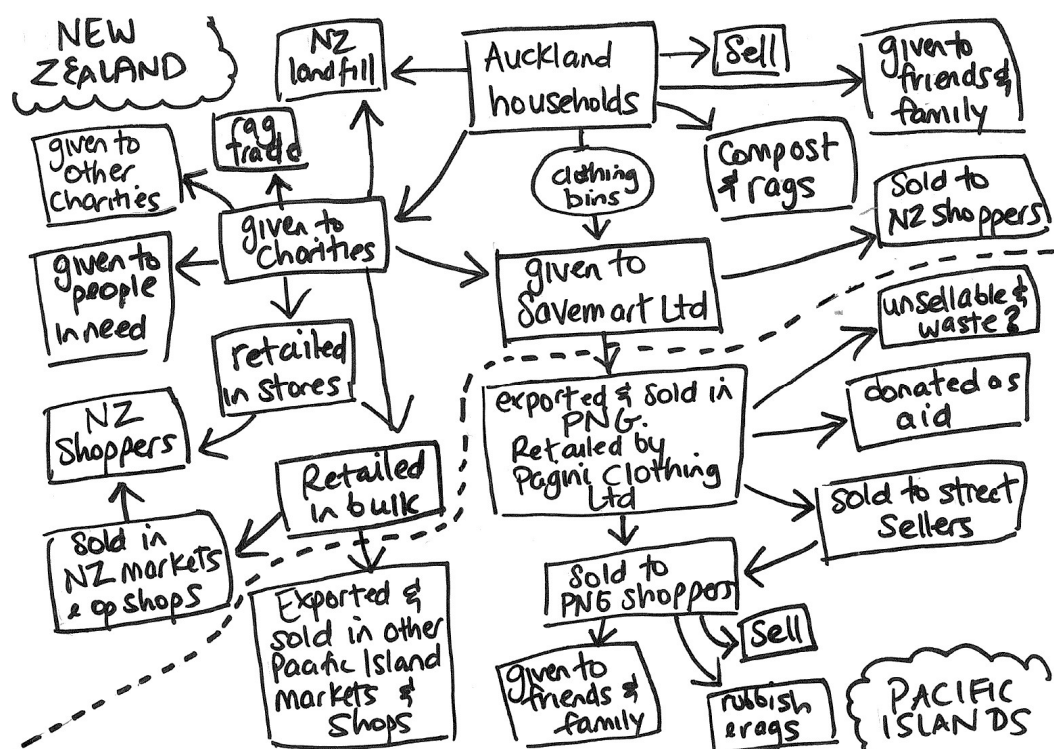
Figure 5.   Schematic representation of SHC GPN from New Zealand to the Pacific Islands

4.3. Clothing donators in New Zealand

Donating unwanted SHC is a common and encouraged behaviour in New Zealand. All interviewees donated SHC – unaware that their donations were likely to go on a journey overseas through a commercialised global supply network, linking us to people in developing countries such as Papua New Guinea. Interviewees said that they donated SHC because they

believe it still has value, to declutter and to help others, and their narrative – the stories they tell about why they give, as well as what happens to SHC it after it is donated were very similar.

Interviewees were first asked where they had sourced clothing over the past year. New clothes were purchased from retail stores, online or received as gifts, whereas SHC acquisition was more diverse. SHC was most likely received as hand-me-downs, although some interviewees also purchased SHC from secondhand retailers and Trade Me. It was purchased as a fashion choice, on an ad-hoc basis (if they happen to go past an op shop), or it was actively purchased because it was seen as good value – particularly for fast growing children. When averaged across all participants, they self-reported that around 75 per cent of acquired clothing over the past year was new and 25 per cent secondhand, with estimates varying from between 100 per cent to as little as 15 per cent new clothing, and most having acquired very little secondhand (between 10-20 per cent) during this period. Given the small number of participants, this research is not quantitative, and is able to describe interviewee reported behaviour, but not able to be inferred across New Zealand's population.

Half of the interviewees thought they had the "right amount" of clothing at home, and the other half thought they had "a little too much". Participants said they knew they had the right amount of clothes when they had something to wear for all types of occasions, and did not feel like they needed to purchase anything else. People who described themselves as having "a little too much" clothing would often add that they felt they had too many of the wrong things, but not enough of what they actually needed. As Charlene described, "*there is definitely a lot of things holding places. You don't want to throw them out because you've invested in them. Or you think they might work out one day*". Having clothes that are appropriate for a variety of cultural and social contexts also contributed to some people feeling they had "a little too much". For example, Natasha said she had to two wardrobes – one with her western wear and one with traditional Indian wear, and Sierra thought that excess clothing was usually for formal and special occasions.

Thematic analysis of interviews with SHC donators in New Zealand identified seven major themes. These themes are listed below, with further detail discussed in sections 4.3.1 to 4.3.7.

- Decisions based on use-value and exchange-value are used to categorise where unwanted SHC should go
- Personal needs and external requests stimulates discarding unwanted SHC
- SHC is discarded because it does not suit tastes, is too worn or does not fit
- Convenience was the most important factor when deciding how to donate SHC
- There is a strong sharing economy for SHC
- Donating SHC is seen as a moral action
- There is limited knowledge about what happens to SHC after donation

4.3.1. Decisions based on use-value and exchange-value are used to categorise where unwanted SHC should go

When deciding how to discard unwanted SHC, decisions are made based on clothing's potential use-value and exchange value, and many participants described sorting clothes into piles destined for different places. This process was done with varying amounts of care and thought. The volume of clothing donated was estimated by interviewees in either shopping bags, grocery bags or black rubbish bags, and the number of people in the household correlated with the volume of clothing they reported discarding in the last year. Households of between one and six people estimated that they had discarded between 45 and 225 litres of clothing in the last year – an average of 142 litres per household.

Between two and five categories were describe by participants for their unwanted SHC. As shown in Figure 6 three quarters of interviewees choose to give unwanted garments to friends and family. All participants interviewed also donated SHC by either dropping it of at a charity store or putting it in a clothing bin. Some were very clear about which organisations they chose to donate to, whereas others were more vague, "*the ones along the street up there*", or "*the mission*". For those who used clothing bins, none were able to identify Savemart as the bin owner. Other destinations for unwanted SHC included reselling them, giving clothes as disaster relief and donating them for school fundraisers. A few people interviewed said they were conscious of not donating clothes that were "too worn". These would either become household rags, were thrown into the rubbish, and one participant chose to compost his worn clothing – purchasing natural fibres for this reason.

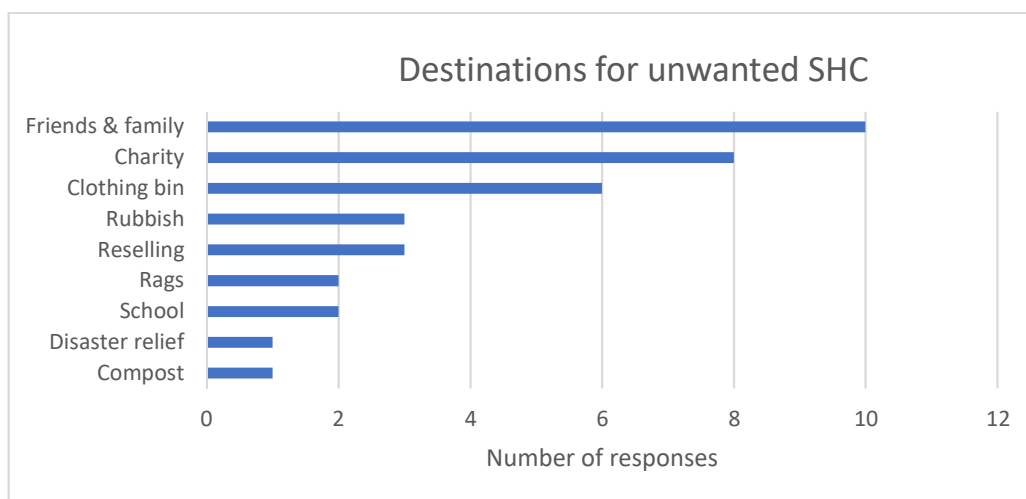Figure 6.   Reported destinations for unwanted SHC

4.3.2. Personal needs and external requests stimulate discarding unwanted SHC

Feeling like they had too many clothes, and wanting to "declutter" was cited most often by participants as a reason to discard SHC. Others said that purchasing new clothes prompted them wanting to get rid of SHC – for example, Analise who said "*you try and fit it into the*

wardrobe and then you see, oh there isn't enough space". Clearing out clothes after a change to living circumstances, including moving house or having a partner move in was also described. Although some participants said they always had a *"bag on the go"* for unwanted SHC, others described the need to have a clear out as being cyclic, based on season and happening once or twice a year. Public requests for donated SHC also prompted a few participants, for example as response to a natural disaster or to support a school fundraiser.

4.3.3. SHC is discarded because it does not suit tastes, is too worn or does not fit

Adults gaining or losing weight, or children growing out of clothes was the most common reason cited for discarding clothes, although a couple of interviewees also described issues occurring if they had purchased the wrong size clothing online. Clothing looking "*a bit too worn*", or having stains and rips was the second most cited reason interviewees gave as a reason to clear things out. These worn items were sometimes still donated to charity, or were put in the rubbish, composted or used as rags. Not liking an item of clothing anymore, thinking clothes were "outdated" or unfashionable were also provided as reasons for discarding items. The last clear out by Ken made him more careful about what he purchased "*you see things you've never worn, or worn once or twice and then you realise you've made some dumb mistakes*".

4.3.4. Convenience was the most important factor when deciding how to donate SHC

Beyond giving to friends and family, when choosing where and how to donate garments, convenience was very important to participants. They said they wanted to donate clothes somewhere convenient, close and easy - "*it's usually somewhere local. I wouldn't go far*". Most often the destination of bins and charity stores were described geographically, rather than by organisation. Theo preferred putting clothing in bins because they had quite a few locations - he could put a bag of clothes in the back of his car until the next time he passed a bin, usually "*behind a school or Countdown*". Natasha also kept a bag of clothes in the back of her car until she finds a bin. "*It all goes to the same place, doesn't it? So it doesn't matter.*"

4.3.5. There is a strong sharing economy for SHC

Redistribution of SHC also occurs through friends, family and community networks, including kindergarten and school. Gifts of SHC were usually called "hand-me-downs", and happened in a bespoke way, with the style, size, and needs of the recipients taken into account when giving. Natasha said there had always been a lot of handing around clothing in her family. If something was still good and could fit someone else, it was "*just passed it along*". This was echoed by others, including Trudy who said that when she is having a clear out, she will put aside specific items for others because "*there might be somebody in the family I think it would look better on*".

Giving and/or receiving hand-me-downs for children was described by all parents interviewed, and viewed as the preferred destination for children's clothing – even if they donated their own adult clothes to charity. Some participants had large family and friend networks that they

distribute children's clothing through, whereas others had identified one person younger than their child that they could give items to.

Holding onto unused clothes contributed to a sense of clutter for participants. For some, receiving hand-me-downs meant that they felt they had a little too much clothing, and this was described for both adults and children's wardrobes. Irene says that because she gets a lot of hand me downs, "*instead of me seeking what I actually need for work, or for going out, so it's not specifically clothes that I've chosen - they just happen to be clothes that I've got. There is quite a lot that I don't use*". Most parents also described their children as having "a little too much" clothing. Even if their children's day to day wardrobes were quite concise, parents held to extra clothing that might not be quite the right size or suitable to the child's style, particularly when they were handed down from someone else.

4.3.6. Donating SHC is seen as a moral action

Interviewees were motivated to donate SHC because they believe it has use-value and exchange-value. They also want garments to continue being used, benefit friends, family and community, raise money for non-profits and reduce waste to landfill. Donating was a well-established behaviour among all people interviewees, who often described throwing away still-useable clothes as being "wrong". Comments such as "*it just feels wasteful*", "*I just wouldn't feel good about dumping something*" and "*it doesn't feel right*" were common throughout interviews. Others described wanting to donate clothes because they were giving to less fortunate people - "*someone else that needs them*", and felt they were "*giving back to the community*". Resource stewardship and avoiding landfill were also cited as a reasons to donate SHC, and when I asked participants what they thought happened to clothes after donation, some were very concerned that I would find their donations were actually just being sent to landfill.

The exchange-value of clothes was also discussed by many participants. They chose to donate unwanted clothes rather than throw them away to raise money for charity, although many were either vague about which charity money was raised for, or said they didn't really mind which, just that the clothes were "*doing good*". A couple of participants also described the financial investment that they had made in the clothing, and thought that throwing away SHC would be the same as throwing away money. As summed up by Ken, "*I mean, I really can't justify throwing a five-hundred-dollar shirt in a bin*".

Donation behaviour was also seen by some as having been informed by upbringing. Irene said she was "*brought up this way… in west Auckland that's just what you did*". Natasha described growing up in a developing country, and said "*we just grew up like that. You never just threw something away. Nothing. There is always someone who needs something*". During our interview her husband was clearing out their garage –coming out with things to ask her "*is there anyone who can use it?*"

4.3.7. There is limited knowledge about what happens to SHC after donation

Vague assumptions were made by participants about what they thought happened to donated SHC, and most had not thought much about it. Common responses to the question "*what do you think happens to the clothes you donate?*" included "*I've just never thought about it*", "*I actually don't know, other than they somehow go to charity*" and "*it's just not something I've ever looked into*". There was also an element of donating SHC in good faith and believing their donations were clothing the needy and raising money for charity.

Participants generally constructed a similar story for SHC after it is donated, although they focused on different parts of a narrative during their description, with personal experiences influencing their beliefs about this supply network. Most interviewees thought that once clothing was donated it would be picked up in a truck and taken to a distribution centre for sorting. A few participants thought that at this stage clothing would be washed, stains taken out, and repaired wherever possible. Some of the clothing would then be given away to those in need and / or sold in stores to raise money for charity. Some interviewees focused on the potential earnings from secondhand clothing, for example Theo thought there was "big money" to be made on-selling fashionable items at a premium. A couple of participants had knowledge of the rag trade, and this was incorporated into their story.

Only two interviewees described non-profits as having to landfill unsellable SHC donations. Both had volunteered for charities and had been surprised at the volume of donations sent to landfill because they were either of poor quality or not sellable. This knowledge changed their donating behaviour, for example Tracey said she now gives SHC to an organisation that matches donations to families they are given to. Irene said that after her experience sorting SHC for a non-profit, she stopped donating SHC that "*was a bit torn or a bit stained*" because it would be destined for landfill. "*Before, I was kind of like, well, someone will sort it. And because I had to do it, I realised it is quite a waste of volunteer time... and money*".

Half of the interviewees had donated SHC into a bin owned by Savemart over the past year, with none identifying that they managed bins and donations destined for commercial resale. Savemart clothing bins were usually described either by colour or location, for example, "*the bin just behind New World down there*" and "*the blue one*". All donators thought that bins collected clothing for charity, and some had remembered the "Child Cancer" stickers as well. Natasha said "*well you can see that's what they are advertising. It's for cancer patients or children with cancer or whatever so that's what I assume it's going to*". She rung up once, but couldn't remember the conversation now - just that it "*ticked the boxes in my head and that was that – I didn't worry about it afterwards*". She laughed and said to me, "*please don't tell me they don't use it properly - I will be so disappointed.*" Ken also told me that he had heard the bins weren't "*as good as we think*". When I asked him what he meant, he said that the perception was that these clothes are getting given to people from low socioeconomic backgrounds, "*but I've heard they are actually selling them to people in need*".

Only one participant understood that clothing donations are sent overseas. She had done some volunteer work in Africa, and had seen SHC for sale there from western countries, although she thought this clothing was sent overseas as aid relief. She described the negative impact of SHC on local sewers there, and thought that although people think they are doing good by donating clothes, seeing that "*makes it difficult to know, you know, the impact of your actions*".

4.4. SHC collectors in New Zealand

SHC is collected, sorted and redistributed by a number of organisations. For this thesis I explored the two main collection avenues – being non-profits that resell SHC to raise money for their missions, and Savemart, a for profit firm which collects SHC through its clothing bins and via surplus SHC from non-profits for resale. Section 4.4.1 provides thematic analysis from interviews with individuals from non-profit organisations, and section 4.4.2 discusses findings from online research about SHC and redistribution channels. Section 4.4.3 discusses the private firms in the supply network which move SHC from New Zealand and Papua New Guinea.

4.4.1. Charities

Regional managers, store managers and volunteers were interviewed from both small and large non-profit organisations that collect and sort SHC and other donations. Charities sell donations to raise money that fulfil their missions, and some also give clothing to people in need. SHC donations were received from households and businesses, and donations received ranged in size from an item or two, bag fulls, house lots, storage units and pallets of new product. Although the scale at which organisations worked at differed, there were some common themes during interviews:

- Volumes of SHC donations are increasing, cyclic and overwhelming
- A huge variety of donation types and quality are received – with only a small portion able to be retailed locally
- A strong understanding of SHC retailing is required to ensure profitability and speed of SHC turnover
- Increased volumes of donations have created a need for differentiated SHC markets
- Landfilling is costly and part of the business model
- SHC donations contribute to social good aligned with the organisation's mission
- There is desire to see the supply network for SHC transformed

4.4.1.1. Volumes of SHC donations are increasing, cyclic and overwhelming

All participants described the large amount of SHC donations received. This required streamlined processes to stop volumes from becoming unmanageable, and all interviewees agreed that the amounts of SHC being donated had increased over time. When describing donations received, interviewees used words like "*overwhelmed*", "*slammed*", "*flooded*", "*overflowing*", "*huge*" and "*never-ending*". The biggest constraints to managing and processing

donations were the number of staff and volunteers, and the storage space available. When interviewees had received too many SHC donations to sort through, they described having to move donations between stores, asking for help from another non-profit organisation, and sending excess donations to Savemart.

Donators tended to think that their decision to clear out clothing are an individual choice, however at a macro level people make decisions at similar times and in a cyclic way. Non-profits interviewed described receiving donations in waves, which come with change in season, weekends and during school holidays. One store manager described the volumes and cyclic nature of donations by saying:

> *"It never stops. I've never had a store say I'm not getting donations through the door. Especially clothing. Clothing is a major, I wouldn't say anyone has gotten on top of that in the time I've been here. They might be organised for a day, and they'll be really happy, and then they get the next lot, and Monday it's like, oh my god."*

4.4.1.2. SHC donations are diverse – with a small amount retailed locally

Non-profits receive a huge variety of donations – both in terms of quality and type from both commercial and household sources. All interviewees described the generosity of people who donate and the amazing items received, as well as the many items received which are general waste, of poor quality, unusable or do not fit into a category of items they are able to sell or redistribute.

Every type of clothing and textiles imaginable are received by charities – including jackets, pants, underwear, towels, curtains, ski boots and t-shirts – in all different sizes, and which have had varying amounts of use. Some thought that the quality of SHC received had gotten worse over the years, whereas others said it was about the same. Interviewees estimated that between 15 and 30 percent of SHC donations received could be either sold locally or used by the community locally.

4.4.1.3. A strong understanding of SHC retailing is required to ensure profitability and speed of SHC turnover

Shoppers dictate the market for SHC, and non-profits are not able to change or adjust their supply or product to meet expectations. They can only work with the donations they receive, and put out things that they think are most desirable to customers. Interviewees showed sophisticated knowledge of the overall SHC retailing sector, business operations and the profit margins they work with. They operate a commercial enterprise, where the value of their brand, target markets, presentation of product, stock and price points are taken into account. Some described the profitability of donations against volumes received, and couple of participants also described the importance of brand loyalty - however also understood that convenience was likely to be the most motivating factor as people decided where to donate and shop. There are also costs and challenges associated with retailing secondhand items:

> *"We are trying to raise money for good. People think that because the items we get are free, they should go cheap as well, but there is a cost associated with processing items, infrastructure, landfilling costs, and not everything we get is able to be sold."*

Stock and pricing in retail stores is chosen to cater for markets – "*every store manager knows what their customers are looking for*", and as described by Jaimee "*it differs, even from here to 10 minutes so you have to tailor what you offer in your stores to the local people, to what the locals want*".

Stock is also turned over very quickly in the SHC market – described by one interviewee as moving at "*lightning speed*". Store managers needed to be disciplined with rotating items and not holding on to too much, as well as displaying and categorising SHC correctly. Knowledgeable SHC sorters are also highly valued, as there is a high level of skill and product knowledge involved in sorting goods, including knowledge about brands valued by customers. Profit margins on clothes are made by volunteers and staff. This is because they make the decisions about what to hang in the store and the pricing point. Shoppers will quickly tell retailers what they want and if items are priced correctly. Some customers shop every day (sometimes twice a day) and many customers also tend to shop quickly, most often during lunch breaks.

4.4.1.4. Increasing SHC donations have created a need for differentiated markets

Increasing volumes of SHC donations have resulted in non-profits needing to find new / differentiated markets for donations. These differentiated markets were generally a response to oversupply of SHC, rather than active ways to develop another revenue stream. For example, non-profits developing relationships with other non-profits to manage volumes of donations, selling goods online, giving SHC to Savemart, working with another NGO to clean and repair clothing, and giving clothes to a ragging company.

Some non-profits also sold SHC in bulk. Although described as not being "*ideal*" it was seen as a better alternative to things being sent to landfill – thus giving SHC a "*second shot*". Interviewees believed that that garments would either be sold in Auckland, for example in markets or small op shops, or they are shipped overseas – mostly to Pacific Islands. One interviewee said that most of their clients who buy SHC in bulk are Pasifika – mostly Tongan, Fijian and Samoan – who would either sell SHC in Auckland or overseas. Another interviewee said that if whole bales were sold, then these items were likely to be sent to Pacific Islands. Tonga was descried as the most common destination for SHC when purchased in bulk.

All non-profits also discussed Savemart as a common destination for SHC, although not all interviewees gave their excess SHC to Savemart. Overflow SHC given to Savemart was either as part of a formal relationship or on an *ad hoc* basis. Some non-profits received a financial donation from Savemart whereas others did not. Savemart was described by one interviewee as both a competitor and a place to dispose of surplus textiles, and another described them as being able to take things that were still useable but not sellable through their charity store. One

participant described Savemart as a good option on occasions where they got "*slammed*" with donations. Shamila said:

> *"I know Savemart was definitely a drop, you know a backstop for people. I think they are very wide range accepting. And they have a good sort of hub, and the man power to deal with quantity. That's what we're lacking at the moment."*

4.4.1.5. Landfilling is costly and is part of the business model

Large volumes of donated SHC (as well as other items) going to landfill was described by all interviewees. Comments like "*tipping costs are huge for us*" were common, and landfilling volumes and costs were described as high and increasing. Landfilling SHC happens as a result of oversupply, poor quality items received, dumping by the public and contamination. Amounts sent to landfill were described in terms of trucks-full, number of black bags, or skip bins, and skip bins were described as having to be collected from a retail store regularly – every week, a couple of times a week, or every day. Overall volumes of SHC sent to landfill were not calculated, as they were often mixed with other items. One interviewee described how landfilling was a part of this sector's business model, and that their business would cease to operate without having waste collectors in place. However, high and increasing landfilling costs was also taking money raised away from the charity's beneficiaries – "*tip fees do my head in - paying money that was raised to help families.*"

Some interviewees also said that they collect donations from the public that they know are not sellable, or that they know are rubbish. This was seen as part of their community service, because they have the capacity – including trucks and skip bins to deal with waste. Others will refuse to collect items they know will not sell.

Many interviewees also described people using charity organisations to get of their rubbish and misinformation by the public about their ability to deal with donations that were not in good condition – with all of it destined for landfill.

> *"If it's not good for family members or for friends, it's definitely not good for anyone else out there. We can't repair, we can't wash, we can't find the missing pieces."*

Interviewees also said that a few bad things, for example rubbish, damp clothes, cigarettes and human fluids can contaminate an entire bag of donations, meaning the whole bag of items was destined for landfill. Problems associated with donations being left outside of retail stores were also described by all participants because of items getting trashed, stolen or rained on – "*we have to pay so much for the vans to go and do dumping trips, because if it gets rained on today, then we can't sell it - even if it was good, because its wet now."*

4.4.1.6. Clothing donations contribute to social good

Non-profit organisations interviewed all worked towards achieving social good. SHC retailing raises money to achieve their missions, and if it is aligned with the non-profit's mission then good quality clothing is also given to those in need. Interviewees described their retailing roles

as contributing to their organisation's wider mission, including any international affiliations. There was integration between the retail element and other parts of the organisation, for example through work placement, volunteer support, giving clothing when needed, and collecting items even if they aren't all sellable as a community service.

If clothing was given to people as a form of assistance, it was done in a bespoke way, with the best items saved for those in need. As described by Shamila "*if it's in brand new condition, and we can give it to a family, we will normally save it for them.*" Some interviewees also said that their non-profit organisation provided a service for people to go into a store and pick items as needed, and was seen as a small and easy way to help.

> *"Because I feel like if that's what you're going to be asking for, it's a burden enough to be coming in and asking for that. It's something little - but it's something. People also often need other support, so it's a good start for a conversation."*

All interviewees described the generosity of the public through donations received.

> *"We really appreciate the donations we receive. Without them we wouldn't be able to support those in need without the help of the community. I think it's awesome that people donate. Because it's the perfect way to make sure your new or near new stuff is going to other people. I know for a fact it's going straight onto other people's backs. If it doesn't get given, it gets sold, and that money goes towards helping other people back on their feet."*

4.4.1.7. There is desire to see the current supply network for SHC transformed

During interviews it was seen as undesirable to send SHC to landfill if there was another use for it, and there was unease with some interviewees using Savemart as a backstop for excess donations – particularly without having a "plan B" in place. Many participants were aware of the unsustainability of how this supply network operated, and were looking for ways to reduce negative aspects of the SHC supply network – including how they could use their scale, resources and reach. A couple of other participants described wanting to find other ways of upcycling, reusing, recycling SHC. Many said it was not part of their core business but would support the community to come in with some solutions.

Increasing consumerism was also seen as contributing to challenges with oversupply of SHC, as described by Patricia - "*what's the latest hobby? The latest hobby is shopping.*" Another participant said that she wanted to see product stewardship for textiles put into place, and thought that retailers needed to take some responsibility for the current problems, and the disposal of items they create. An example provided by another participant was H&M and Zara's recent appearance in New Zealand, whose fast fashion business model means that high volumes of clothing are sold at a low price. Clothing from both brands is now being received at charity stores.

4.4.2. Online Media Research

I conducted an online google search for media articles about the collection of SHC in New Zealand and found many articles which focused on the challenges faced by charities and Savemart. Topics reported on included rubbish dumping, poor quality and "gross" items received and increasing landfilling costs. Media articles were from as far back as 2003, where Beston (2003) reported that charities were finding it increasingly difficult to make profit from SHC, and some felt as though they had become wholesalers for commercial SHC dealers.

Many stories described the overwhelming number of donations received, including unwanted items such as household rubbish, broken, stained, ripped and unsellable SHC. In articles, interviewed charities requested that donation were not left outside of stores after hours (Brunton, 2017; McKinlay, 2016; Hunter, 2018; Tso, 2018; Dangerfield, 2018). Many of the stories described charities storefronts and clothing bins being used to dump rubbish (Shaskey 2016; Stuff, 2016; Newton, 2018), and some articles were published just before Christmas, requesting that the public be mindful of what they donated that time of the year (Harrowell, 2017; Watkeys, 2017; Dangerfield, 2017). Many articles also included quotes from Thomas Doonan, Savemart director. For example, Shaskey (2016) reported a quote from Thomas Doonan that "*people need to take a long hard look in the mirror*" about "unimaginable" items being put in clothing bins along with general rubbish.
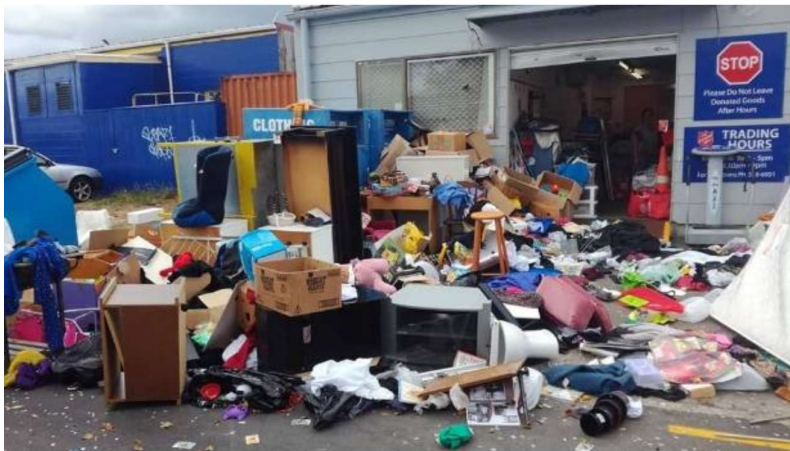
Figure 7.   Photograph of dumping outside a charity shop in Wellington (Stuff, 2018)

Some articles described charities being overwhelmed by clothing donations, linking this to overconsumption of new clothes (Meij, 2017). I also found a few stories about SHC upcycling projects (for example McKinlay 2016; McDonald 2018). McDonald (2018) reported on Wellington St Vincent de Pauls op shop teaching people to sew with unwanted fabric. There were also occasional stories about the best places around New Zealand to op-shop for SHC (Stuff 2017; Sell, 2012).

Figure 8.   Photograph from inside of a charity op shop in New Zealand (Stuff, 2017)

Savemart's role was described in a variety of ways in online media. Earlier media articles described Savemart as picking up SHC on behalf of the Child Cancer Foundation (for example Beston, 2003), some described Savemart as owning clothing bins and also receiving SHC from charities which was then retailed in New Zealand (for example Checkpoint, 2017), and some said that Savemart retailed SHC in both New Zealand and Papua New Guinea. Some articles were ambiguous about whether SHC being sent to Papua New Guinea was retailed or given freely (for example Shaskey, 2016). As reported by Street (2014), Thomas Doonan had said that unwanted but still wearable clothes are sent to Papua New Guinea and "*distributed throughout the settlements*" and "*even unsaleable items are saleable to a third world country*". When was asked about whether clothing was donated to Papua New Guinea, a Savemart ex-employee interviewed by Thomas (2017) responded with "*yes and no… you don't want to be sorting the donation bales that go to PNG. People dumped used needles, nappies, you name it... And anything that was stained ripped just beyond sale in NZ was thrown into the Papua New Guinea bale.*"

Savemart's philanthropy was also discussed in the media (for example Shaskey, 2016; Rankin, 2017; Checkpoint, 2017). Rankin (2017) reported that Child Cancer Foundation had received $3.5 million dollars from Savemart over the years and other charities had also received donations as well. On their website, Child Cancer Foundation (n.d.) lists Savemart and the Textile Recycling Centre as "*providing substantial ongoing financial support for the overheads of the Foundation*". The Child Cancer Foundation's website also states that the annual Savemart Community Volunteer Awards recognise the volunteer excellence in support of the Child Cancer Foundation – however I had not found any other reference to these awards during online searches.

Some media articles (for example Rankin, 2017; Thomas, 2017) questioned the transparency of Savemart's operations, and argued there was a misleading portrayal of bin signage and amount of profits on clothes which are given to charity. For example, an ex-employee of Savemart interviewed by Thomas (2017) stated that the Savemart store she worked at (one of 32 across the country) would earn around $15,000-$20,000 on a Saturday, and "*if you just do the maths, then charities won't get very much.*" Thomas Doonan provided a statement to Thomas (2017),

stating that no organisation, charitable or profit making, could give all profits to charity because of overhead costs, and that Savemart operate their business as part of a large textile recycling operation that includes waste from manufacturers. Thomas Doonan stated that charities receive a substantial part of Savemart profit and that they also fund a nurse training and support programme in Papua New Guinea which helps people with cancer. To explain labelling on bins, Thomas Doonan said that bins clearly states the recycling project by the textile recycling centre helps children with cancer. "*We could list all our charity projects on the bins but these change on a regular basis and we would have to do new labels every year which would be difficult.*"

Checkpoint (2017) also reported on poor working conditions at Savemart after having spoken with over 50 Savemart employees. Employees described being banned from wear gloves while sorting through donations so that they could feel the condition of the clothes or if they were damp. Employees said that they were concerned because they often came in contact with things like "*soiled underwear*", "*used vibrators*", "*hospital clothing that's got blood stains on it*", "*dead rats*", "*rubbish from the kitchen*", "*broken glass*", "*nappies with shit*" and "*cockroaches*". Employees said that they were threatened with dismissal if they complained or campaigned for change. Tom Doonan responded to Checkpoint (2017) to say that gloves were available to staff if requested, that the clothing had been pre-sorted by the charity organisations they came from, rejecting claims that Savemart's workforce were unhappy. Savemart had then also made unionised employees redundant, however this decision was later reversed (Checkpoint, 2017).

4.4.3. Private firms in the supply network node between New Zealand and Papua New Guinea – Savemart – PNG Recycling – Pagini Clothing

There are three linked for-profit firms involved in the flow of SHC from New Zealand to Papua New Guinea. The first is Savemart (New Zealand), the second is PNG Recycled Clothing Centre (Australia) and the third is Pagini Clothing (Papua New Guinea).

4.4.3.1. Savemart – New Zealand

Savemart is a largescale secondhand collector, sorter and retailer in New Zealand. On their website, it states that they are the largest clothing recycler in New Zealand, with 32 large warehouse outlets across the country, stocking "*3000 fresh items each day*" and have been operating for over 40 years (Savemart, n.d.). Savemart procures clothing that is sold in their New Zealand retail stores and sent overseas through clothing bins that they own and manage, as well as receiving SHC from charity organisations (Checkpoint, 2017). Savemart also states that they are a "*proud supporter of the Child Cancer Foundation and other non-profit organisations*" (Savemart, n.d.).

Savemart Limited is a for profit company, with Thomas Doonan listed in the New Zealand Company's Register (Ministry of Business, Innovation & Employment ("MBIE"), 2018) as director and shareholder. Mr Doonan is also listed as a director and / or shareholder of a number of related companies, including The Textile Recycling Centre Limited, Recycled Clothing Limited, Doonans Cleaning Rag Service Limited and The Rag Company Limited

(MBIE, 2018). These companies are interrelated, and together they are called "Savemart" in this case study for ease of reference.

Figure 9.   Photograph of Savemart clothing bins taken just outside a school (2017)

4.4.3.2. PNG Recycled Clothing Centre – Brisbane

The second organisation connected to the redistribution of SHC from New Zealand to Papua New Guinea is a for profit company based in Australia called PNG Recycled Clothing Centre Pty Ltd. On their website they state that they specialise in collecting, sorting and shipping items, including SHC, shoes, bric-a-brac, toys and books to Papua New Guinea and other islands including Fiji, Tonga, the Solomon Islands and Samoa (PNG Clothing Centre, n.d.). Current directors of this company are George and Laura Doonan. Chris Kopyoto had also previously been listed as a director and shareholder for PNG Recycled Clothing Centre (Australian Securities and Investments Commission, 2018).

Although this company states on their website that they are a commercial operation, explanations about what they do are narrated in a way which sounds as though they provide charity. For example "*our focus is on providing cheap and affordable used clothing to these countries*", "*We would like to take the opportunity to thank you all for your ongoing support*" and "*Your contribution is making a huge difference to the lives of the people of PNG and the islands*". PNG Recycling Centre will pay 60c per kilo for items donated to them, and state that half of their clothing is sold in wholesale warehouses, where a large amount of clothing is bought by dealers who take garments back to their villages for resale, thus creating "*a lot of employment and provides food for their families*". They go on to say that the other half of donations is given for free to churches, charities and other organisations for redistribution to needy people in the community, that all clothing donated is shipped overseas, and none is disposed of in Australia (PNG Recycling Centre, n.d.). This company also operates the Bring the pink bag to school project, which provides pink bags and instructions to schools on donating clothing to go to Papua New Guinea, and will pay the school for clothing per tonne or kilogram

(Bring the pink bag to school project, n.d.). Note the similar use of pink bags in New Zealand by Savemart with Child Cancer Foundation labelling to collect SHC.

An online search of media on PNG Recycling Centre only came up with only two articles (Callinan, 2012; Thompson, 2013) both of which discussed questionable representation of the company as a charity. Callinan (2012) reported that PNG Recycling Centre had been using pink bags with the word "cancer" on front of collection bags on their website – although Director George Doonan had said this was a mistake made by their website designer.

George Doonan is also a founder / director of a chain of largescale secondhand retail stores in Fiji called Value City. Their website states that they have 16 stores across Fiji (Value City, n.d.), along with franchises in Samoa, Tonga, Kiribati and the Solomon Islands (Bolanavanua, 2017).

4.4.3.3. Pagini Clothing Limited – Papua New Guinea

The third company involved in the redistribution of SHC from New Zealand to Papua New Guinea is called Pagini Clothing Limited. This is the company that owns retail stores that sell SHC stock provided by Savemart and PNG Recycling Centre. Pagini Clothing has stores in seven or eight provinces in Papua New Guinea, three of which I visited in Port Moresby – (Kukus, Badilli and Moale Dabua). Chris Kopyoto (also previously a director and shareholder of PNG Recycling Centre Pty Ltd) had previously been a director of Pagini Clothing, and is still listed as a shareholder (Investment Promotion Authority Papua New Guinea, 2018). Online searches provided no other information about this company.

4.5. SHC sector in Port Moresby

Interviews were conducted with employees at largescale retail stores that received imported SHC from New Zealand and Australia. From these stores, SHC was sold directly to customers, as well as to street sellers either per item, by the bag or in bales. Interviews were also conducted with SHC street sellers, and SHC purchasers living in Port Moresby. Across all interviews, people described how the availability of this product was important for the economic and social wellbeing of Papua New Guinean people. Many Papua New Guineans interviewed also said that being clothed with dignity was a right that everyone should have, and the availability and distribution of SHC helped with this. SHC was also an important resource to be shared with families, friends, communities and villages. Selling SHC was seen as an opportunity for people to "come up" regardless of class – and a good business to be a part of, particularly for women. SHC trade was viewed by many interviewees as important for Papua New Guinea as a developing country with limited resources, particularly because many people showed little faith in the government to help lift them out of poverty, and powerless against global drivers and overseas owned business operating in Papua New Guinea. Purchasing SHC was very popular with everyone spoken to in Port Moresby. Markets were well established, and both individuals who were part of this trade and consumers were very positive about its availability.

4.5.1. Largescale SHC Retailers

It was challenging to recruit participants employed at Pagini Clothing Limited. I could not find any contact details online for the stores, so attempted to reach store managers by visiting stores to request an interview, and to leave a letter explaining my research to them and to the owners of Pagini Clothing. While trying to reach participants I had been hung up on, had my number blocked, and one manager would not come out of their area. As soon as I believed that employees were told not to speak with me, I stopped attempting to recruit them to avoid their experiencing employment issues or embarrassment.

Figure 10.   Photo taken at Yakapilin Market in Port Moresby (2018)

I decided to supplement research by also interviewing store managers and employees at large retailers which sold SHC imported from Australia. Because of my limited success recruiting participants, the short duration of most interviews and the diversity of supply networks described by participants I spoke to, thematic analysis was not completed. Instead I provide a summary of conversations and my observations.

All retailers received shipments of SHC and other secondhand items from longstanding suppliers in Australia and New Zealand. One store manager said that the target for their store was to sell at least 2,000kg of clothing in a month, and another estimated that their store would sell between 4,000 to 5,000 items of clothing each day. Retail stores ranged in size, although they were generally large warehouses, with long racks of clothing sorted into men, women and children's, as well as selling shoes, and non-clothing items such as towels and linen, books and other household items. Employees said that most of the clothing imported were suitable for hot weather, although there was also some clothing with heavier fabrics, which would generally go to stores in the Highlands, as the climate is cooler there.

All employees interviewed from both New Zealand and Australian supplied stores said that the quality of clothing imported was consistent, and that most of the items were good – although

some were too worn or damaged to be put on the racks for sale. Some interviewees said that these damaged items were thrown away, and some said it was sold to a ragging company for a small amount of money.

All stores also had a cashier close to the front entrance, and had either employed security staff, or had contracted a security firm. Security was there to monitor theft of clothing by patrons, and to deter theft of money from the premises. Pricing of items was a specialised role and was done by trained staff to ensure consistency. Once priced, employees would sort and hang items on racks which would be rotated and prices reduced until they sold. Alternatively garments would be sold in bulk, or given as charity.

Employees spoken with said that they were happy working there and being able to provide for their families – one employee said that "*secondhand takes care of us*". Many said they believed that the items sold were good for the people of Papua New Guinea. They also said that the quality of the clothing was very important for customers, as was providing an affordable price, particularly when compared with cheap and poorly made new clothing imported from Asia. All interviewees also said that they had street sellers who would come in daily to buy stock, often early in the morning. They thought the street sellers – almost all women – were talented at picking fashionable and good quality items, and that selling SHC was a good business for the sellers as they could make a livelihood from it.

I visited three Pagini Clothing stores in Port Moresby – Kukus, Moale Dabua and Badili which were all very large. There was a sign on the front of each store stating that they sold 12,000 items of clothing per day. One employee spoken to said SHC and other items sold in the store came from "*the Doonans – George and Tom*" – one from New Zealand and the other from Brisbane, but mostly from New Zealand. The tags that were attached to clothing look similar to those used by Savemart in New Zealand, and tags are imported from New Zealand.

Figure 11.   Photo taken outside Badili Clothing Mart (owned by Pagini Clothing) in Port Moresby (2018)

One employee I spoke with said that there were around 30 employees in each of the Pagini Clothing stores. Stores were busy every time I attended – with between 65 and 100 customers, and lines of customers waiting at cashiers to complete their purchases. The SHC available on

racks were of varying quality. Some items were brand new, some were worn but still good, whereas others were torn and stained, or looked to be inappropriate for the heat in Port Moresby. Prices of SHC varied greatly, for example I paid 50 toia (about 25c) for a singlet with Raglan branding, bought my daughter a Hogwarts robe for K2 (a dollar), and a Kowtow dress for K4. I also saw more expensive items, for example a pair of men's cargo shorts for K50.

Figure 12.   Photo of labels used in Pagini Clothing Limited owned stores as sent by Savemart (2018)

4.5.2. Street sellers - PNG

Street sellers interviewed were all women except for one. Some were married, and almost all had children. Most had come from the Highlands, and described moving to Port Moresby to raise money for their families and give their children more opportunities. Some operated their business on their own, while others worked with family members. Their SHC stalls were set up on the roadside – sometimes outside their house, or they would choose a place which had good foot traffic, for example by a petrol station, shops or in a market. They often sold SHC with other goods such as shoes, bags, individual cigarettes, betel nut, instant noodles and books. Some would hang clothing along a fence, whereas others had set up tarpaulins, umbrellas or a marquee.

Although the scale of operation and the income that street sellers were able to make from this type of business varied, common themes emerged:

- SHC sales provides sellers with a good livelihood, and they are able to support their families
- A strong understanding of SHC retailing is required to ensure speed of stock turnover and profitability
- SHC sellers are entrepreneurial
- SHC sellers believe that SHC is a good product
- Profitability of SHC sales had decreased over time
- SHC sellers plan to continue operating this business

Figure 13.   Photograph of street seller stall in Port Moresby, 2018

4.5.2.1. SHC provides a good livelihood

All street sellers said they were able to earn enough money from SHC sales to provide for their families, including their daily costs, having enough money for their children's schooling and other necessities, and some also sent money to their families. Although all women said they could make a livelihood from selling SHC, their businesses operated at different scales. For example, some purchased individual garments from retailers to be resold at a higher price, some purchased bags of clothing from retailers, and others purchased bales of clothing either from one of the retail outlets or directly from an importer. Some interviewees were able to generate enough capital to reach longer-term goals such as expanding their business, purchasing land and building a house, whereas others said that they would sell just enough to make ends meet. One interviewee said she could sometimes sit at her stall without selling anything for a couple of days, but she would always eventually sell some items. She described sales as daily blessings, and would then use the money to buy things like rice for her family.

Many interviewees said that they liked operating this business, and felt their income was secure because of the fast turnover of clothing purchased by customers. One interviewee described this by saying she made "*fast money*", and "*you can buy things, get money, then buy more things to sell*".

A few interviewees compared selling SHC to selling food, and considered that the SHC business was better to be in, because unsold food can spoil, but clothes do not.

> "*The food can be wasted because you cannot eat everything. If you cook a lot of food, and if it doesn't all get eaten, you will throw it in the rubbish. But for this, if we keep it, then we resell it again. If you want to do clearance, you do clearance, and then you will get some money.*"

4.5.2.2. A strong understanding of SHC retailing is required to ensure speed of SHC turnover and profitability

In order to remain profitable, street sellers need to choose SHC items that are desired by their customers and price them correctly. Many also described looking for the latest fashion such as skinny jeans (called stuck ones) and being able to sell women's clothes more quickly than men's. If items had been presented to their customers for a while and not sold, they would either put the clothing away and bring it out another time, or keep putting prices down until they eventually sold. Otherwise, they would give clothes to relatives or use them as rags at home.

Interviewees also said that they needed to ensure that they have enough capital to continue purchasing and selling SHC. One interviewee said she would buy clothes every couple of days to resell, and another said she would wait until she earned K150 before purchasing more. Interviewees also had their favourite retailers they liked to go to – and mentioned stores such as Badilli, Labels and Kukus, with some receiving discounts for being regular customers.

SHC street sellers with larger operations would purchase either 50kg or 100kg bales of clothing from an importer / retailer. They could purchase bales in grades (Grade A is good quality and costs K2000, Grade B is mixed quality and costs K1000, and Grade C is poor quality and costs K500) which could contain mixed items, or specific items such as only men's or women's clothing. Estimates about how fast these could sell clothing ranged from a few days to a couple of weeks, and if they were running low on items, some said they would stock top up by purchasing individual garments from retail stores.

All SHC sellers knew that SHC had originated as donations from Australia, however not all knew that clothes also came from New Zealand. One interviewee said that the best items are sold in New Zealand and Australia, with the worst going to Papua New Guinea. She also said that it would be better if they could send the best clothing to Papua New Guinea, as it meant that sellers could make more money.

Figure 14.   Photograph of street seller stall in Port Moresby (2018)

4.5.2.3. Sellers are entrepreneurial

Some interviewees described being able to build their businesses over time, going from purchasing garments individually to being able to buy SHC by the bale. A couple of women who purchased SHC by the bale said that they thought they could make more money if they had a contact directly in Australia or New Zealand, however the people that they purchased bales

from would not disclose their suppliers. A few also asked me if I could help - and I had to apologise and say I was just studying this topic, I was not in the secondhand business.

Some interviewees would also supplement their income from SHC sales by selling other items for example one interviewee said she would sometimes sell bags of cordial or donuts at her children's school if she needed extra money. Another interviewee said that she would also alter SHC so that they would appeal to local tastes, for example by cutting dresses into skirts and sewing an elastic band through in the waist. She said she could buy a dress for K10 or K12, and then after alteration could sell the skirt for K20.

A man I spoke to was very proud of his wife's ability to generate money for their household by selling items, often with very little capital. She would occasionally sell SHC or other items whenever they needed extra money for something unexpected. He said that he would often tell their children "*if you look in your mother's hand, you will always find money there*".

Sellers I spoke to were independent, positive about their futures, and creating opportunities for themselves. They were not looking to anyone else – including the government – to provide for them.

> "*God helps people in different ways, but the government goes up and down. Secondhand is not the government's business, we just do it, but the government gets the benefit of it. They don't look for opportunities but we do.*"

4.5.2.4. SHC is a good product

Many street sellers said that SHC was a good product for customers, and it was good for Papua New Guinea. SHC provided for good quality clothing at an affordable price, particularly in comparison with cheap garments imported from Asia and sold in "block shops". Also, because there was no clothing manufacture in Papua New Guinea and lack of traditional clothing available at an affordable price, it at least gave people options. Some said that having SHC available on the street sides was also good for people to buy things who did not have the transport or time to go to a large secondhand retailer. Many interviewees also said that SHC made people happy, and gave people an opportunity to feel good about themselves regardless of their circumstances – "*secondhand clothes are for everyone, not just people who are working.*"

4.5.2.5. Profitability of SHC sales had decreased over time

Many sellers thought that the quality of SHC coming into Papua New Guinea has worsened over time, with more worn items coming in – although a couple of sellers thought it had stayed about the same. All agreed the price they paid to purchase SHC either in stores or bales had increased, which meant their ability to make profit has decreased – "*the market is going down, and its going down for the mothers*". For example, an interviewee who bought SHC per garment said that she made between K2 to K5 profit on each item she sells, she says she doesn't get much, particularly since prices have gone up in the shops. Many also thought that there the

number of retailers (both street sellers and retail stores) in Port Moresby had increased over time, thus increasing competition.

Because bales are closed, the sellers did not know what they were getting, and as described by Mary, "*sometimes you think you are getting Grade B, but the clothes are so worn – its rags that are very old and not wearable so it's more like Grade C*". Bale prices would also fluctuate, however sellers said they would keep on buying bales as they knew they could continue making something from them.

One street seller described her frustration at challenges in the market outside of her control, which impacted on her ability to maintain a profitable business – for example currency fluctuations. She said she used to also sew clothing to sell, but because Chinese importers had copied their traditional styles using poor quality fabrics, she is not able to compete so does not bother anymore:

> "*We want to tell the government that we are angry that they can do this, that they can sell our clothes and crafts. The Chinese are coming and copycatting, which are lower quality. For example, we could sell meriblouses for K100. But we can't compete with the prices. I don't feel like sewing it, I say – what will I get out of it?*"

4.5.2.6. SHC sellers were planning to continue with their business

When I asked interviewees if they were planning on continuing with this business, an interviewee responded with "*we are already in secondhand, why would we change?*" Some of the had been selling SHC for over 10 years, and did not know what else they would do. A couple said they were planning to grow their business, for example by having another stall, or starting other side businesses – potentially food or flowers, and one interviewee said she was happy for now, but did not know what the future would bring.

When asked if they want to say anything to people living in New Zealand, sellers described their gratitude for their ability to make a living, and also for making SHC available for Papua New Guinean people. One interviewee said that she wanted to thank "*the government, the communities, and the non-profits to have the good heart to give these clothes. We are making good money, and it helps us in our daily income*".

4.5.3. SHC consumers

Papua New Guinean nationals from many different provinces, all living in Port Moresby were interviewed about their clothing purchase and disposal habits. SHC – most often called "secondhand" - was extremely popular both as a product and a shopping activity. Almost everyone interviewed said that SHC made up between 80 and 100 per cent of clothes they had either purchased or been given over the past year. In fact, only two interviewees did not purchase SHC at high levels – one owned a clothing retail store (who still bought about 50 per cent secondhand), and the other travelled extensively overseas.

Other than SHC, interviewees purchased a variety of other items from secondhand retailers, including shoes, bags, household linen, pillows, towels, children's toys and books. Pots and pans, tableware and cutlery could also be found at the secondhand, and were highly sought after.

Although interviewees came from a variety of socioeconomic and provincial backgrounds, it is important to note that their experiences, and the conversations I had will not reflect all Papua New Guineans. All participants were either employed or ran a small business – including security guards, retail assistants, international NGO employees, government employees, waitresses and university students. I consider that they would not be representative of Port Moresby's least resourced people or the 85 percent of Papua New Guineans that live in rural areas.

Themes about their experiences and knowledge included:

- SHC is popular across socioeconomic groups for price and quality
- SHC is an opportunity to take part in fashion trends and shop for fun
- People are knowledgeable about and take an interest in the SHC supply network
- There is a strong giving economy of SHC
- SHC is seen to create social and economic good for Papua New Guineans
- People felt they had too much clothing
- More SHC is imported into Papua New Guinea than can be sold

4.5.3.1. SHC is popular across socioeconomic groups for price and quality

Price was very important for SHC consumers interviewed and for some, also impacted on which secondhand retailer they went to. Many described earning low wages, and only being able to allocate a small budget for clothing. "*Even if you have a ten or five kina, its good enough, you can find something for yourself*". They felt fortunate to be able to buy SHC for affordable prices – "*sometimes you can get things for 10 toia to K1 at Kukus and Badili. Or it's around K5 for jeans and no more than K3.50 for t-shirts.*" Parents said that they could go into the secondhand with K50 or K100 and have enough to get things that they and their children needed, which was especially important during the start of the school year. All interviewees, including those who were more affluent wanted to find garments for a good price.

The quality of the clothing purchased from secondhand was important for everyone interviewed. When asked what quality meant, interviewees said that it meant the clothes were strong, they wouldn't tear, would last a long time and the colours wouldn't fade. Type of fabric purchased was also important – shoppers wanted thin, cool fabrics like cotton. Interviewees said that were many good quality items available for purchase, although you really had to check clothes over as sometimes they would have tears or stains, buttons missing or the zip wouldn't work. People said that most items were good but some were bad, and a couple of people estimated that maybe one in ten items available was too damaged to purchase.

Purchasing SHC was also preferred by shoppers to "*Asian made clothing from block shops*". These shops are largely Chinese owned stores which sold poor quality new clothing and household goods. Interviewees saw these items as being of lesser quality, and many – including Peter said that they are "*no good – they are cheap, but they don't last long, and the colours fade*".

4.5.3.2. SHC is an opportunity to take part in fashion trends and shopping for fun

SHC was described by all interviewees as a good price and good quality. However, those two factors alone would not account for its incredible popularity across socioeconomic groups. Conversation about SHC often included it meeting practical needs and tastes, taking part in fashion trends and the joy that can come from finding great deals and great items. Justin said that where he lived "*secondhand clothing is big. Fashion is big too. You see people going around wearing a whole lot of stuff. They just look so fancy. So radical.*" Those interviewed shopped often for SHC and enjoyed the process – with most saying they went to the secondhand once or twice a month, sometimes in the weekends, or during their lunch break. There was also a sense of pleasure in being able to buy something at a reasonable price, which would have cost much more new.

Figure 15.　　Photograph of a Country Road shirt purchased at Moale Dabua for 90 toia (2018)

Being able to dress well, wear clothes they felt good in and expresses style was a source of pride and happiness for many. For example, Rose described quality as not only a garment's physical qualities, but also the feeling you get when you wear clothing – "*when you wear something nice, it just makes you feel good about yourself.*" Local magazine Lily's fashion pages featured local people looking stylish in both new clothing and SHC.

Figure 16.　　Papuan New Guinea magazine Lily featuring women wearing a mixture of both new and SHC (Lily Magazine, 2017)

Local fashion trends were in line with imported SHC, for example skinny jeans ("stuck ones") were popular and highly sought after in Port Moresby during my time there. Vanessa described this by saying "*because there is more stuck ones coming in, more people are wearing it. Because where are they going to get their clothes? They are going to get it from secondhand and it looks good, so they work it*." When I asked one woman if there was anything she wanted to share with people in New Zealand, she laughed and said "*send more stuck ones!*"

Some participants believed that because Papua New Guinea is a developing country, people there look towards developed countries thinking about how they "*want to be like that, to look like that*". SHC provides an opportunity to choose western styles –imitating social media, TV, movies and friends. Interviewees were also aware of and sought western brands such as Jeans West, Glassons, Nike and H&M. The increasing popularity of western clothing was also described by some of the older interviewees a loss for Papua New Guinea, because people were moving away from their culture and traditional dress, such as meriblouses.

4.5.3.3. People felt they had too much clothing

All interviewees spoken to said that they had either "a little too much" or "way too much" clothing. I do not believe this would be true of all Papua New Guineans, as all interviewees also told me that there are many people in Papua New Guinea who still do not have access to or cannot afford good clothing. When I asked why they thought they had too many clothes, most described their closets and cupboards being far too full "*I have way too much, my closet is full -*

its pouring out". Some also described feeling overwhelmed by how much clothing they owned "*sometimes it's just – *sigh***".

Some participants said that sometimes they would give away clothes they don't wear often just to clear some room, and would most often give away items they did not wear often or were too worn. Some interviewees would also sell clothes. Rose said that she would sometimes sell clothes to the street sellers. She joked that if she bought something for K3, then she would sell it for K2 because she had worn K1 out of it.

When people discussed how much clothing they had discarded, they often spoke about it per item. Interviewees estimated that they had discarded between 20 and 70 garments in the last year, and some said a couple of boxes or bags. If clothing was too faded or worn, many interviewees also said they would be used for rags around the house, or throw it in the rubbish.

4.5.3.4. There is a strong giving economy of SHC

As well as buying clothes for themselves, all participants also bought SHC for friends and family, and some purchased items to be transported back to their villages. They did not only give their clothes to others when they no longer wanted them, but also when they saw that others needed clothing and they were in a position to help them.

> "*In our family we are sort of the most well-off family, so I feel like we have to give to the less fortunate, because we are all family anyway, we have to help each other. There will come a point where I might need their help*".

Rose said that sometimes she would give her unwanted clothes to people when she felt sorry for them. She would tell them that they didn't have to wear the clothes, they could also sell them to get some money. Mila described giving clothes to the settlement kids close to where she lives, particularly when she sees things that they need, and Brianna said that if she had the chance, she would give clothes to help people – giving first preference to widows and single mothers. I asked interviewees why they give their unwanted things to others, and many said they would feel bad just throwing things away when they can see a need.

Many participants described putting bags of SHC together for their villages, either when they were going to visit or when someone from the village was visiting Port Moresby. Peter said that if he has enough clothing, he will put clothes together for his village people to take back. He said that in Papua New Guinea their ways are different, and they are used to sharing things which white people might not understand. Brianna also said that when she goes home for a Sing Sing festival, her family members will give her gifts such as food or traditionally made mats and bags, and she will take them gifts of SHC, or other things that are harder access in villages such as soap.

Many people described their villages as being difficult to access because of high expense and lack of transport options. For example, one interviewee described from Port Moresby, having to take a plane, go by road and then walk for five hours to reach his village. Some mentioned that

they wanted to see SHC being sent to the more rural parts of Papua New Guinea, the "outer edges" where people were still not able access good quality items and services in remote areas.

4.5.3.5. People are knowledgeable and take an interest in the SHC supply network

SHC consumers in Port Moresby were both knowledgeable and interested in the SHC supply network. All knew that clothing was imported from Australia, and some knew that stock also came from New Zealand. Many of the men interviewed told stories about finding New Zealand and Australian money in pockets of SHC purchased, saying it could be changed for "big money". Jerome described the excitement of finding an Australian $50 note in a pair of pants he bought, and being able to change it at the bank for almost K150.

People seemed genuinely interested in discussing their experiences purchasing SHC with me, why it is good for people, as well as asking questions about what I knew. Conversations were often fun, and we spent time pointing at items of clothing we were wearing describing how much it cost, compared with how much it would be if new. Many discussed the best places to buy SHC across Papua New Guinea, and some thought that the prices and variety was better in places like Madang and Goroka than in Port Moresby.

When I asked interviewees what they thought about the clothing having been donated in countries like New Zealand and Australia, they generally didn't seem bothered by it and grateful for its availability, making comments like "*just bring it here, all we see is good quality*". Justin said he had thought about it at one stage:

> "*I thought, why are we getting charity clothes? Selling them out to other people. But then again, as it went on, I just thought I don't really care about how it came, where it came from. Poor people don't give clothes away. Rich people buy good stuff, and then they give their clothes away because they buy new clothes. So if you think about it, most of the stuff in secondhand are actually better quality than the things you can buy here in stores.*"

Many interviewees were surprised that people I had interviewed in New Zealand did not know where their clothes were going. Marley asked me "*They are just donated? Do people know what happens to their clothing?*" When I said that everyone I had interviewed didn't, she was really surprised "*Oh wow! They don't know?*"

4.5.3.6. Creating social and economic benefit for Papua New Guineans

Participants saw secondhand's availability in Papua New Guinea as creating both social and economic good for people. Some interviewees described the low wages paid to workers, high unemployment, poverty and crime in Port Moresby. Many described being clothed as a need, and SHC's availability means that more people were able to clothe themselves and their families. Peter, who is a father of eight says that "*supermarket prices are high here, but at least I can get good clothes*". Brianna thought that if they didn't have secondhand, a lot more people would be struggling. Being able to buy secondhand clothing was important for her family's

budget – "*most of us eat rice and tined fish, sometimes that is all we can put on the table for dinner.*"

Some interviewees also described feeling a lack of autonomy or power, with challenges being outside of their control. For example some said that when the kina value drops, it makes life harder for those who are less well off. Other interviewees described their anger towards the government, saying it was "*no good*" and "*corrupt*", that they were always borrowing money, and weren't doing enough for their people, "*but secondhand, that belongs to the people of PNG*".

SHC imports contributes to small business development. A few interviewees aspired to have their own SHC stores and one interviewee especially wanted to take this service to the doorstep of rural people. Rose described how her mother has just started buying towels secondhand, and then washes and repairs them before reselling. She said otherwise, big towels can cost between K85 to K100 in the shops. Her mother described herself as cash and carry – "*you bring the cash to me and you carry the towel away.*" When interviewees discussed street sellers, they were happy for them to be making money, to "*come up*". A couple of interviewees also described paying someone to repair or alter SHC clothing purchased. For example, Peter would sometimes buy jeans, cut them and give a seamstress K2 or K5 and have them hemmed.

4.5.3.7. More SHC is imported than can be sold

Many participants thought that the amount of SHC entering Papua New Guinea was increasing, along with an increased demand for this product, and interestingly, most also agreed that the quality of what was coming in was better as well.

Clothing imported from New Zealand that had not been sold in Pagini Clothing stores is being made available as charitable gifts for people in need. Brianna described a warehouse full of clothing that hadn't been sold, and from there it is shared with the community. She wasn't sure of the detail but said that I could speak to her pastor about it. Vanessa works for a non-profit organisation in Port Moresby. She said that she had asked a Pagini Clothing store for five bales of clothing, and said it was so easy to get, she wished she had asked for more. They told her that they would give the clothing as long as it was not on sold - "*it's their way of helping out other people*".

She said that most of the clothing given were "*really quality, really nice clothes*". As well as clothes suitable for hot weather, there were also a number of hoodies, sweaters, and coats. Vanessa sent the warmer clothes up to her people in the Highlands, and had been able to give most of the other clothing away through NGO programmes that support some of the most disadvantaged people in Port Moresby. She believed that the gifts of SHC have really helped those people.

> "*Oh they were so happy. And on the day they received them, some of them wore it. I went up to them to say - hey you look good! And they say - yeah I got it from here. Every time someone comes, and we can see they need clothes, we put it in a plastic bag and give it to them. You have to remember that Papua New Guineans, we take*

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care of each other, so we will not just take for ourselves, but for the others in the family."

Brianna also described what can happen to excess, unsold SHC in Port Moresby. She said that she lives in a semi-rural area, and she sees clothes being dumped there. Because of the large volumes, she believes it is from SHC sellers. She sees the local children picking through the garbage, and taking things like rags, socks and CD covers. She thought it was bad, and that the government should do something about it, she wasn't sure if she should report it, or to who.

5. Discussion

The purpose of this study is to describe how the global production network for SHC from New Zealand to Papua New Guinea operates, who the main actors are, and what kind of value and impacts are created through this trade. This case study has literally followed SHC from clothing donators in Auckland through to consumers in Port Moresby. In the process, its aim has been to build knowledge about this GPN within a Pacific context, contribute to Pacific research, provide rich description of GPN actors' experiences, knowledge and expectations, and contribute to empirical knowledge about GPNs for secondhand and used things.

Through this case study I found that SHC moves very quickly and at high volumes through all GPN nodes. In New Zealand, donators interviewed estimated that their households discard an average of 142 litres of clothing a year, charity interviewees described a need to process donations quickly to "*keep on top of them*", and Savemart (n.d.) states on their website that they have "*3,000 fresh items every day*" for sale across the country. In 2017, New Zealand exported over 8,200 tonnes of SHC to Papua New Guinea. Once SHC has reached Papua New Guinea, New Zealand supplied Pagini Clothing claims to sell "*12,000 garments each day*". Some of this clothing is purchased by SHC street sellers, who during interviews described fast turnover of clothing sold and SHC making them "*fast money*". SHC consumers interviewed in Port Moresby described buying SHC often, with many also saying they felt they had too many clothes. The SHC GPN from New Zealand to Papua New Guinea parallels the fast fashion model of consumption for new clothing, which is characterised by the sale of large volumes of clothing that is sold quickly at low prices (Dahlbo et al, 2017).

The supply network for SHC is based on good intentions. It is characterised by values such as giving, sharing, wanting to help those less fortunate, raising money, maximising utility, and reducing waste. However, this trade also hides unsustainable consumption and disposal of clothing in New Zealand, a culture of dumping, commerciality, and the eventual fate of clothing as waste – both in New Zealand and overseas.

New Zealand's relationship with Papua New Guinea and the Pacific region is different from other studied SHC GPNs from the Global North. New Zealand holds a position of leadership within the Pacific (MFAT, n.d.) and our relationships with Pacific Island nations – including Papua New Guinea – is culturally distinct. It is shaped by our unique world views, history, culture, politics and demographics as well as history of trade and aid, and colonisation and decolonisation. New Zealand describes itself as a country with leadership and influence that makes positive impact for the Pacific region (MFAT, n.d.). MFAT (n.d.) also describes New Zealand's relationship with Papua New Guinea as longstanding and friendly, exemplified through consultation, trade and aid. Ensuring sustainable governance of the GPN that takes SHC from New Zealand to Papua New Guinea provides an opportunity for New Zealand to continue showing leadership in the Pacific and ensure that ethical practice is in place that creates the best possible outcomes for all involved.

The discussion section of this thesis is set out in three parts. In section 5.1, the experiences of SHC GPN actors from New Zealand to Papua New Guinea are discussed. Section 5.2 contains the "missing actors" in the story of SHC's supply, and section 5.3 provides an outline of this research's limitations and opportunities for future study.

5.1. Global production network actors

This study found that as well as donating through charity organisations and clothing bins, all New Zealand interviewees gave SHC "hand-me-downs" to friends and family in a bespoke way. This study also found that donators interviewed discard SHC because it does not suit their tastes, is too worn or does not fit. They are motivated to donate SHC because they believe it has use- and exchange-value, will raise money for charity, will enable charities to give to those in need, and to avoid sending still useable items to landfill. These findings are line with empirical descriptions of discarding and donating behaviour (Fortuna & Diyamandoglu, 2017; Brooks, 2013).

For clothing donated through charity stores and clothing bins, this research found that donators interviewed were unaware of the true commerciality and globality of what happens to SHC given, similar to findings from Brooks (2013) and Sandberg (2018). Donator narratives about what happens to SHC after donation are based on their assumptions, personal observations, experiences and conversations. I found a large amount of media during online research from the past fifteen years which describes overwhelming volumes of donations received and dumping of waste on charities and Savemart, as well as the role that Savemart plays in collecting and retailing SHC in New Zealand and Papua New Guinea. It surprised me that no donators interviewed discussed these issues, and none were aware that Savemart managed the blue clothing bins which are extremely popular across New Zealand. This leads to my conclusion that the impact of SHC consumption, disposal and dumping behaviour and the commerciality of this trade have not been narrated in a way that is salient to the public (Lejano et al, 2013). This could be because these issues have not been integrated into daily life, and messages about the true nature of this GPN contrast with prevailing beliefs about the role of charity. It is also not congruent with our desire for donating to be convenient while extending the useful life of SHC (Lejano et al, 2013).

Charity organisations interviewed described SHC donations as being overwhelming and cyclic, a theme which was in line with online media found about this trade. This description was not found in literature about SHC GPNs, and I am unsure if it a characteristic of SHC collection particular to New Zealand, or shared in other parts of the world. Literature describes the embeddedness and historic role of charities in the Global North as enabling them to extract greater value from SHC than traders in importing countries, and charities in the Global North also appear to play a more active role in overseas trade than those in New Zealand (Brooks, 2013; Crang et al 2013). I consider that New Zealand charities are able to extract less value from SHC than charities in overseas studies. This is because those interviewed did not play an active role in exporting SHC overseas commercially. Interviewees from charities described

being able to retail between 15 to 30 per cent of SHC donations in their stores, some is given to those in need, and many charities interviewed gave (rather than sold) SHC not sold domestically to Savemart, a very small amount is was sold to bulk purchasers, and the rest was landfilled.

In overseas studies (for example Watson et al, 2016; Boticello, 2012) it is estimated that around 5 per cent of textiles donated are sent to landfill. I consider that the this is likely to be much higher in New Zealand – for example, one participant estimated that a third of SHC donated to their charity store was landfilled because items were unsellable and/or unusable. Landfilling volumes and costs were discussed with all charity interviewees as a source of frustration. They described landfilling practice as being an unfortunate part of their business model, and volumes and landfilling costs increasing. Some interviewees from charity organisations also discussed their growing awareness of the unsustainability of the SHC trade, as well as its links to overconsumption of clothing. They described a desire to see things done differently, including the public reducing their consumption of clothing, clothing producers taking responsibility for the end-of-life for garments they produce, and the community coming in with solutions. I had not found similar findings described by overseas studies.

The New Zealand-Papua New Guinea GPN shows strong network embeddedness between Savemart, PNG Recycling Centre and Pagini Clothing (Henderson et al, 2002). The GPN for SHC from New Zealand to Papua New Guinea also appears to be monopolistic, with Savemart acting as lead firm (Yeung & Coe, 2015). Savemart owns clothing bins across New Zealand and also collects unsold SHC from charity organisations. They are responsible for exporting SHC to Papua New Guinea, where they supply SHC to one retailer, Pagini Clothing Limited. The way that this GPN operates is different from SHC GPNs described in existing literature, which have markets with multiple SHC collectors, sorters, exporters and export destinations (Watson et al, 2016), and which require brokered forms of governance from the middle (Crang et al, 2013). The presence of multiple actors in overseas markets would result in competition that can support self-regulation and the increased likelihood of products correctly matched to export destinations (Crang et al, 2013). Brooks (2012; 2013) described the importance of coordination, trust and reputation of exporters to ensure that importing countries are not left with "unhappy surprises". Since Savemart is the largest collector of SHC in New Zealand, manages export of SHC to Papua New Guinea where it only supplies one retailer, and controls more than half of the entire SHC trade to Papua New Guinea, they hold a large amount of power in this GPN. They are able to exert this power and maximise their ability to extract value from SHC (Crang et al, 2013).

Savemart is a private sector, for-profit firm, rather than a charitable organisation. Although they undoubtedly give some profit to charity (most notably the Child Cancer Foundation) this is likely to be a small percentage of this company's profit. Savemart receive a freely given supply of SHC, which they retail in 32 stores in New Zealand, and export thousands of tonnes of SHC to Papua New Guinea each year. Their portrayal of clothing sales from bins going to help children with cancer through "the clothing bin project" sits in tension with the commerciality of this trade.

While the wording on clothing bins is legally correct, donators interviewed appear to take this wording to imply that they are giving directly to charity. As well as this, reports by Checkpoint (2017) about working and health and safety conditions at Savemart are concerning, as are quotes in the media made by Thomas Doonan about the trade to Papua New Guinea, including his claim that "*even unsaleable items are saleable to a third world country*" (cited in Street, 2014). Just as interviewees from charities in New Zealand describe giving the best donations received to families in need, effort should be made to ensure good quality products are provided to some of our most vulnerable Pacific Island neighbours. I found both good and damaged / unsuitable items for sale in retail stores owned by Pagini Clothing, and the items available on store racks would not include the worst items or waste exported to Papua New Guinea by Savemart. I did not find any evidence of audits of clothing quality by an external agency on shipments sent to Papua New Guinea from New Zealand. Because the mechanisms of competition are not present in this supply network, there is financial incentive for Savemart to mix desirable with undesirable items in their exports to Papua New Guinea, as described by Brooks (2012; 2013).

New Zealand provides financial assistance to Papua New Guinea to support development of self-sustaining social and economic prosperity (MFAT, n.d.). An important aspect of GPN analysis is that it can provide commentary on developmental impact of trade on particular nodes (Coe, 2011). In keeping with studies from the Global North, SHC has clear benefits for people in Port Moresby (Brooks & Simon, 2012). It is an extremely popular commodity that was considered by all interviewees to meet needs for price, quality, expressing individuality and enhancing self-esteem. Papua New Guinea also do not have their own textile industry, and SHC was seen by many interviewees as a better option than new Asian-made cheaply produced garments. In countries such as Papua New Guinea that have low purchasing power and where people have low incomes, SHC is extremely important (Baden & Barber, 2005). However, SHC imports may also be responsible for locking people into this trade, and leaving them little room to explore other developmental options. As well as this, SHC retailing along with cheap Asian imports stunts opportunity for local clothing manufacture to take place (Brooks & Simon, 2012; Amankwah-Amoah, 2015).

SHC trade creates economic activity and income through large SHC retailers, on-selling SHC by street sellers, and repairing and upcycling garments in Port Moresby. However, much of the employment created is in the informal sector (Baden & Barber, 2005) meaning that income is unreliable, and it could become harder for SHC retailers to make profit due to uncontrollable factors, including an increasing cost of clothing purchased per item, increasing bale costs, and unexpected, unwanted garments mixed into bales (Brooks & Simon, 2012). SHC street sellers interviewed were largely entrepreneurial women with limited means, although all said they were able to sustain their families with income created from SHC sales. Some women had built their businesses and capital so that they could move further up the chain from selling individual SHC garments to buying bales. A few women interviewed were ambitious and felt the next step was

to find direct contacts in New Zealand and Australia so they could grow their business further – although this was proving to be challenging for them.

SHC has been enmeshed into Papua New Guinean culture, with new cultural meaning given to it (Boticello, 2012). As well as importing the physical garments, many Papua New Guineans interviewed have also imported western consumption habits, for example seeking popular brands and taking part in fashion trends such as skinny jeans. SHC was also described by interviewees in Port Moresby as something that is given and shared freely with family, friends, communities and to villages. I found that people interviewed in Port Moresby give SHC far more altruistically than donators interviewed in Auckland. In New Zealand, giving occurs when donators no longer find utility in the clothing for themselves, but in Papua New Guinea, giving also occurs when people see that the utility and benefit of the clothing for others outweighs their own.

Interviewees in Port Moresby also described shopping for clothes more often than interviewees in New Zealand. Shopping for SHC in Port Moresby was described as a fun activity, however an increased frequency of clothing consumption could also be explained because SHC wears out faster than new clothes. Farrant et al (2016) considered that SHC has a lifespan of between 65-80% of new clothes, and because Papua New Guinea is likely to receive some of New Zealand's most worn garments, the lifespan of this clothing may be even less than this. Even if people in Papua New Guinea are getting much needed utility from New Zealand's SHC, they are still essentially getting garments which have a lesser lifespan, and which will eventually become a waste that needs to be managed.

I found that there is more SHC being imported to Papua New Guinea than can be retailed. This might be because high volumes of SHC are available in Port Moresby (rather than being distributed to where it is needed in more rural areas). It may also be because there is too much SHC imported that is too worn or damaged for retail, or is inappropriate for consumer tastes or climate. This is evidenced by my observations in Pagini Clothing-owned retail stores of damaged and inappropriate items for sale, Pagini Clothing donating closed bales of unsold SHC as aid to NGOs and churches, and comments made by one interviewee about seeing large amounts of clothing being dumped close to where she lives.

5.2. The missing actors from this story

This research has followed actors which are part of the SHC GPN from New Zealand to Papua New Guinea. During research, I also found that there are a number of actors who are missing from this supply network.

5.2.1. Clothing producers

I found no evidence of clothing producers or retailers in New Zealand playing a role in the second cycle of production and consumption of garments they produced – nor taking responsibility for garments' end-of-life. Clothing creates environmental impacts which are

dependent on fibres used, production and disposal (Dahlbo et al, 2016). I consider that the clothing industry should not be allowed to produce and profit from products which will eventually become waste, a large amount of which can never be taken out of the environment.

In the current model of SHC reproduction and consumption, the cost of SHC and its eventual fate as waste is borne by the general public and charities in New Zealand, the general public in Papua New Guinea, and at the expense of the environment in both places. Ethical and sustainable consumption and redistribution of New Zealand's SHC is not possible without compulsory product stewardship by clothing manufacturers, and this could be the next logical step in producer corporate social responsibility (Sandberg, 2018).

5.2.2. Textile recycling

There are currently no scalable and cost-effective textile recycling options available in New Zealand for SHC. This means that SHC donated will be reused in New Zealand or overseas, enter the rag trade, and be landfilled – thus ending its useful life. Overseas literature estimates that 15% of SHC that enters a second cycle of consumption is recycled (Crang et al, 2013). Because recycling does not appear to exist as an option for New Zealand textiles, still recyclable SHC is likely to become waste once it is deemed to have ended its reusable life. With textile recycling actors absent from the local SHC GPN, we are missing an opportunity to develop a circular model of consumption which reduces the need for new resources by recreating materials from already existent fibres (Dahlbo et al, 2016).

5.2.3. Government policy that is holistic and realistic

Government needs to set policy that is holistic and realistic, and takes into account actors across the whole supply network. Governments set waste reduction targets that encourage donation and reuse of SHC, and households are becoming increasingly aware of the need to reduce waste to landfill (Fortuna & Diyamandoglu, 2017). However, these discourses of donating to reduce waste do not take into account the burden placed on charities and their landfilling costs when they receive too many inappropriate garments, or the huge volumes of donated clothing sent overseas, where it will be landfilled eventually.

Because New Zealand's SHC trade is not characterised by free market mechanisms such as multiple actors and competition, and because the trade is monopolised by one actor, I consider that mechanisms should be put in place to check the quality of SHC exported overseas – particularly to Papua New Guinea. Because SHC is given freely by donators with an expectation of it "doing good", and because it is retailed to a developing country which is likely to have poor waste management systems (Farrant et al, 2010) those making profit from this trade should be held to a higher standard of ethical behaviour.

5.3. Limitations and future research

This exploratory research provides a frame which can be tested and developed by further studies. It also has a number of limitations. For example, because a wide range of supply network actors are discussed, it means that interviews and descriptions can only provide a broad overview. The inability to access participants from Savemart and Pagini Clothing also leaves gaps in this research about this part of the supply network. As well as this, because much of the research was conducted with self-selected interview participants, data obtained reflects opinions that are not necessarily able to be extrapolated across the population. For example, conversations with charity interviewees may not be reflective of all charity organisations involved in collecting and retailing SHC.

There are a number of opportunities for further research on Pacific SHC GPNs to test the robustness of my findings, to further understand this trade and to continue to work towards the best possible outcomes for all actors and stakeholders involved. Examples include:

- More robust and quantitative data about SHC donation and disposal behavior in New Zealand such as nationwide surveys. Comparative studies may also result in interesting findings as I had found some differences in the way that SHC is shared and donated between different cultures and age groups interviewed.
- Robust data about the amount of SHC sent to landfill in New Zealand.
- Some of the charity organisations in New Zealand that SHC is donated to also provide their services throughout the Pacific. Case studies could be conducted alongside charities working more closely with GPN actors in receiving countries to extend benefits along supply networks (Baden & Barber, 2005).
- Research into opportunities to increase the benefit for Papua New Guineans through this trade. For example through increasing access to SHC directly from New Zealand, providing microloans for entrepreneurs, and improving access of SHC in rural and remote areas.
- More robust investigation into the quality and utility of SHC sent to Papua New Guinea from New Zealand is required.
- Investigation of the impact of Pagini Clothing giving unsold SHC away through NGOs and churches.
- This research focused on SHC traded to Papua New Guinea, however evidence was also found of a dynamic network of actors that export SHC to other Pacific Island countries. Volumes described in trade statistics may not reflect the true volumes exported to other Pacific Islands.
- Further research on what Pacific Island peoples do with imported clothing when it is no longer of utility, and the impact of that textile waste for the local environment.

6. Conclusion

The reality of what happens to SHC donated in New Zealand and its trade in Papua New Guinea is far more interesting and complex than the narratives that donators interviewed had created. These narratives function to keep the system going as is, and exempt us from further engagement with our garments after their donation. They also exempt clothing producers from taking responsibility for their role in the end-of-life of garments.

There is a growing understanding that "raising awareness" does not necessarily result in pro-environmental behaviour change, largely due to the value-action gap and provision of information not being salient to our everyday lives. There is an opportunity here to story consumption and disposal of SHC for New Zealanders and our Pacific neighbours in a way that can drive cultural change. The rich and complex actors involved in this trade, as well as the opportunity to create better outcomes for some of our region's least resourced people have all of the elements of a "good story". I consider that this story can be used to contribute to metanarratives about SHC GPNs, what we think are the right things to do, and what the governance mechanisms of this trade should look like.

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Appendices

Appendix A   Interview questions

Appendix B   Participant information sheet

Appendix C   Consent form

Appendix A Interview questions

Please note that interview questions were not strictly adhered to. Conversations often included a wide variety of other topics.

1. Clothing donators in New Zealand

- Gender: ☐ female / ☐ male
- Ethnicity: ☐ Pakeha / ☐ Pacific Islands / ☐ Maori / ☐ Asian / ☐ non-NZ European / ☐ Other
- Age: ☐ 19 and under / ☐ 20-29 / ☐ 30-39 / ☐ 40-49 / ☐ 50-59 / ☐ 60 plus
- How long lived in NZ: ☐ less than one year / ☐ 1-4 years / ☐ 5-9 years / ☐ 10 years +
- Home life structure [can pick multiple]: ☐ flatting or renting / ☐ living with parents / ☐ living alone / ☐ children or other dependents
- Where clothing comes from [can pick multiple]: ☐ new / ☐ malls or shopping centres / ☐ online / ☐ secondhand / ☐ charity stores / ☐ secondhand stores / ☐ markets / ☐ friends and family
- What do you do with clothes you no longer want [can pick multiple]: ☐ landfill bin / ☐ charity bin / ☐ charity store / ☐ sell online / ☐ secondhand store / ☐ markets / ☐ friends and family / ☐ reuse (eg. as rags)
- Do you think you own a lot of clothing?
- Do you ever feel overwhelmed with the amount of clothing you own?
- What makes you decide what to give away / sell / throw away / donate; and what to keep? (eg. good condition to charity, soiled clothing goes to …. etc)
- Can you estimate how much clothing you discard? (For yourself or your household)
- Are you in charge of disposing unwanted clothing?
- What helps you to decide where to take clothing? (closeness to home, easy to drop off, environmental, wanting to give to charity etc)
- What do you think happens to the clothes after you have put them in a charity bin?
- Have you ever wondered?

2. Non-profit organisations in New Zealand

- What is your organisation's main goal or aim? [if info isn't available online]
- Are you a profit-making business or not-for-profit? [if info isn't available online]
- How long have you been operating? [if info isn't available online]
- What is your role in the organisation?
- I understand you receive a number of donations, what types of items are usually donated to you?
- What proportion of items you receive is clothing? [ask for a percentage]
- Who do you think most of the clothing comes from? [eg. from households, clothing retailers etc]

- Is the clothing usually secondhand? [ask for a percentage]
- How is clothing is usually donated to you? [eg. via clothing bins etc]
- How would you describe the types and condition of the clothing you receive?
- How do you sort it?
- Do you sell clothing in a store?
- Does any of it get given away?
- Are you left with clothing that you can't sell?
- What happens to the items that you can't sell?
- What do you wish you could tell people who donate clothing?

3. SHC retailers in Port Moresby

- Where are you from?
- Do you live in Port Moresby?
- Gender: ☐ female / ☐ male
- Age: ☐ 19 and under / ☐ 20-29 / ☐ 30-39 / ☐ 40-49 / ☐ 50-59 / ☐ 60 plus
- How long have you been selling used clothing?
- How did you get involved in this trade?
- Do you run your business with anyone else?
- What do you like about it? Or don't like about it?
- How do you buy the clothing to sell?
- Where do you buy / are given it from?
- Do you know where it came from?
- How often do you buy clothing to sell?
- How much clothing do you get each time you buy?
- Does it cost much?
- Are you able to see what you are purchasing (are bales open or closed).
- What is the condition and variety of the items you receive?
- Is much of it new?
- Do you do anything to the clothing before you sell it (eg wash, mend, remake etc).
- Why do you think your customers like to shop with you?
- How much of what you receive do you sell.
- What happens to clothes that you can't sell?
- Have you noticed any changes since getting involved in this trade?
- Do you think it's been a good business for you to get involved with?

4. SHC consumers in Port Moresby

- Gender: ☐ female / ☐ male
- Province:
- Age: ☐ 19 and under / ☐ 20-29 / ☐ 30-39 / ☐ 40-49 / ☐ 50-59 / ☐ 60 plus
- How long lived in POM: ☐ less than one year / ☐ 1-4 years / ☐ 5-9 years / ☐ 10 years +
- Home life structure [can pick multiple]: ☐ flatting or renting / ☐ living with parents / ☐ living alone / ☐ children or other dependents
- Where clothing comes from [can pick multiple]: ☐ new / ☐ malls or shopping centres / ☐ online / ☐ secondhand / ☐ charity stores / ☐ secondhand stores / ☐ markets / ☐ friends and family
- What do you do with clothes you no longer want [can pick multiple]: ☐ landfill bin / ☐ charity bin / ☐ charity store / ☐ sell online / ☐ secondhand store / ☐ markets / ☐ friends and family / ☐ reuse (eg. as rags) / ☐ burn
- Do you think you own a lot of clothing?
- Do you ever feel overwhelmed with the amount of clothing you own?
- What makes you decide what to give away / sell / throw away / donate; and what to keep? (eg. good condition to charity, soiled clothing goes to …. etc)
- Can you estimate how much clothing you discard? (For yourself or your household)
- Are you in charge of disposing unwanted clothing?
- How do you decide where to take clothing?
- Knowledge about where supply of SHC comes from?

Appendix B Participant Information Sheet

Date Information Sheet Produced: 6 December 2017

Project Title
Supply network of used clothing in New Zealand to the Pacific Islands

An Invitation
Hello, my name is Maria Hernandez-Curry. I am a Master of Business student at Auckland University of Technology (AUT), and am undertaking research about the supply network of used clothing in New Zealand. I am particularly interested in the ways that used clothing from New Zealand finds its way to the Pacific Islands, and particularly to Papua New Guinea. Interviews are being conducted in Auckland (New Zealand) and in Port Moresby (Papua New Guinea).

Halo nem blo mi Maria Hernandez-Curry. Mi wanpla sumatain wokim Masters blo Bisinis long Auckland University blo Technology. Mi wokim wok painim aut long ol sekenen klos na ol rot ol klos i kamap long ol ples long Pacific na lo PNG tu.

I would like to conduct an interview with you (potentially half an hour to an hour) to discuss your experience with the collection and distribution of used clothing. I will be interviewing those involved with donating, collecting, bundling, distributing / and or selling these items, and would appreciate your time to discuss this topic further.

Mi laik tok wantaim yu liklik taim (30pela minut samtain) na painim aut long ol experience blo yu long ol displa klos ikamap long hia na yupla salim. Mi bai painim aut na tok wantain ol lain givim klos, ol laik bungim klos na ol lain I salim ol klos. So mi hamamas tasol sapose yu givim liklik taim blo yu long toktok long displa wok painim aut.

Your participation is voluntary (it is your choice) and you may withdraw at any time prior to completion of data collection. There are no potential conflicts of interest, and whether or not you choose to participate in this interview will neither advantage nor disadvantage you.

Displa bung blo mi wantaim yu em long laik blo yu, sapose yu les long toktok wantain mi, orait em ok . Nogat wanpla stopim yu so noken wari long displa. Toktok yu mekim o no mekim bai nonap bagrapim wanpla so no wari long displa.

What is the purpose of this research? As tingting blo research or work panim aut?

Displ wok painim aut em long luksave long ol benefit or gutpla blo sekene klos long sosel na environmen side blo ol ples we ol klos igo.Mi ting displa work panim aut bai givim sampla gutpla

tingting na luksave na helvim ol lain istap long displa bisinis na ol lain isave usim ol klose . Tu ol gavaman na ol lain I luk long wok blo trade

The supply network of used textiles in New Zealand is not holistically understood, which makes it difficult to assess its social and environmental benefits and impacts. I believe that this research has potential to increase our understanding and raise awareness of benefits and challenges from the redistribution of this resource. I believe that my research could also provide new information to those who manage trade governance to make decisions which improve outcomes for people and the environment.

This research will also benefit me, as it is part of my completion of a Master of Business qualification.

How was I identified and why am I being invited to participate in this research? Blong wanem mi askim yu long givim bekim long askim blo displa work panim aut?

Mi kam askim yu long ol displa askim blo wanem yu save salim na deal wantaim ol displa sekenen klos. Olem mi toksave pisinis long ol as tingting blo displa wok panim aut long nau tasol mi toktok wantaim yu o long email mi salim kam.

You are invited to take part in this research because of your potential involvement in the movement of used textiles from New Zealand to the Pacific Islands, including in Papua New Guinea . You have been invited to take part in this research either by introductory email or face to face conversation.

How do I agree to participate in this research?

Sapose yu tok orait long givim bekim long ol askim blo displa work panim aut, orait bai mi bai askim yu long putim name o mak blo yu long wanpla pepa blo tok orait na bai yumi statim askim na bekim. Spose namel long askim na bekim yu no hamamas long toktok orait yu ken stop na noken toktok moa.

If you are comfortable to take part in this research, I will ask you to sign a Consent Form before we begin the interview. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research? Long displa wok painim aut?

Mi bai toktok wantaim yu liklik taim olsem half hour long ol experiences na luk blo yu long displa sekenan bisinis we ol kisim klos kam long New Zealand na salim long PNG. Ol toktok blo yu na

ol narapla mi kisim baim go skelim na raitim pepa blo mi. Olsem mi tok bipo, sapose yu no laik long toktok wantaim mi em OK tu so toksave na stop. Ol tokt9ok yu givim em blo displa wok painim aut tasol na bain no usim long ol narapla samting.

I would like to conduct a half hour to one hour interview with you about your experiences and perceptions of collecting, distributing and/or selling used clothing in New Zealand and in Papua New Guinea. Your interview, along with interviews with other research participants will be transcribed and analysed. The information you share with me will be amalgamated with information shared with other research participants. Your participation is voluntary, and you may withdraw at any time without repercussion. The information I will be collecting from you will only be used for the purpose of this research.

What are the discomforts and risks?

Ol sampla samyting yu no hamamas long bekim ansa em ok tu long noken tok. Mi ting nogat plenti samting tasol sapose sampla samting yu les long tok bikos em ol wok/bisinis samting ok yu toksave na noken bekim ansa. Em ok nogat wari long displa.

Potential discomforts and risks are likely to be minimal during this interview. However I understand that some of the questions I might ask you may not want to answer because they relate to how you conduct your business. If you find the interview too invasive or distressing at any time, and wish to stop, I would support you in this. Your name or contact information will not be disclosed in any reporting outcomes, and there is no risk of your confidentiality or privacy being breached. Please let me know if you would like to review a transcript of our interview. You are welcome to remove information from the transcript.

What are the benefits? Ol gutpla samting bai kamap long wok panim aut?

Displa wok painim aut bai helvim long luk save long husait it stap long dspla wok bisinis na luksave long ol gutpla na nogut blo displa bisisnis na luksave tu long we ol klos ikam long en. Ol toktok yu givim tu bai helvim mi long rait skul pepa blo mi long Master blo bisinis na pisisim. This research could increase what is known about the supply network of used clothing, and also increase your knowledge about this supply network as well as the environmental and social outcomes from this distribution network.

This research will assist me to complete a thesis, and therefore count towards a Master of Business at AUT.

How will my privacy be protected? Blo wanem bai mi save spose ol toktok mi tok em ol narapla ino save olsem mi tok

Olsem toksavve pastaim, ol nem na fone number blo yu bai nogat narapla save. Ol olgeta wok painim aut ripot em name blo yu na ol narapla infomesin blo yu bai mi no tokaut

As discussed above, your name and contact information will be kept confidential. Throughout research analysis and findings you and your organisation will be referred to with a pseudonym, and any identifying information will be withheld.

What are the costs of participating in this research? Igat wei long baim o nogat?

Nogat pei long toktok na givim infomesin tasol mi askim yu long givim taim blo yu tasol.

There is no financial cost of you participating in this research, and the only cost to you will be up to one hour of interview time.

What opportunity do I have to consider this invitation?

Mi givim taim long yu olsem wanpla wik long tingting na toksave kam bek long mi sapose yu laik stap insait long displa wok painim aut o nogat na spose yu gat sampla askim nambaut.

You will have a week to consider this invitation. I encourage you to get back in contact with me if you have any queries or concerns.
Will I receive feedback on the results of this research? Bai yu kisim toksave long kaikai blo disla wok painim aut

Em orait long yu ken kisim sampla tok save long kaikai blo displa wok painim aut. Yu toksave tasol oslem yu laik harem long kaikai blo displa wok painim aut na put mak long bokis long fom blo givim tok orait (consen fom).

You are of course welcome to ask questions about this research at any time prior to that date or afterwards. If you wish to obtain a copy of the final report, please tick the appropriate box on the consent form.

What do I do if I have concerns about this research?

Sapose yu gat askim long displa wok painim aut ok, toksave pastaim long projek supervisor Marjo Lips-Wiersma, marjo.lipswiersma@aut.ac.nz or 09 921 9999 ext 5038 or ol narapla bos lain em Executive Secretary of AUTEC, Kate O'Connor, ethics@aut.ac.nz , +649 921 9999 ext 6038.

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Marjo Lips-Wiersma, marjo.lipswiersma@aut.ac.nz or 09 921 9999 ext

5038. Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, Kate O'Connor, *ethics@aut.ac.nz* , +649 921 9999 ext 6038.

Whom do I contact for further information about this research? Husait bai yu askim?

Holim displa pepa stap na contakem ol nem blo ol lain stap long displa pepa.

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details: *Kontek blo meri wokim displa painim aut*
Maria Hernandez-Curry, maria.i.t.hernandez@gmail.com or 7448 8177 or +6421 0233 1946

Project Supervisor Contact Details: *Kontek blo projek suprovisor*
Marjo Lips-Wiersma, marjo.lipswiersma@aut.ac.nz or 09 921 9999 ext 5038.

Approved by the Auckland University of Technology Ethics Committee on *31 October 2017*, AUTEC Reference number *17/302*.

Appendix C   Consent Forms

Consent Form

For use when interviews are involved.

Project title: ***Supply network of used clothing from New Zealand to the Pacific Islands***

Project Supervisor: ***Marjo Lips-Wiersma***

Researcher: ***Maria Hernandez-Curry***

○   I have read and understood the information provided about this research project in the Information Sheet dated 6 December 2017.

Mi retim na klia long ol infomesin istap blo displa wok panim aut istap long infomesin pepa ikamap long dei 6 blo numba 12 mun.

○   I have had an opportunity to ask questions and to have them answered.

Mi bin gat sans long askim ol askim na kisim bekim

○   I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.

Mi luksave/save olsem ol toktok bai ol irekotim long taim blo askim na tu ol bai usim audio tape or masin blo reketom ol toktok na ol bai transcrbim or skel ol toktok ya.

○   I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.

Mi klia/undestandim olsem mi ken tak pat/o stap insait long displa wok painim aut long laik blo mi na ken lusim/witdraw long displa wok painim aut long laik blo mi na bai nogat mekim save or disadvantage.kamap long mi.

○   I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.

Mi klia olsem sapose mi lusim stap blo mi insait long displa wok panim aut, mi gat sans long rausim ol toktok mi mekim or larim ol stap blo usim long displa wok panim aut . Tu mi klia olsem taim ol wok panim aut ipinis na ol raitim ol pepa em bai hat long mi rausim ol toktok/infomesin blo mi.

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○ I understand that if I disclose information about illegal behaviour (such as dumping of rubbish, and misdeclaration of imports / exports) to the researcher, they may disclose their concerns and my contact information to the relevant authorities.

Mi klia olsem sapose mi tok aut long ol infomesion long ol pasin ino stret (kain olsem ol tromai pepepia na ol nogat tok klia long ol import/export (ol kago kam insiat/or kago go aut) go long husait man/meri (researcher) iwokim displa wok panim aut, o iken tokaut long ol concern/tingting blo ol igo long ol autority

○ I agree to take part in this research.

Mi tok orait long stap insiat long displa wok panim aut

○ I wish to receive a summary of the research findings (please tick one): YesＯNoＯ

Mi laik kisim ol sumari/sotpla pepa blo displa wok panim aut :   Yes Nogat

Participant's signature:

        ....…………………………………………………

Participant's name:

        ....…………………………………………………

Participant's Contact Details (if appropriate):

………………………………………………………………………………………………………
…………………………………………..

Date:

Approved by the Auckland University of Technology Ethics Committee on 31 October 2017 AUTEC Reference number 17/302

Note: The Participant should retain a copy of this form

Consent and Release Form

For use when photographs, videos or other image recording is being used

Project title: ***Supply network of used textiles from New Zealand to the Pacific Islands***

Project Supervisor: ***Marjo Lips-Wiersma***

Researcher: ***Maria Hernandez-Curry***

○   I have read and understood the information provided about this research project in the Information Sheet dated 6 December 2017.

Mi retim na klia long ol infomesin istap blo displa wok panim aut istap long infomesin pepa ikamap long dei 6 blo numba 12 mun.

○   I have had an opportunity to ask questions and to have them answered.

Mi bin gat sans long askim ol askim na kisim bekim

○   I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.

Mi klia/undestandim olsem mi ken tak pat/o stap insait long displa wok painim aut long laik blo mi na ken lusim/witdraw long displa wok painim aut long laik blo mi na bai nogat mekim save or disadvantage.kamap long mi.

○   I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.

Mi klia olsem sapose mi lusim stap blo mi insait long displa wok panim aut, mi gat sans long rausim ol toktok mi mekim or larim ol stap blo usim long displa wok panim aut . Tu mi klia olsem taim ol wok panim aut ipinis na ol raitim ol pepa em bai hat long mi rausim ol toktok/infomesin blo mi.

○   I permit the researcher | artist to use the photographs that are part of this project and/or any drawings from them and any other reproductions or adaptations from them, either complete or in part, alone or in conjunction with any wording and/or drawings solely and exclusively for (a) the researcher's | artist's portfolio; and (b) educational exhibition and examination purposes and related design works.

Mi tok orait long ol man I wokim dispela risech long usim ol piksa o ol narapela kain as toktok tasol bilong displela projeck na ino bilong narapela hap na mi save olsem dispela emi bilong skul wok na ol arapla kain wok bilong skul tasol.

○   I understand that the photographs will be used for academic purposes only and will not be published in any form outside of this project without my written permission.

Mi save olsem ol dispela piksa ol I bai usim long wok bilong skul tasol na ol bai ino usim dispela ol piksa arasait long skul wok.

○ I understand that any copyright material created by the photographic sessions is deemed to be owned by the researcher | artist and that I do not own copyright of any of the photographs.

Mi save olsem wanempla piksa ol I kisim I bilong ol na mi ino gat rait long kisim ol piksa bek.

○ I agree to take part in this research.

Mi tok orait long stap insiat long displa wok panim aut.

Participant's signature:
....…………………………………………………………

Participant's name:
....…………………………………………………………

Participant's Contact Details (if appropriate):
……
…………………………………………………..

Date:

Approved by the Auckland University of Technology Ethics Committee on 31 October 2017 AUTEC Reference number 17/302
Note: The Participant should retain a copy of this form.