The impact of tourism clusters on the central Namibian coast

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Abstract

A rise in adventure travel in the early 1990s through 2019 has boosted the growth of tourism hubs in developing nations and in specific cases such as Namibia's coastal tourism hub of Swakopmund. SME agglomerations show distinct qualities of tourism clusters effectively meeting the demands of both domestic and international visitors. However, despite the successes of the local tourism industry, tourism in the central coast of Namibia appears to be growing without a policy plan considering the impact industry clusters have on the local and national economy. This research aimed to investigate the existence of a tourism cluster in Swakopmund and to construct a method to measure the contributions of the suspected tourism cluster to the local economy. Using an exploratory mixed-method research design joining agglomeration literature, a historical review, personal interviews, a business count, regional location quotients and a questionnaire survey, the local tourism industry in Swakopmund was determined to be a tourism cluster. Interestingly, factor analysis and ANOVA results exposed strong interdependencies of cooperative behaviour and coopetition between tourism and tourism dependent firms despite motivational responses uncovering destructive business methods of aggressive commission actions and intellectual property theft. Survey findings report formidable contributions to local employment, SME creation and opportunities sustaining the value of a tourism cluster to the local business community. Moreover, the implications of this study add to a lineage of tourism cluster studies in developing nations contributing to future tourism development and maintenance of clustering tourism SMEs in tourism destinations.

Keywords: Tourism clusters, agglomerated industries, Swakopmund, adventure tourism, tourism economics

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CHAPTER 1 :

Introduction and problem statement

1.1 Introduction

Shortly after Namibia gained independence in 1990, a peculiar situation emerged involving small-sized tourism businesses within the coastal tourism industry. The emergence of new tourism firms began with the newly found national stability in both South Africa and Namibia that contributed to an increased interest in both nations as a tourism destination (Christie and Crompton, 2001; Heath, 2003; Visser & Rogerson, 2004; McKay, 2016a, p3). This coincided with a growth in sub-Saharan overland travel interests and rising global interest in adventure travel (Namibia Annual Visitor Statistics, 1994; Suich, 2001; Rogerson, 2004:185-6; Buckley, 2005, 2007; The Namibian, 2010; Pomfret, 2016). Namibia's dramatic desert landscapes and two world class parks - Etosha National Park and Sossusvlei Dunes - offer travellers attractive options for holiday travel (Lapeyre, 2011:5; Nyakunu & Rogerson, 2014:245). As Jan Turpie (2004:1) avows, "The tourism industry in Namibia has undergone rapid growth since the late 1980s, with an average increase in international arrivals of 16% per year." Regional natural attractions in proximity to Swakopmund include an accessible 20km dune field alongside the ocean, desert scenery and the Skeleton Coast National Park in combination with being conveniently situated as a stopover point for travellers between Victoria Falls and Cape Town. Accordingly, as visitation to Swakopmund increased, the birth of a new activity-based tourism industry began and, by 1998, activities such as quad biking, sandboarding, skydiving, fishing and dolphin cruises were gaining popularity amongst coastal visitors. A closer review of the entrepreneurial activity, competitive practices amongst firms and the social interactions of the entrepreneurs that occurred during the following decades indicate a possible development of what researchers in tourism consider to be tourism clusters (Hjalager, 1999, pp 3, 4, 9; Jackson & Murphy, 2002; Nordin, 2003; Kachniewska, 2013, p39).

This chapter introduces an investigation into the existence of tourism clusters on the Central Coast of Namibia and provides documentation of their contribution towards the tourism sector within the region. The theoretical framework of this study is a component of tourism economics, new economic geography and tourism development. Supplementary disciplines, due to a wide range of scholarly interest with the subject (Malmberg & Maskell, 2002), are introduced only to enhance and provide additional descriptive angles into the investigation and to further describe the uniqueness and ambiguities surrounding tourism cluster methodology. A reader will find a weighted theoretical focus on works pertaining to overall industrial or destination competition and, although this study does not directly involve measuring the competitiveness levels of the local tourism industry in Swakopmund, the underlying assumption followed here is that competition is a vital component of the success of an industry (see Porter, 1990, 1998; Crouch and Richie, 1999; Dwyer and Kim, 2003; and pertaining to SADC region Heath, 2003; Saayman and Saayman, 2008; Fourie, 2009; DECOSA, 2016). The literature review succinctly touches upon variations of research approaches that are incorporated into this study. Therefore, in consideration of content limitations pertaining to this chapter, each research angle is presented briefly with the intention of introducing the reader to the research concepts and industrial make-up of the area in focus. For this reason, a more concise and in-depth review is presented in Chapters 2 and 3 of the study.

1.2 Literature Review

This section begins with an overview of tourism before introducing agglomeration theories, Industrial cluster concepts and their application in the tourism industry.

1.2.1 Introduction

The tourism industry is rapidly gaining recognition as a powerful driver of regional economic growth (Jackson and Murphy, 2002; Cracolici et al, 2006; Capone, 2004, 2009; ADTI, 2015, p3) with an ability to reach a wide range of businesses and promote local development (Page, 1999; Christie and Crompton, 2001). Tourism is viewed as being one of the largest economic sectors in the world (UNWTO, 2018; Eliat and Einav, 2004; Miller & Gibson, 2005) and has

one of the greatest potentials for growth (Heath, 2003; Ribeiro & Andrade, 2015; Fernando & Long, 2012). Supporting the expectations of global tourism agencies, by 2017 tourism was the third largest export category after chemicals and fuel with export tourism growth outpacing merchandising exports for the seventh year in succession (UNWTO, 2018). In 2019, tourism contributed US$8.9 trillion or 10.3% of global GPD (WTTC, 2020). In February 2020, the Covid-19 global pandemic brought the tourism industry to a virtual standstill that affected tourism destinations worldwide. In Namibia, nearly five months of lockdowns, together with closed borders prevented overseas tourism and significantly inhibited domestic tourism (FENATA, 2020). Full recovery to 2019 figures is estimated to take 4 years (Aribulu et al., 2021).

In reflection on tourism's weight in the world economy, the search for a strategic model for tourism development has led policy makers and researchers to explore the possibilities of newer economic theories and search for methods of application (Kim & Wicks, 2010). Within the tourism industry, it is widely known that firms are predominantly small to medium enterprises (Hjalager, 1999; Rogerson and Kirsten, 2002; Cunha and Cunha, 2005; Page et al., 2011) that tend to exist in geographic concentrations around specific localities that are of interests to tourism markets (Capone, 2004; Pearce, 2005; Rogerson, 2014). This noted agglomeration pattern of tourism firms, according to Benner (2013) and Ferreira and Estevao (2009), combined with particular behavioural trends within the industrial linkages has become an area of interest amongst researchers, aligning the commercial behavioural patterns with industrial cluster theories. Encompassed in this train of thought, individual collocated firms work together by way of collaboration and cooperation – at times inadvertently - to achieve economies of scale, enhance their competitive environment while retaining the benefits of small to medium sized enterprises (Porter, 1990, 1998; Rosenthal, 1997; Feser and Bergman, 1999; Nordin, 2003; Flowers and Easterling, 2006). This literature review considers the field of work performed in the tourism research arena focused on Namibia in conjunction with a brief overview of industrial and tourism cluster concepts. Subsequently, the rationale for

applying agglomeration concepts into the tourism industry is addressed to justify an investigation into the economic impacts of a suspected tourism cluster in Swakopmund, Namibia.

According to the regional Southern African Development Community (SADC) (see Suich et al., 2002) and global tourism trends, tourism in Namibia has been growing steadily since independence in 1990 (Policy Planning and Information Unit, 1996; MET, 2004, 2008, 2010, 2013; NTB TSA 2015; WTTC 2018, 2020). In terms of GDP growth, tourism contributed N$5 192 million to the economy in 2015, representing 3.5% of direct GDP while employing 44 729 people (NTB TSA report, 2015). Indirect economic contributions represented 10.5% of GDP and 100 720 jobs corresponding to 14.5% of total national employment (NTB, 2015, p5). The WTTC (2016) estimated tourism indirect contribution to be 15.5% with 17.1% of national employment.

The 5th National Development Plan (NDP5) incorporates tourism as a key role player in SME growth, stating that only tourism and transport exceeded the growth projections laid out in the 4th national development plan (MET, 2013 Tourism exit survey; NDP5, 2017, p16). According to Turpie et al. (2004, p1) tourism growth averaged 16% per year preceding the September 11 attacks in the USA. Corresponding to positive tourism growth trends, unlike neighbouring Botswana, the Namibian government chose an open door policy towards the tourism industry with regards to foreign operators. Permitting non-Namibian guides and drivers to conduct tours within Namibia via work permits is an example of this. The result of policy collaboration, global travel growth trends (UNWTO, 201 9) and substantial comparative advantages are shown in increasing visitor quantities from 1994 until 2020 with the exception of 2001, 2003, 2009, 2020 and 2021 (Policy Planning and Management Information Unit, 1996; MET, 2004, 2010, 2015, 2019; NTB, 2008 TSA; Barnes et al., 2010, pp 3-4; National Planning Commission, 2015; New Era, 2018; WTTC, 2020; OECD, 2020).

1.2.1.1 Tourism in Swakopmund

National tourism growth spilled over into the central Namibian coast through a mixture of domestic, regional and international visitors (Zeybrandt and Barnes, 2001; DECOSA, 2016) exemplified by an estimated 50% of overseas travellers visiting the town of Swakopmund (NACOMA, 2005, p26). Subsequent work in a visitor's exit survey performed in 2013 (MET, 2013, p20) found 30% of those interviewed visited Swakopmund. This translates to approximately 275 000 foreign visitors per year plus an additional 100 000 domestic visitors (DECOSA, 2016) making Swakopmund a top destination for Namibian holidaymakers (Hoyt et al, 2007, p8). Concurrently, a Development Consultants for Southern Africa (DECOSA, 2019) study performed for the municipality of Swakopmund estimated the city received 400 000 visitors annually. In response to increased growth in the mid-1990s, a small group of activity providers, restaurateurs and hoteliers established SME businesses catering for a new wave of tourism based on adventure travel (see Swartbrooke, 2003; Buckley, 2007; Rogerson, 2007; McKay, 2012, p33; UNWTO, 2014, pp 20-1; ATDI, 2015).

In the course of the influx of adventure seeking tourists, a dichotomy in the tourism market opened up opportunities for specialised activities founded in adrenaline and nature-based experiences divergent from traditional fishing, quad biking and 4-wheel driving in private vehicles (Hattingh, 1996; Zeybrandt and Barnes, 2001). Overland trucks en route across the African continent began visiting Swakopmund due to its geographic location, historical structures, the Skeleton Coast and, eventually, the wide variety of activities provided by local tourism businesses set up to cater for, predominantly European travellers discovering "Africa's youngest nation" (Schalken et al., 2001. Concurrent tourism growth occurred in the MICE tourism, filmmaking, angling, sand and sea, cultural experiences and domestic visitation (DEA, 2009, p20; DECOSA, 2016; Sherborne, 2018). By the end of 2018, non-inclusive of restaurants, the NTB had 814 registered tourism businesses in Swakopmund (NTB, 2019). In addition to increasing tourism firm growth, in less than a decade following the adventure

tourism catalyst of the mid 1990s, Swakopmund had secured the title of Namibia's adrenaline oasis (Burton, J. 2019; *Interview with J. Sarro.* November 12, 2019).

1.2.1.2 SME growth in the Namibian tourism sector

The Namibian tourism sector is made up of SMEs primarily based in Windhoek or on the central coast. However, the number of alternative tourism establishments clustering in and around national parks, conservancies (see Christie et al., 2013, pp 217-9) and private game farms experienced considerable growth. This was primarily due to time and distance considerations, visitor preferences to experience unspoiled natural landscapes and wildlife viewing (Barnes, 1998; Barnes et al., 1999, p104; 2004). In addition to SME growth in wilderness settings, the capital city of Windhoek benefitted from tourism SME growth as a result of proximity to the busiest airport, perceived best locale for shopping and availability of supplies and services, being the largest city in Namibia (Director of Environmental Affairs, 2009, p20). In response to this economic growth, studies underpinning the existence of tourism SMEs in Namibia have been performed on the coast by Alberts and Barnes (2007), in communal areas (Lapeyre, 2011), national policy concerns (Janis, 2011; Nyakunu and Rogerson, 2014), and national tourism SME statistics (NTB, MET). Lapeyre (2011) addresses the impact of international tour operators on communal SMEs supported by Mukata and Swanepoel's (2017) study on the development of SMEs in the northeaster region of Namibia.

The external market pressures exerted in an analysis of Swakopmund's tourism SMEs competitive arena, DECOSA (2015) outlined both competitive and comparative advantages of SMEs in Swakopmund. It called for an increased level of collaboration amongst operators on communal SMEs and this is applicable to tourism SMEs throughout Namibia, including urban regions. Increasing customer satisfaction is addressed by Sanni (2020) highlighting the need for increased knowledge sharing between employees, pointing towards improvements in human resource management practices. A look into overall SME practices is provided by Charamba (2017) where insufficient knowledge of business models contributes to SME failures in the Windhoek region. Looking from a policy standpoint, studies adorning the

successes of Namibian tourism growth tend to focus on natural endowments, diverse cultural offerings and the mere existence of tourism enterprises as the roots of rising visitor numbers. A missing component to understanding the successes of the Namibian tourism industry and increases in tourism SMEs is the interaction between tourism SMEs operating in local industries.

An assortment of research into tourism SMEs occurs in alternative tourism destinations with well-defined comparative advantages. These include diverse cultures and wildlife viewing as well as natural endowments such as landscapes, scenery and coastlines. In New Zealand, Buckley (2005, 2007, 2010) specifically looks into adventure tour operators in Queenstown, recognising the contributions accrued to national tourism from the existence of an adrenaline capital. Similarly, McKay (2016, 2017) draws attention to the geographic distribution of adventure tourism operators in South Africa, identifying regional hotspots of activity tourism. Giddy (2018) takes a demand-side viewpoint of the motivations of adventure tourists at South African prime tourism destinations. In an assessment of tourism studies, Saayman et al. (2016) reviewed the critical success factors covered in tourism literature from both the demand and supply side approaches. The findings revealed a greater number of studies existing on the supply side of tourism but within the segment, there was a gap in SME interrelationships or inter-industry collaboration. However, the topic is discussed by Christie and Compton (2001, p5) articulating the significance of firm collaboration by affirming, “No one supplier within the destination country controls all of the components of a tourism product. The tourist, therefore, may have a range of good and bad in the same destination”. The same authors visualise a globally competitive regional tourism industry engaging in a degree of competition at levels that increase product quality without creating overly aggressive price wars (Christie and Compton, 2001, p7). The significance of regional tourism industry collaboration is additionally raised by Heath (2003), suggesting that the function be undertaken by a public/private participation in the form of a destination management organisation (DMO). The focus of study in the SADC tourism industries encompassed fundamental ideologies of agglomeration

theories, only applying the characteristics in alternative fields such as marketing, poverty reduction, service training and utilisation of natural endowments (Rogerson and Visser, 2004, p10).

1.2.1.3 Clustering approach in southern African tourism

A considerable breakthrough in intra-industrial relationship studies in Southern Africa was performed in the Tourism Collaborative Action Initiative aimed at initiating a "mass movement of tourism economic development, with a commitment from all stakeholders to expand and enhance international as well as domestic tourism earnings and the creation of jobs through a process of collaboration" (Nordin, 2003, pp51-2). The Cluster Consortium proposed a national clustering level and identified two thematic clustering processes highlighting ecotourism and heritage tourism. These were initially focussed on four pilot areas within South Africa (The Cluster Consortium, 1999, p16; Rogerson and Visser, 2004, p3; Miller and Gibson, 2005). A noteworthy result of the cluster Consortium was achieved in Khayelitsha, a township on the outskirts of Cape Town where, according to Nordin (2003, p55), "the commitment and grass root energy exceeded that of all the other pilots, underlining the importance of strong social capital, informal contacts and the involvement of local stakeholders". The study provided a step towards tourism growth in rural and outlying areas in Southern Africa void of tourism experience, while simultaneously introducing the region to clustering policies and instigations (Rogerson, 2002a, p108).

1.2.2 Industrial Clusters

Industrial cluster theory is founded in the benefits derived from enterprises in specific industries agglomerating in spatial proximity to each other (Rosenfeld, 1997; Porter, Delgado and Stern, 2010) bound by common comportments sharing suppliers and production methods (Feser and Bergman, 1999, p1). Modern cluster theory researchers trace the origins of industrial agglomeration theories to Alfred Marshall (1890, 1920) where the industrial district argument (Krugman, 1991; Saxenian, 1994; van der Panne, 2004; Belussi and Caldari, 2009) mentioned external economies of scale and an agglomeration or concentration of related

small-sized firms located in close proximity to each other. Marshall identified two benefits from localisation; the importance of a shared labour pool and the benefits from knowledge spillover (Krugman, 1991). His argument suggested that, when local industrial businesses specialise, the production capabilities became engrained within the local atmosphere (Martin & Sunley, 2001) in concurrence with sharing of specialised local labour, supporting vertical businesses, and firms specialising in different areas of the related industry - all contributing to greater productivity (Martin & Sunley, 2001) and increasing innovation (Saxenian, 1994; Baptista and Swann, 1998).

Industrial cluster concepts have since been modified to conform to contemporary industrial developments as is the case with the technology industry in the Silicon Valley in California. The agglomeration of information based technology firms presented a cluster paradigm where agglomeration concepts have been applied to a broad spectrum of characteristics (Scott,1989; Saxenian, 1994; Porter 1998). For example, researchers observed how economies of scale can be reached by intra-industry firms locating within spatial proximity to one another, illustrated by Saxenian (1990) itemising semiconductor production into an assortment of smaller firms producing specialised components that make up the semiconductor, “Each firm remains at the leading edge of its particular expertise – be it chip design, fabrication processes, engineering and design services, or fast turnaround manufacturing – and has access to the products and services of equally sophisticated and specialised suppliers” (Saxenian, 1990, p94). Furthermore, Silicon Valley remains an archetype cluster case scenario by exemplifying increased rates of innovation (Scott, 1988; Porter, 1990, 1998), knowledge sharing via “dense social networks of social and professional relationships” (Saxenian, 1990, p95; 1994), a strong regional network of specialisation and training facilities (Markusen, 1996, p301; Kenny and von Burg, 1996; Rosenfeld, 1997, p11; Adams, 2005, 2011; Klepper, 2009) and producing globally competitive products (Porter, 1998).

Deciphering a cluster’s definition brings up a well-debated topic in agglomeration studies. At the helm of revisiting Marshallian agglomeration theories is Michael Porter, who placed

substantial weight on the influence of industrial clusters on global competitiveness. Porter defines clusters as “geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition.” (Porter, 1998:78). Whereas Rosenfeld (1997, p8) emphasises “a geographically bounded concentration of interdependent businesses that collectively share common opportunities and threats”. The overriding components being spatial proximity and interdependent relationships exhibiting labour pooling and the sharing of knowledge for the benefit of the entire industry, which is maintained by healthy degrees of coopetition and shared common goals (Feser and Bergman, 1999). As for clarification of geographic proximity, Porter (2000, p2) asserts, “Drawing cluster boundaries is often a matter of degree and involves a creative process informed by understanding the linkages and complementarities across industries and institutions that are most important to competition in a particular field.”

1.2.3 Tourism Clusters

Initial agglomeration studies focused primarily on the manufacturing sector. However, cluster theories are applicable and adaptable to the service industry (Nordin, 2003; Capone, 2005; Cunha and Cunha, 2005; Ferreiera and Estevao, 2009; Kachniewiska 2013). There are similarities between the cluster theories of the tourism industry and industrial districts (Porter, 1998; Hjalager, 1999; Rocha, 2004; Guzel and Yaleinkaya, 2019, p31). Given the growing role of tourism within both local and global economies, applying cluster theory to tourism research is a rational outlook (Benner, 2013). Although the concept of a tourism cluster is often perceived to be underdeveloped, there is much potential for future linkage between industrial cluster theory and the tourism industry (Nordin, 2003). Firms operating in tourism sectors act in accordance with multiple industrial cluster properties (Porter, 1998, p81, 2000, p5; Cunha & Cunha, 2005). For example, geographical proximity and industry agglomeration is a common occurrence in the tourism industry as operators tend to collocate near particular attractions such as ski resorts, beaches or historical monuments. Bounded by their respective attractions, tourism operators often share infrastructures, collectively manage their resources

or attractions and innovate to increase competitive advantages (Dwyer and Kim, 2003, p372; Braun & Hollick, 2006; Iordache et al., 2010, p100). Tourism products frequently consist of different firms, for example a hotel, restaurant and an activity provider. The end product develops into a collaboration of multiple firms acting interdependently to produce higher standards to achieve better customer satisfaction (Nordin, 2003). Alternatively, a meagre performance or a substandard individual product may alter the success of other firms within a tourism destination (Porter, 1998, p81; Cunha & Cunha, 2005). So the experience of a destination as a whole can be affected by the inadequate performance of a particular product acting as a restaurant or activity operator (Nordin, 2003). This relationship of interdependence can be more complex in tourism as it advances beyond the vertical boundaries of buyer-supplier relationships. Additional glues binding tourism clusters are shared cultural backgrounds and lifestyle commonalities. These play an important role in maintaining a tourism cluster (Capone, 2004) and in conservation. It is mostly understood that the preservation of any given tourist attraction benefits regional tourism firms in the long run. Moreover, a collective interest in preserving a particular attraction develops bonds between firms that extend beyond normal business practices. This management and preservation of a region's assets, combined with competitive tourism products, secures longer term shares in a now global tourism marketplace (Cunha & Cunha, 2005).

1.2.4 Counter Arguments

Sceptics of cluster theories challenge the basic foundation of cluster concepts. A fundamental concern is the absence of a clear or explicit definition on which researchers in the field commonly agree (Nordin, 2003). A variety of different definitions are applied in cluster research (Brown, 2000). These ambiguities challenge the notion of a cluster, given the vast diversity of industrial regions and the relationships that exist within each business district (Martin & Sunley, 2001). In the case of clusters and geographical proximity, the unspecified geographical location leaves ambiguities within itself. Perceptions indicating that clusters do not follow traditional boundaries and are continuously changing (Nordin, 2003) further

complicate the concept of geographical location. Rosenfeld (1997, p6) bluntly wrote, “But criteria for clusters have proven exceedingly difficult to pin down, and there are as many definitions as there are types of organisations using the term”. There seems to be no exact figure to determine the boundaries of what constitutes a cluster.

Malmberg & Maskell (2002) challenge spatial agglomeration theories that claim clustering reduces the costs of firm interaction with an argument challenging that the cluster could aggregate into a single firm and further reduce costs. Their argument suggests a paucity of empirical evidence in Porter’s work, justifying how firms agglomerating into clusters obtain the theoretical benefits at a greater rate than the same group existing as an individual larger firm. As Malmberg and Maskell specify, prevailing industrial cluster research “does not contain any theory specifying how the territorial configuration of many co-localised firms in related industries would be able to create knowledge in ways not equally available, for example, to a single but larger firm, or to well-functioning (trust-based) networks of interacting firms, each placed at a different location” (Malmberg and Maskell, 2002; p434) Furthermore, it is problematic to predict the outcome of the SME’s incorporating into one large firm. The shortage of studies monitoring firm performance inside versus outside the cluster presents a challenge to researchers and cluster enthusiasts in finding empirical evidence deciphering differences between firms acting within a specific cluster and the same businesses operating externally or free of any cluster related activities. Martin and Sunley’s (2001) seminal work, ‘Deconstructing Clusters: Chaotic Concept or Policy Panacea’ cultivates an interesting argument indicating problems with cluster theory and, more specifically, with Porterian cluster ideology itself. Martin and Sunley (2001:14) suggest a disparity in empirical evidence supporting Porter’s (1990, 1998) theory (such as knowledge spill overs, increased innovation and the benefits of locating in geographic proximity) by reason of a lack of empirical evidence that examines similar benefits could not be achieved by the localised businesses incorporating into a single entity or a few larger firms.

“Rather than being a model or theory to be rigorously tested and evaluated, the cluster idea has instead become accepted largely on faith as a valid and meaningful way of thinking about the national economy” (Martin & Sunley, 2001:11). Sarah Nordin recognises the disputes concerning cluster theories and uses the constructive criticism to call for a greater level of flexibility to continue with the cluster theory and the previous research (Nordin, 2003).

1.3 Problem Statement

In the year 2017, the number of tourism firms on the central coast of Namibia grew to 812 registered businesses (NTB website) without considering of restaurants, related tourism suppliers or service providers. Tourism growth, from both a policy standpoint and industry perspective, emphasises expanding tourism numbers nationally as a key driver towards tourism business growth. However, little attention has been given to the cluster theory concepts raised by Michael Porter and alternative works regarding agglomeration effects such as interdependencies, sharing of a labour pool and the benefits gained to SMEs from cluster formation.

The key problem is that tourism in the central coast of Namibia appears to be growing without a policy plan that considers the impact of industry clusters on the local and national economy. Do tourism firms in the region exhibit cluster characteristics? Are there agglomeration effects present in the local tourism industry of Swakopmund? If so, what significance do tourism clusters have towards development of the industry in the local and national economy?

1.4 Goal of the Study

1.4.1 Goal

The goal of this study is to determine the presence of a tourism cluster in Swakopmund and examine the effects of local tourism firms agglomerating with the aim to inform tourism policy in the region.

1.4.2 Objectives

The objectives are multiple, in that the existence of a cluster is determined before examining the effects of tourism firms agglomerating. The research begins with a preliminary look into the literature on industrial and tourism clusters to determine the presence of a tourism cluster. Firm interdependencies and sharing of the labour pool act as measurements of the agglomeration effects. A final objective is to make policy recommendations concerning the tourism cluster.

Objective 1 – To analyse literature on tourism cluster and agglomeration theories, development, characteristics and methodologies to delaminate linkages within the suspected tourism cluster.

Objective 2 – To investigate the effects of agglomeration from a Porterian competitive standpoint by measuring firm interdependence, cooperative practices and the sharing of a labour pool.

Objective 3 – To measure the extent of clustering in tourism firms in Swakopmund using a mixture of quantitative and qualitative methods to extract results from local tourism industry owners and managers.

Objective 4 - To draw conclusions about the effects of tourism firm agglomeration and make policy recommendations pertaining to the tourism cluster and surrounding industries.

1.5 Research Method

This section introduces the 3-phase research design, which includes methods for collecting data, supporting literature and data analysis.

1.5.1 Research Design

The research is exploratory in nature, primarily because the available information on current Namibian coastal tourism is restricted to limited databases of the Hotel Association of Namibia (HAN), the Namibian Statistics Agency (NSA) and the NTB business registrations. Current

(2018) estimates are archaic and debatable, supported by an October 2020 tender by the Municipality of Swakopmund (MUN) to conduct a business survey and categorise the findings. From the point of view of this research, the suspicion is that the number of operators extends beyond the firms registered with the Namibian Tourism Board (NTB). Also, the local tourism industry continued to experience a substantial increase in new entrants into the market while the 2020-2021 coronavirus pandemic has changed the tourism landscape and threatened the survival of firms in Namibia.

Another obstacle in substantiating existing figures is the non-requirement of businesses such as petrol stations and hardware shops to register as tourism entities even though the tourism industry greatly relies upon these establishments. Activity operators, hotels and restaurants are able to remain competitive, in part by using vertical linkages with food and fuel suppliers along with a variety of service oriented businesses such as vehicle mechanics and electricians (Nordin, 2003: 23-24; Jackson & Murphy, 2006; 1021; Cunha & Cunha, 2005). The research design begins with a compilation of a database of the number of firms acting in the tourism cluster to establish linkages between firms within the tourism cluster. The first step in the research is to gain a better understanding of the linkages between firms within the tourism cluster.

Once an understanding of the linkages within the cluster has been established, a bipartite reconnaissance of industrial cluster literature and the history of tourism in Swakopmund is carried out. The literature review is presented in a chronological format in line with a systematic literature review (SLR) method, uncovering key advances and seminal works contributing to the present day applications into the tourism industry. Often used in conjunction with SLRs is systematic mapping, a practice used in consolidating literature, reducing research bias and obtaining an overview of research topics (Petersen et al., 2008, p2). Although the aim of this study is not to create a systematic map derived from relevant literature, the mapping procedure provided a straightforward method to assimilate, process and categorise the different research fields pertaining to this study.

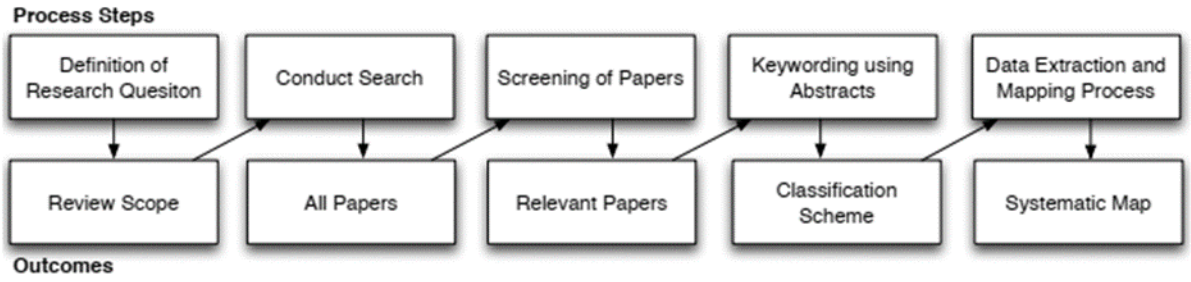

Figure 1.1 Systematic mapping process

Source: Petersen et al. (2008, p2)

The SLR involved reviewing 882 research papers that were separated into 13 categories and 29 sub-categories. Google Scholar is the primary database used and snowball sampling was the technique employed to obtain literature pertinent to this analysis (Johnson et al., 2019, p823 citing Callahan, 2010). The SLR research framework and variable coding was based on James et al. (2016, p8) alongside insights gained from studying agglomeration theories in the literature review. In this study, the process originated with a literature review of assorted disciplines labelled as the cluster category containing 310 works of benchmark cluster literature divided into 14 sub-categories.

Subsequent to understanding the history and research parameters of agglomeration theories, a look into the tourism history of Swakopmund starts with a three-fold aim:

a) To establish the origins of tourism and trace possible lineages leading up to clustering practices within the tourism and, to an extent, all local industries.

b) To gain an understanding of the evolutionary process undergone by the tourism businesses to arrive at the current industry organisation. This includes SADC regional tourism and politics plus international tourism trends.

c) To identify key players contributing to the tourism industry's clustering attributes

The investigation on regional tourism history in Chapter 3 required a broad-based assessment of components and circumstances shaping Namibia's tourism industry. On one side, natural endowments, diversity in cultures, endemism of flora and fauna, and the historical discourse of relevant events significantly contribute to tourism growth (Buckley, 2000). Alternatively,

circumstances affecting tourism growth include global and regional economic conditions, social movements and travel trends, a destination's accessibility and tourism industrial components such as tourism infrastructure (Bell and Lyal, 2002; Swartbrooke et al., 2003; Cater, 2006; Buckley, 2007, 2010). In the case of adventure travel, Buckley (2010, p219) considered four primary scales of new product development. These were product, company, destination and sector.

1.5.2 Literature study

Feser and Luger (2002) point out that cluster analysis is "flexible" due to variations in definitions, methodologies and guidelines for determining spatial scales. Multiple varieties in methodological techniques are discussed by Lazzaretti, Boix and Capone (2008) with no one qualitative or quantitated method specified for a particular cluster (Martin & Sunley, 2001). The quantitative methods in review, however, require data on a particular industry size (number of firms) or employment. Obtaining a more accurate estimate of how many firms participate in the tourism industry constructs a base to build upon when investigating firm interdependence and sharing of a labour pool.

The tourism product consists of several firms, each producing a part of the total tourism product (Crouch, 2007; Hjalager, 1999). This prompts firms to engage in collaborative business practices due to interdependencies in producing a competitive and complete product (Jackson & Murphy, 2002:39-40; Nordin, 2003:16-17). Jackson and Murphy (2002: 39) highlight the key differences between industrial districts and cluster relationships formed while engaging in collaborative practices. Nordin (2003:18) asserts, "The destination participants need to look at themselves as part of an integrated system". As the literature suggests, the second objective requires quantitative research to measure the level of interdependence between tourism firms and qualitative research to investigate the relationships within the suspected tourism cluster. Investigating the interdependence of tourism firms in Swakopmund is based on Michael Porter's emphasis on collaborative practices of firms within a particular

industry being a strong determinant of a cluster (Nordin, 2003: 12; Porter, 1998:79, Santos et al. 2008; Hjalager, 1999:10).

Consulting the NTB offices in Swakopmund and Windhoek provides a reference into the manner in which businesses are registered as tourism enterprises. An investigation into contributions from firms operating outside of the coastal region is required to gain a better understanding of external actors and their influence on the Swakopmund tourism cluster. This includes booking agents and coastal operators (Ribeiro & Andrade, 2014) with offices in Windhoek. Information regarding prominent external firms from the NTB website are obtained and then consulted about their regional suppliers and service providers. The Municipality of Swakopmund (MUN) offers a database that lists registered businesses along with population statistics. A database from the Ministry of Environment and Tourism provide information on parks and policies. Individual tourism firms have transaction records that are vital towards obtaining information pertaining to percentage values measuring interdependence, while interviews and questionnaires provide labour pooling figures.

Highlighting the keywords Swakopmund, tourism clusters, agglomerated industries and tourism economics, the internet is a primary source of information regarding empirical, statistical and theoretical procedures. Google Scholar, NWU library guides, and other related websites are resourceful references for guidelines and information related to the content of this research. Seminal works from Michael Porter's diamond model provide a foundation (Kim and Wicks, 2010; Jackson and Murphy, 2006) for choosing definitions, industrial guidelines and both qualitative and quantitative methods of research. Research performed by Cunha and Cunha (2005), Jackson and Murphy (2006), and Crouch and Ritchie (1999) provide methodological examples of measuring agglomeration effects within the tourism cluster.

Experts, including past ministerial officials (MET) and long-term members of the local tourism industry are of value concerning matters pertaining to firm interdependence, historical facts, government policies, and investigating the participants within local tourism cluster. As Feser

and Luger (2002: 5) state, “The challenges inherent in quantitative analysis of secondary data have led to the heavy reliance on interviews, focus groups, and surveys of experts.” The significance of expert opinion in this research cannot be underestimated because, to date, tourism statistics available in regions reviewed in the literature are unavailable or inaccurate in Namibia. The internet provides alternative avenues for the research. For example, Baggio, Scott and Cooper (2010) mention an investigation into individual firm’s websites as a determinant of interdependence indicating how inter-firm collaboration may be visible within website references. The Ministry of Environment and Tourism publish reports on Namibian tourism and reports from global agencies such as the World Travel and Tourism Council Economic Impact 2016 Namibia (2016) and Namib Coast Biodiversity Conservation and Management (NACOMA) project (NACOMA, 2004) are referenced to estimate the size of the national tourism industry and government policy towards tourism firms operating in national parks.

1.5.3 Empirical Study

A three-phase mixed-method design was employed to investigate clustering properties in the local tourism industry in Swakopmund. The following sections briefly introduce the methods used to capture data. The data is to be collected primarily by the researcher with help from the offices of the selected operators within the sample.

1.5.3.1 Methods of collecting data

Phase 1 of the research methods conducts an SLR to understand the parameters of industrial cluster theories and conceptual applications to the tourism industry. This phase includes combing over historical literature highlighting the tourism history in Swakopmund and the connection to SADC regional tourism history alongside global tourism trends. The purpose of compiling regional and local tourism data is to analyse past events in the local tourism industry that uncover clustering characteristics and to clarify the impact of the suspected tourism cluster on the local economy. Literature data collection is done via searching online databases such as Google Scholar, tourism industry commercial websites and archives existing in the

Sam Cohen Library in Swakopmund. This phase is discussed in detail in Chapter 5, section 5.2 in this study.

The second phase conducts a business count to compile a database of tourism and tourism dependent firms in Swakopmund. Data collection begins by assessing the usability of existing datasets at local authorities and tourism organisations. The Municipality Records of Swakopmund are consulted for demographical statistics, while individual firms provide employment figures. The Hotel Association of Namibia (HAN), Coastal Tourism Association of Namibia (CTAN) and Tour and Safari Association of Namibia (TASA) have records useful for estimating the number of external tourism enterprises that impact Swakopmund's local economy based in Windhoek. Data from literature uncovered in phase 1 of the study will be used. For example, Moira Alberts and Johnathan Barnes (2008) retrieved local tourism data for 2007 that can be of use for this research (Alberts & Barnes, 2008, pp. 21-2). Informal interviews are correspondingly carried out to ascertain the pathways through which tourism revenue affects the local economy. The interviews are also intended to dig up clustering characteristics and assist with designing research tools. This stage is detailed in Chapter 5, section 5.3.

The third phase of this study used data from the World Bank 2018 business survey of Namibia to calculate a Location Quotient (LQ) and conduct a survey using a questionnaire. Location Quotients measure a specific industry's employment concentration compared to total regional employment. The processes of calculating LQs are discussed in Chapter 4, section 4.3.3 and in Chapter 5, section 5.4.2. The questionnaire survey is conducted via email and personal interviews to capture in-depth data revealing cluster properties and to measure the impacts of these traits. A discussion of this method is presented in Chapter 4, section 4.3.4 and the details of the questionnaire design can be found in section 5.4.3.1 in the following chapter.

1.5.3.2 Data

The data collected to meet the objectives of this study is a mixture of extracts from literature, personal interviews, databases (municipal, national and UN) and secondary survey data.

Literature data provides a multi-dimensional comprehension of agglomeration research and methods used to apply the theories to tourism. The review correspondingly uncovers historical data on tourism in Swakopmund and the SADC region to segregate external contributions to the local economy from local tourism industry impacts. This approach assimilates literature and data collected from interviews that considers natural endowments, alternative economic inputs (e.g. mining and fishing industries) as significant contributors to the local economy as well as regional tourism growth trends that may have produced benefits regardless of the existence of a tourism cluster. This process is discussed in detail in Chapter 3 and in Chapter 5, sections 5.1 and 5.2. The literature review is presented in Chapter 2.

The business count in Swakopmund is both primary and secondary data used for designing business categories, identifying tourism revenue and interactions within the local economy, and designing the survey questionnaire. Business locations are recorded in Microsoft Excel and categorised into town zones for spatial proximity analysis. Secondary data extracted from personal interviews conducted during the business count is used to distinguish the routes of tourism revenue to clarify a survey sample population and identify the cluster characteristics that are measurable in the questionnaire. The particulars of these processes are discussed in Chapter 5, section 5.3.

The questionnaire survey records a wide scope of data encompassing work experience in the tourism industry, skill level, employment figures, percentages of locally supplied goods and cluster characteristics that were outlined in the literature reviewed. Questionnaire data is in a mixed format with a combination of Likert scale and nominal scale responses. Nominal scaled measurements include motivational responses and final comments on the research. The details of clustering characteristics are discussed in Chapter 2, section 2.3.2 and questionnaire datatypes are specified in Chapter 5, section 5.4.3.

1.5.3.3 Questionnaire structure

The questionnaire survey aims to provide this study with a wide-ranging look into cluster-like business transactions within the local business community that are frequently missed by

aggregate data focussed on regions or nations. The measurements of these characteristics determine the local tourism industry as a cluster and assess the impact the suspected tourism cluster has generated on the local economy. This process is outlined in Chapter 5, section 5.4.3.1. The quantitative instrument measuring firm interactions consists of a three-part questionnaire. The first section investigates businesses and services that are consumed locally by tourism operators. What the shops supply and who are the key contributors? Who are the perceived competitors and what firms are considered to be friendly? This provides a preliminary view of linkages and cooperation. The inquiry explores more detail in relation to linkages of each business plus the interactions that transpire during operations. Again, it is the suspicion of this researcher that any attempts to obtain monetary values will deter key players from participating. Establishing trust between the researcher and firms under investigation is crucial to obtaining firm interactions (Buhalis, 2000).

1.5.3.4 Data analysis

Data from the literature and historical reviews is recorded on paper or in Microsoft Word and transferred to Microsoft Excel to structure a systematic literature review and extract relevant points for the research design. Descriptive statistical analysis is not performed in this phase as the results are primarily theoretical and thus applied to the Chapter 5 research design. This process is mapped in Chapter 5, section 5.2 and charted in figure 5.2. Literature reviewed was segmented into various aspects of the study and downloaded into Endnote for a final assimilation at the completion of the study. The details of the theoretical analysis and categorical breakdown are discussed in Chapter 6, section 6.3.1 and exhibited in table 6.1.

The second phase business count data is recorded and transferred into Microsoft Excel to identify business classifications used in the questionnaire construction and for a descriptive statistical analysis pertaining to business locations. Classification structure derives from the literature reviewed including globally recognised classification guidelines. For example, The UNWTO classifies twelve characteristics that contribute towards the definition of a tourism industry (International Recommendation for Tourism Statistics, 2008:42). Using the UNWTO

IRTS 2008 guidelines and the opinions from industry experts significantly contribute to determine which firms are to be included in the study. Key to the study population is the willingness of firms to participate in the research. Additionally, restaurants, activity operators, hotels, safari operators, tourism shops and booking agents will constitute the majority of the sample (Ribeiro & Andrade, 2014). The aim is to sample highly active businesses that yield the greatest possibilities for identifying and measuring firm interdependence and pooling of labour.

Data extracted from informal interviews was recorded and used for research design, specifically when considering which latent clustering variables are reachable by a questionnaire survey. Further details are found in Chapter 5, section 5.4.3. The descriptive statistics are applied in the results and discussion in Chapter 6 alongside the questionnaire data analysis in sections 6.4.3.1 and 6.4.3.2.

Location quotient data obtained from a 2018 UN business survey in Namibia is in Microsoft Excel and calculated using Excel. Analysis of the results are performed by comparing Erongo regional outcomes with industrial and tourism cluster research outlining existing LQ cut-off points for indicating employment clusters. The details of this process are highlighted in Chapter 4, section 4.3.3 and Chapter 5, section 5.4.2.

Results from the questionnaire survey are recorded in Microsoft Excel and transferred into SPSS for descriptive and inferential statistical analysis. In the case of the wide-scope of latent variable cluster measurements encompassing this study, a factor analysis is performed to extract principal variables that explain a majority of response variability. Bonferroni and Tamhane tests are performed to further understand the relationship of the variables between business sectors. This process is detailed in Chapter 5, section 5.4.6.

1.6 Defining the Concepts

This section explains fundamental concepts and terminologies underlining this study.

1.6.1 Tourism

The United Nations World Tourism Organization (UNWTO) definition of tourism is applied to the research at hand. UNWTO defines tourism as an act performed by a visitor where a visitor is defined as: “a traveller taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited” (International Recommendations for Tourism Statistics, 2008, p10 para 2.9).

The tourism product is defined by Crouch (2007: 1) as “an experience that is delivered by a destination to its visitors”, with the tourism product being made up of multiple factors working together to provide the tourism experience (Nordin, 2003: 16; Cunha & Cunha, 2005; Kachniewska, 2013; 39; Buhalis, 2000). Tourism products such as restaurants, activities and curio shops are part of the entire tourism product consumed by individual tourists, thus promoting relationships between tourism businesses that improve the entire tourism product (Kachniewska, 2013:39). Jackson and Murphy (2002) describe the tourism product as, “each tourist destination is an agglomeration of businesses, each with its own agenda and priorities,” (Jackson and Murphy, 2002:37). Most tourist destinations collocate near “core resources and attractors” (Crouch & Ritchie, 1999: 146) desired by visitors thus validating the inclusion of agglomeration theories towards the industry.

1.6.2 Agglomeration studies and clusters

This study recurrently refers to agglomeration studies, which is an umbrella term encompassing a multitude of spatial analysis disciplines including industrial and tourism clusters. In economic terms, the field of agglomeration looks at the effects when firms, specific industries and industrial groupings co-locate within spatial proximity to one another.

On the other hand, firms collocating in geographical concentrations in similar industries are labelled as clusters, defined by Michael Porter as: “geographic concentrations of companies and institutions in a particular field” (Porter, 1998:78) that are, “interconnected companies,

specialised suppliers, service providers, firms in related industries, and associated institutions (e.g., universities, standards agencies, trade associations) in a particular field that compete but also cooperate" (Porter, 2000:15). Stuart Rosenfeld (1997:2) states, "A 'Cluster' is very simply used to represent concentrations of firms that are able to produce synergy because of their geographic proximity and interdependence."

The interchangeability between agglomeration and clusters is primarily due to the similarities of the definitions. However, agglomeration tends to be associated with a field of studies and in situations that are merely pointing out spatial proximity without insinuating behavioural characteristics encompassed in clusters. The literature reviewed frequently substitutes agglomeration and clusters with the only common differentiation being that agglomeration holds a wider field of studies whereas clusters tend to focus on specific regions and the clustering attributes that are discussed in section 3.2.

1.6.3 Linkages

The International Encyclopaedia of Geography defines linkages as: 'the contacts and flows of information and/or materials between two or more industrial sectors or firms' (He & Zhu, 2016:2). Backward linkages refer to the supply of goods and services to manufacture a product. An example of a backward linkage in the tourism industry is a wine merchant to a restaurant or treated hardboard supplier to a sandboarding company. Forward linkages refer to the relationship of purchases and sideways linkages are interactions with other firms in the industry. Linkages between firms exemplify interdependence and firm collaboration within a given cluster (He & Zhu, 2016). This research aims to measure both forward and sideway linkages between firms in the tourism industry.

1.6.4 The Central Coast of Namibia

Namibia 's central coast consists of three cities/towns: Walvis Bay (including Laangstrand), Swakopmund and Henties Bay with an estimated population of 160 000 people in total. Swakopmund will be the focus of this research. The decision to focus on Swakopmund in this

study is two-fold. Firstly, the variety of mixed-methods used to gather data would require too much time if Walvis Bay and Henties Bay were included in the scope. For example, deciphering tourism revenue and impacts into the Walvis Bay economy becomes complicated due to the capacities of fishing and port-related industries. However, commonalities exist between the three locations, especially in the coastal tourism industry. In these circumstances and in this study, the term central coast of Namibia replaces Swakopmund.

1.7 Preliminary Chapter Classifications

Chapter 1 begins with an introduction to the tourism industry on the central coast of Namibia with a description of regional geographical, social and industrial attributes contributing to a growing tourism sector. A brief background of the tourism industry operators and a description of the tourism products will lay the foundation for the suspicion of the existence of a tourism cluster. A declaration of the problem statement inaugurates the investigation into the existence of a tourism cluster despite any knowledge from governing bodies or operators within the industry.

Chapter 2 reviews literature on cluster concepts and seminal works contributing towards the definition and applications of cluster theories. A general presentation of cluster concepts and how they pertain to the coast of Namibia will begin the review before discussing the historical backgrounds of cluster concepts presented in a chronological order and highlighting influential contributions towards modern cluster theories. The review will uncover varieties of cluster definitions that include classical concepts, definitions presented in seminal works and research elucidating fundamental cluster attributes. The research reviews the application of cluster ideology towards tourism and assorted applications of cluster theory into the tourism industry. Influential works challenging cluster theories are discussed before the literature review concludes with a summary of related works and what has been discovered.

The third chapter investigates the history of tourism in Swakopmund.

The fourth chapter, Methodology, introduces the research goals and methods practised to identify clusters relating to the third objective of the research. A review of literature pertaining to cluster identification methodologies is presented before a research design is formulated. A timeline and framework will define the boundaries of work to be performed with a discussion on the units of analysis and statistical methods. Tools for the study with related data from previous works summarising and supporting the research methodology conclude the discussion on methodology and lead the report into the research design.

Chapter 5 maps out the mixed method research design, which is presented in three stages: the literature review, database development and the collection of the data.

Chapter 6 analyses the results by firstly reporting the findings of the total firms and employment of the tourism industry in Swakopmund. Spatial agglomeration scatter charts, location quotient of employment and standard deviations of distances between firms will be established. A comparative analysis with the findings of other related research aims to define similarities between Namibia's coastal tourism and other similar tourism regions. An overview of the statistical techniques used with the test results follows and the chapter concludes with the findings of both the quantitative and qualitative research. The findings of interviews conducted during the research are included within the results.

Chapter 7 uses the results of this study to draw conclusions about the effects of tourism firm agglomeration and constructs policy recommendations pertaining to the regional tourism industry and external firms that engage in the tourism cluster. Recommendations are presented.

Chapter 2: Agglomeration theory, Industrial clusters and the tourism industry

2.1 Introduction

The first step towards an investigation of the agglomeration effects into a tourism cluster is a review of the literature on industrial clusters. The aim of this chapter is to provide a clear understanding of the foundations, basic principles, and application of industrial cluster theories in the tourism industry. Relevant discoveries from the literature reviewed are intended to clarify both industrial and tourism cluster characteristic, including recognised economic benefits of clustering accrued to regions. The findings of industrial cluster characteristics derived from the literature ultimately assist in forming a methodological framework to measure agglomeration effects in Swakopmund subsequent to a look into regional tourism history revealed in Chapter 3.

This investigation opens with a chronological survey, uncovering the origins, evolutionary process and avenues of agglomeration theories preceding tourism cluster research. In the following sections, seminal works concerning agglomeration research are examined to clarify the wide assortment of viewpoints, formulate a definition of industrial clusters, and identify early applications of agglomeration theories in the tourism industry. To support the use of cluster theory application in tourism, case scenarios from previous research are presented elucidating agglomeration benefits incurred to a variety of regions. Following this chapter is a look into regional history employing the results of this chapter as cluster identification guidelines to select methods for measuring the effects of agglomeration from the tourism industry in Swakopmund.

Changes in regional and global economic growth have a direct impact on tourism growth and both local and regional tourism industry structure which could influence the growth of tourism

clusters. Therefore, industry trends in tourism correlating with global economic growth patterns are considered in this study in line the foundations of agglomeration studies. The review uncovers important strides taken by researchers in identifying how and why firms agglomerate or cluster, the definitions and boundaries of clusters and finally discusses the parameters and relevance of agglomeration theories in the tourism sector.

The discipline of agglomeration studies is vast and, with that alone, remaining on course, requires the exclusion of portions of the pathway to modern industrial cluster concepts along with far-reaching avenues beyond tourism clusters.

2.1.2 Industrial agglomeration

Industrial agglomeration and cluster theory is founded in delineating the motives or "phenomenon" behind firms assembling into specific regions (Malmberg and Maskell, 2002, p430). The theory encompasses principal benefits incurred to firms, whole industries and nations from businesses collocating in spatial proximity to each other (Porter, 1990, 1998; Krugman 1991; Rosenthal and Strange, 2002; Enright and Roberts, 2004; Ketels et al., 2009). Reduced cost of goods, access to labour, and proximity to consumer markets are cited as primary advantages of industrial clusters (Marshall, 1890; Porter, 1998; Saxenian, 1994; Corulluer and Courlet, 2003). These amalgamate within specific regions incurring the benefits of knowledge sharing and building networks based on trust and increased innovation. In fact, a broad field encompassing agglomeration studies extends outside economic and management sciences with social and geological features influencing the location of civilisations (Fujita and Thisse, 1996). Therefore, the expanses of agglomeration theory investigated in this chapter are bound to the confines of modern economic theory without diverging into pathways of psychological, sociological and political reasoning as to why humans tend to converge to specific locations. The literature review focuses on identifying the definitions, parameters of industrial clusters, impacts of agglomerating industries and the application of these theories into the tourism industry. However, with the introductory issue at hand, economics remains a study of human behaviour (Marshall, 1920).

This chapter focuses on the post-19th century evolution and acceleration of industrial clustering theories. However, early agglomeration theories are rooted in agriculture and specialisation of labour and can be traced back to Adam Smith's 'Wealth of Nations' concepts on land management (Porter; 1997; Folta and McCann, 2008). Adam Smith, in his division of labour theory, emphasised that specialisation of labour increases productivity whereby a farmer maximises crop yields by concentrating on working the land instead of equipment maintenance, building tools or researching fence building techniques (Bell, 1992; Loasby, 1998, p142; Butler, 2011). Ultimately, labour segregates into highly specialised sectors and results in an advanced economic system that is the base for national wealth (Loasby, 1998; Butler, 2011). In line with Adam Smith, a noted contribution towards agglomeration theory was published in 1826 by Johann Heinrich von Thunen who observed agriculture production in terms of proximity to towns in preindustrial Germany (Bryan and O'Kelly, 1996; Fujita and Thisse, 1996, p341; Vom Hofe and Chen, 2006, p4). Von Thunen specified productive farmland situated closer to towns had greater value due to lower transport costs of goods produced (Fujita, 2000; Bryan and O'Kelley, 1996). According to modern economic geographers, this developed into being a key founding principle in the field of urban studies (Krugman, 1991, p483; Fujita, 2000). Extending focus into urbanised areas, von Thunen theorised that workers in capital cities maximise their efforts by concentrating on a single skill, streamlining labour and leading to the growth of factories due to increased production and greater local demand (Fujita, 2000, p14). With origins in agricultural land use and rents accrued from location and fertility, location sciences took a significant step forward (Fujita, 2000).

2.1.3 Changing in the Fordism industrial environment

This chapter places emphasis in the latter part of the 20th century when a considerable portion of agglomeration literature progressed subsequent to the 1970s when a shift in industrial organisational trends occurred. Large scale Fordism business models, for example the US automobile and household appliance industries, were perceived as an end-goal business

model placing emphasis on achieving economies of scale internally (Amin, 1994; Bellandi and Di Propris, 2015). Counter to traditional theories of agglomeration, regions endowed with a low-cost workforce prevailed as larger firms eased the tasks of workers into more productive yet mundane tasks to maximise production while lowering labour costs (Schoenberger, 1987; Scott, 1988). Social challenges arose as wages stagnated (Chintz and Vernon, 1960) coinciding with rising inflation and the growth of larger firms. The US automobile industry is a front running example of Fordism, where large scale production machinery increased costs of innovation that, in turn, reduced competitive advantages with the internationalisation of Japanese Fordist producers (Schoenberger, 1987, p249-50; Amin, 1984). With high innovation (shifting production processes) costs in place, the large scale Fordist system of production began to deteriorate, giving way to a modernised system of flexible production (see Schoenberger, 1987; Scott 1988). With a declining larger scale production model in effect, flexible production models stimulated smaller firms to innovate faster. With the technical revolution of computers reducing costs, new paths towards agglomeration and clustering business models surfaced (Scott, 1989; Porter, 1990; Saxenian, 1994).

2.1.4 Agglomeration in tourism

Section 2.4 investigates the introduction and application of agglomeration theories into tourism subsequent to major shifts in industrial trends. In effect, tourism developments shadowed industrial Fordism courses from the 1950s until the early 1980s. This was due to advances in airline industry spawning a rise in all-inclusive packages and expanding hotel chains (Theobald, 2005). The post-war boom in the 1950s led to a growth in the tourism industry where international tourism arrivals rose from 25.3 million in 1950 to 286 million by 1980 (WTO, 1980; Theobald, 2005, p6). This accelerated growth pattern was fuelled by aeronautical advances in tourism that provided improved access to distant holiday locations. In turn, this caused shifts away from localised destinations with tourists seeking out further, more exotic options. One example presented by Kaiserfeld (2010, pp. 152-53) citing Entredi (1965, p85) being the case of Swedish package travellers, from 1955 when preferred travel was bus

charters and a decade later, in 1965, out of 370 000 package tours provided, 320 000 were by plane and, of these, 90% were to the Mediterranean. In connection with Swedish tourism trends, a look into tourism figures of the Balearic Islands, Spain's second most popular tourist destination, reveals similar trends to global Fordism industrial patterns (Pons et al., 2014). Tourism during this period rose from under 200 000 to nearly 4 000 000 in the late 1970s in the Balearic Islands (Pons et al., 2014, p245; citing Murray, 2012; Balearic Tourism Agency, 2014). Available hospitality beds followed a similar pattern and, in 1978, there were only 0.8% more beds than in 1973. This reflects a slowdown in tourism growth in line with greater industrial trends (Pons et al., 2014, p247; Scott, 1988). Later in this chapter, the evolution of tourism research into changing global tourism trends is presented alongside a convergence of agglomeration theories in tourism studies.

The following section chronologically investigates relevant history in agglomeration theories, clarifies fundamental industrial cluster concepts, and identifies important distinctions in cluster theory principles. The literature review begins with the works of Albert Marshall in the latter part of the 19th century.

2.2 The history of cluster research

In this section, the study begins with a review of Albert Marshall's seminal work on agglomeration theory, leading into a broader spectrum of industrial cluster research. Relevant pathways, intermediaries and evolutionary processes of cluster research are explored to establish the foundations of modern cluster theories.

2.2.1. Marshallian agglomeration theory

2.2.1.1. Foundation of Marshall's agglomeration theory

Alfred Marshall, a Cambridge University scholar, is credited with assembling founding theories and basic principles of modern agglomeration concepts within industrial districts in his 1890 publication, 'Principles of Economics'. (Krugman, 1991; Maskell and Kebir,2006; Titz et al., 2008; Belussi and Caldari, 2008; Folta and McCann, 2008). Marshall uncovered the existence of industrial districts, or a concentration of firms, and investigated benefits incurred by firms,

industries and nations from the existence and practices of agglomeration (Marshall, 1890; Krugman, 1991; Markusen, 1996; Malmberg, 1996; Belussi and Caldari, 2008). In his observations made from 19th century industrialising Britain, Marshall detected a tendency of firms to localise near supply chain origins, be it the iron industry near coal sources or Staffordshire's ceramicists locating adjacent to clay and coal suppliers. Marshall documented location commonalities exhibited by multiple firms in similar industries reducing the transport costs of obtaining key inputs (raw materials) and product delivery (Marshall, 1920 pp222-23; Becattini, 2002). A secondary scenario arose that Marshall (1920) termed 'patronage of a court' where the wealthy create a demand for high quality goods that attracts skilled labour from external regions, eventually passing knowledge to local workers (Marshall, 1920, p223-4; Belussi and Caldari, 2008). In line with von Thunen (1826) the presence of a town or city served an important role for industrial districts (Fujita, 2000) in providing a marketplace of increased demand for business-related interactions (Marshall, 1920; Becattini, 2002; Belussi and Caldari, 2008). The growth of vertically integrated businesses during industry expansion increased external economies of scale, or outsourcing production processes (see Rosenthal and Strange, 2002, p3) instead of internalised growth exemplified by Fordist inter-industrial organisation (Markusen, 1996; Audretsch, 2007; Belandi and De Propis, 2015). Three significant components of external economies stemmed from Marshall's theory: a) the localised concentration of businesses in an industry provided a skilled labour pool from which firms could choose; b) reduced transport costs with industry-specific products being produced locally, and c) knowledge spill overs increasing productivity to a greater extent than less concentrated industrial locations (Krugmann, 1991; Fujita and Thisse, 1996; Feser and Bergman, 1999, p 9; Folta and McCann, 2008; Loasby, 2013).

2.2.1.2. Further Marshallian contributions into agglomeration studies

Marshall (1920) noted that the agglomeration of industry-specific firms in spatial proximity attracts skilled labourers from external sources seeking employment, thus increasing labour pools (Marshall, 1890; Folta and McCann, 2008). An example was Flemish weavers who

arrived in England clustering around aristocrats, preceding British cotton industries and imparting skills to citizens on the foundations of clothing manufacturing (Marshall, 1890, p224-5). The UK cotton weaving industry later demonstrated his core finding that, as an industry expands, labour demand grows, reducing unemployment and increasing skilled labour which, in turn, educates and trains the local labour market (Marshall, 1890). The results are benefits accrued to the entire industry and the local population therein lowering costs of searching for skilled labour, increasing production and quality of goods resulting in increased growth in external firms (Malmberg, 1996; Folta and McCann, 2008). Additional benefits arise, such as lower transport costs that allow firms to accrue higher profits, creating surplus and improving competitive operations in external markets (Krugman, 1991). As additional businesses agglomerate into industrial districts, localised firms produce industry-specific, specialised products with increasing levels of labour division acquiring industry-specialised skills (Folta and McCann, 2008; Feser and Bergman, 1999). Regions eventually become “experts” at specific trades and industries.

Marshall’s (1920) third benefit of external economies is knowledge spill overs or industry-specific wisdom that is transferred between firms either from operating in close proximity to each other or employees passing new techniques into alternative workplaces (Feser and Bergman, 1999; Becattini, 2002; Audretsch, 2007; Corulluer and Corlet, 2003; Loasby, 2013). This creation of transferred knowledge is what modern industrial cluster enthusiasts later align with relationships built on trust and experience, driving industries towards increased innovation and competitive advantages (Porter, 1990; Becattini, 2000). The importance of inter-firm cooperation identified by Corulluer and Corlett (2003, p300) along with knowledge transfers highlighted by Belussi and Caldari (2008, p338, 346) and Belandi and Di Propis (2015) that were developed nearly a century after Marshall’s initial publication have founded a great deal of cluster based analysis in the information technology revolution of the present (Audretsch, 2007).

2.2.1.3. Cluster related research post Marshall

The works of Alfred Marshall influenced research in the latter part of the 20th century. However, a disruption occurred in the 1920s when a shift in large-scale industrial production stepped into the economic limelight in what economists have labelled “Fordism” after Henry Ford’s large-scale production process internalising economies of scale, labour practices and the movement of knowledge (Audretsch, 2007; Belandi and Di Propis, 2015). Marshallian theories became overshadowed by the accelerated growth patterns of large scale firms. However, the principal components of Marshallian agglomeration findings inspired economist Edgar M. Hoover, who wrote extensively on industry transfer costs in relation to location and labour, to continue investigating reasons influencing agglomerating industries (Hoover, 1948; Krugmann, 1991, p485; Simmie and Sennett, 1999 pp. 89-90; Feser and Luger, 2002). Another probe into this decline of agglomeration theory was undertaken by Raffaelli, (2004)) who dedicated his study, ’Whatever happened to Marshall’s industrial economics?’ on investigating Marshall’s Cambridge students and the outcomes of their works. Included in the group of Cambridge economists was Philip Sargent Florence who continued Marshallian industrial economics and agglomeration theories. However, according to Raffaelli (2004), although Florence made significant contributions into to the academic arena, his overall efforts were minimal at that period and the Marshallian field dissolved for the time being.

Further expansions into agglomeration studies derived from an innovative economist Joseph Alois Schumpeter who, in the first half of the 20th century, modelled contributions of innovation and entrepreneurialism as shaping greater economic structures that later became imperative to agglomeration applications in the high-tech boom (Amin, 1994, p12; Lazzarotti, 2011). Schumpeter viewed the entrepreneur as the innovator through their own inventiveness where innovation and entrepreneurialism are interconnected as being the key drivers in economies for changing business environments (Lazzarotti, 2011; Hagedoorn, 1996, p884). Introducing what he called ‘new combinations’, Schumpeter categorised innovation into five departments. These were a) the introduction of a brand new product or service, b) creating a new production,

c) uncovering or discovering a new market, d) obtaining new sources of raw materials and e) creating new businesses or restructuring entire industries (Hagedoorn, 1996; Hospers, 2005; Lazzarotti, 2011, p123). The groundwork Schumpeter accomplished in his early works influenced later business and innovation scientists such as Michael Porter, who became quintessential in promoting the value of modern agglomeration theory into mainstream economics (Hospers, 2005; Lazzaretti et al., 2011)

By the mid-1970s, a rising interest in agglomeration studies developed in the Italian clothing industry, headed by Giacamo Becattini (Audretsch, 2007; Sforzi, 2009; Lazzaretti et al., 2012, p8). This was labelled as the 'Italian school' of industrial clustering. According to Sforzi (2009 p 324-5, 2015) and Ottati (2016), the works of Becattini (1979; 1989) were ground-breaking industrial cluster works, revealing that a series of SMEs revolving around the clothing industry exhibited qualities of Marshallian industrial districts (also Becattini, 2002, p484; Belandi, 2002; Rocha, 2004). Becattini recognised two peculiarities where large public and private capital intensive companies appeared to be in decline while well-equipped smaller firms existing in clusters were thriving (Becattini, 2002; Belandi, 2002; Ottati, 2016). The observations noted how new agglomerations were not developing inside existing industrial cities. Instead, they appeared across far-reaching locations including southern Italy (Becattini, 2002, p 92). Highlighting dissimilarities between the Italian school philosophies and Fordist internalising economies was the special attention given to relationships within regional clusters (Martin, 1999; Lazzaretti et al., 2012). This train of thought placed emphasis on the social, cultural and institutional basis for regional industrial expansion (Martin, 1999). As Sforzi (2009, p327) states, "the advantages of division of labour could be achieved by smaller producers, specialised in one or a few stages of the production process – that is, the same industry *lato sensu*, including subsidiary industries and business services – embedded in a local community where social forces cooperate with economic ones". The literature reviewed in the later sections of this study reveals core characteristics of industrial clusters illustrating the impact on future research of Alfred Marshall, Schumpeter and the Italian school.

2.2.2. Cluster research post-Fordism

2.2.2.1. Changing industrial climate

A changing economic climate prevailed in the 1970s, initiated by aging Fordism industrial models used by large-scale industries, growth in demand for "customised" special products (Ottati, 2016 p2) and the beginning waves of the computerised technical revolution. Researchers shifted focus away from limelight industries well known for internalising growth into reviving agglomeration theories, emphasising flexible production systems and externalised economic growth (Amin, 1994; Rosenfeld, 1995; Martin and Sunley, 1996; Rocha, 2004, p15). Spearheading this movement was Michael Piore's and Charles Sable's 'Second Industrial Divide' (Amin, 1994, p15; Martin, 1999) followed by A.J. Scott looking at technology and movie industrial agglomerations in the California sector (Rocha, 2004). The externalised economic growth model of flexible specialisation is achieved by smaller firms, agglomerating within spatial proximity, being able to shift or modify production processes (Kuhn et al., 1986) more rapidly while being more cost effective than large-scale businesses (Scott, 1988; Amin, 1994, p20; Rosenfeld, 1995; Rocha, 2004). Central to flexible production is new technology, developing advances in production equipment or programmable technology being capable of performing multiple tasks operated by skilled workers (Kuhn et al., 1986; Schoenberger, 1987; Scott, 1988). As supplemental smaller firms locate within the spatial proximity of networks, technology production services and procedures are outsourced to the firms that otherwise, in decades past, would have been incorporated internally (Scott, 1988, p9). Scott (1988) perceives that, as firms develop accommodating demands in flexible specialised production, the labour pool expands. This reduces search costs to firms and provides security for employees with an increased job market (Scott, 1988, p15).

2.2.2.2 Economic geography's perspective

Flexible production theory advanced into the late 1980s, coinciding with an escalating technical revolution of the computer industry, advancements in agglomeration studies accelerated stemming from economic geographers (Malmberg and Maskell, 2002). In

reflection to industrial clusters, regional scientists as well as geographers are concerned with motives for firms agglomerating into spatial proximity and the effects on regional growth patterns (Feser and Bergman, 1999). As stated by Malmberg and Maskell, “spatial clustering is at the very core of what research in economic geography is all about” (Malmberg and Maskell, 2002, p430).

Leading the movement into industrial clustering was Paul Krugman, a Harvard professor and high level policy advisor, who investigated the localisation of industries with regards to transport costs, increasing rates of return (Saxenian, 1994; Lazzaretti et al., 2012) and external economies with the benefits incurred more at the local and regional levels than at the international level (Martin and Sunley, 1996). Economic geographers noted how external economies enlarge as backwards and forwards linkages are formed concentrating in clusters leading to centre periphery (Perez and Vernango, 2016 – derived from Raul Pribisch) patterns on a national level resulting in regional specialisation as businesses and labour migrate to areas of opportunity (Rocha, 2004). Regional specialisation subsequently becomes a factor of “increasing returns and imperfect competition instead of comparative advantages and perfect competition” (Rocha, 2004, p 23; Martin and Sunley, 1996). Economic geographers differed in their interpretations of firm location specifics that are widely acknowledged as a core benefit of agglomerating industries, these being external scale economies (Martin and Sunley, 1996, p270; Feser and Bergman, 1999) and reduced transport costs (Krugman, 1991). As manufacturers collocate in regions with higher demand, population (including labour) accumulates within the proximity of more developed infrastructure and job security. Krugman (2003, p131) states, “firms that have an incentive to concentrate production at a limited number of locations prefer, other things being equal, to choose locations with good access to markets. However, access to markets will be good precisely where a large number of firms choose to lo locate”. A difference Paul Krugman exerted was his belief that both internal and external economies were important to industrial growth. This was demonstrated by work that was sustained by mathematical models (see Krugman, 1991 &1998 for economic modelling)

that Krugman believed were representative of real economic growth scenarios and could be adjusted to fit different case scenarios (Martin and Sunley, 1996, p268).

2.2.2.3. Increasing technology: A near perfect model

Alongside the resurgence of Marshallian industrial agglomeration interest, during the1970s the technology industry was growing, triggering a restructuring of economic and social modelling that corresponded with industrial cluster research (Saxenian, 1994; Klepper, 2009). A shift occurred at the end of the Fordism period, turning towards knowledge-based products and away from the traditional manufactured goods and natural assets – raw materials (Malmberg and Maskell, 2002; Adams, 2005). Growth in the computer industry offered a living model for economic geographers, regional scientists and business economists alike to experience first-hand the life cycle of agglomeration theories and industrial clusters (Saxenian, 1990; Porter, 1998; Kenny and Patton, 2003; Nordin, 2003; Adams, 2011). A glance into Silicon Valley's employment growth shows that, in 1970, there were 100 000 high tech employees and in 32 years the estimation grew to 500 000 employed in over 20 000 firms (Adams, 2011, p368). From the 1950s to the 1990s, the percentage of knowledge versus material-based manufactured goods in the US grew from 20% to 70% (Adams, 2005, p29). By 1990, more than $11 billion in electronic goods were exported from Silicon Valley, equalling one third of total US exports (Saxenian, 1994, p43). With the statistics in place, researchers such as Anna Lee Saxenian drew arguments away from large scale production and into industrial agglomeration theories presented by Marshall in 1890. Agglomeration enthusiasts at that time faced difficulties such as explaining the exit of Japanese semiconductor manufacturers from the region. However, queries arose simultaneously as to why regions around the world failed to reproduce the Silicon Valley model given adequate skilled labour, capital inputs and available technology (Saxenian, 1990, p90-1). The "Valley" had experienced the presence of large scale industries, but growth from the 1980s was dominated by smaller firms agglomerating, outsourcing production, sharing labour pools, and benefitting from knowledge spill overs (Klepper, 2009; Adams, 2011). Further elucidations of industrial clusters

will arise in the review later in this chapter, but the general consensus amongst cluster enthusiasts and researchers is that the events and industrial pathways of Silicon Valley were instrumental in accelerating cluster policy research (Nordin, 2003).

2.2.3. Porterian theory

2.2.3.1. Michael Porter

Limited arguments exist refuting the input of Michael Porter, a Harvard business economist, into modern cluster theories (Krugman, 1991; Saxenian, 1994; Rosenfeld, 1997; Feser and Bergman, 1999, p6; Martin and Sunley, 2001; Lundequist and Power, 2001; Jackson and Murphy, 2002; Nordin, 2003; Maskell and Kebir, 2006). Porter observed from data collected in a four-year study on the performance of different industries. A common pattern emerged of firms clustering in industrial districts in line with Marshallian concepts of industrial agglomeration theories (Porter, 1990; Rosenthal, 1997). Porter (1990) published 'The competitive advantage of nations' after compiling results from ten nations that contradicted what he termed "conventional wisdom that guides the thinking of many companies and national governments in terms of national and regional competitiveness" (Porter, 1990, p3). While the then current train of economic thought based competitiveness on interest and currency exchange rates, cost of labour and economies of scale, Porter (1990) called for new methods and tools for examining which industries are working efficiently or remain competitive and the reasons for their success. Focus is placed upon the success of an industry as a measurement of the competitive ranking of a country (Feser and Bergman, 1999) and Porter created what he called a diamond model comprising of four factor conditions that are key to a region's long-term competitive placement (Porter, 1990, 1998, 2000; Nordin, 2003, p20).

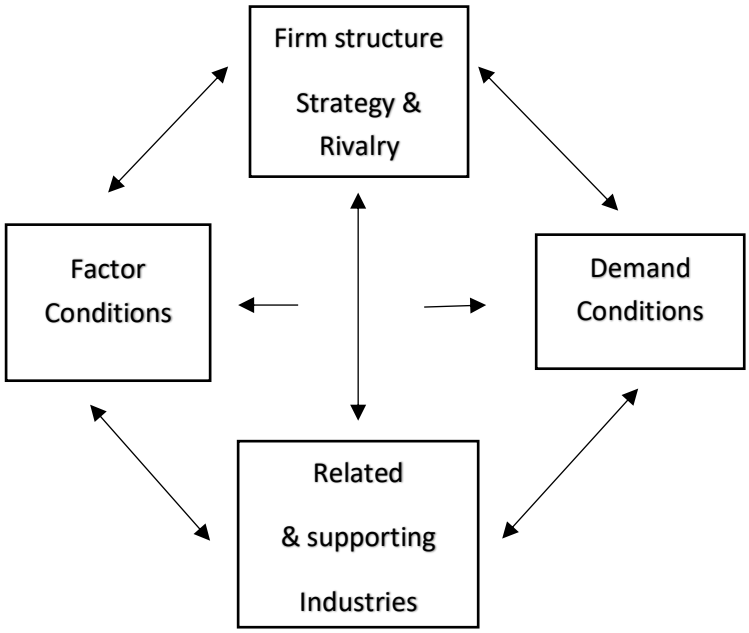

Figure 2.1 Porter's Diamond Model

Source: Porter (1990 p78)

The determinants of national advantage were *factor conditions* – factors of production such as labour supply, land, natural resources and capital infrastructure. Porter specifies these conditions must be highly specialised, such as a scientific research facility (Porter, 1990; Feser and Bergman, 1999) and factor conditions are the components in which a firm or region wishes to compete and are the requirements for a cluster's success (Nordin, 2003, p24). *Demand conditions* refer to local customers consuming the industry's product. This provides a better picture of consumer's needs, rapid feedback on product quality and increases innovation rates (Porter, 1990; Nordin, 2003). The third condition is *related and supporting industries,* defined as high quality suppliers and services providing globally competitive products at market or below market prices. This includes local competitors who cooperate and compete, increasing innovation whist keeping the industry at globally competitive standards (Feser and Bergman, 1999). *Firm strategy, structure and rivalry* completes the diamond model. This denotes the local business environment, including cultural and social ties, rivalry and competition style (Feser and Bergman, 1999) as well as historical factors that shape the local business

environment (Porter, 1999, p83). The four endowments are the foundation of Porter's competitive benefits of industrial agglomeration to be expanded upon in his later studies.

In 1998, Porter's seminal work 'Clusters and the new economics of competition' was published, further establishing his role as an authoritarian voice in promoting industrial cluster theories into mainstream economic policy planning. The work was an elaboration of his previous studies with strong focus on expanding cluster characteristics and the versatility of industrial cluster theories (see Rocha 2004 p21-22; Lazzaretti et al., 2012). Porter's viewpoint of global competitiveness in modern advanced economies held similarities to pre-existing agglomeration research of Schumpeter (1939), Chintz and Vernon (1960) and Scott (1988). Porter (1990) expanded on the benefits to industries and nations from the existence of successful clusters (see Simmie and Sennett, 1999 pp. 89-90; Rocha, 2004). Increased innovation, knowledge sharing and labour pooling between clustering firms lead to the enhancement of a region's competitive advantages (Lazzarotti et al., 2011 review Schumpeter's innovation work) with better allocation and production of inputs (Porter, 1998, p78). The importance of clusters to competition is segregated into three parts: Firstly, by increasing productivity in a particular region, secondly by driving innovation and lastly by invigorating the formation of new businesses (Fernando and Long, 2012).

A widely-used concept involves spatial proximity, bringing buyers and suppliers closer. This affects productivity by reducing transaction costs (Marshall, 1890; Hoover, 1948; Audretsch, 2007; Baptista and Swann, 1998) and eliminating a costly requirement for inventory as well as encouraging closer relationships with service providers (Schoenberger, 1987; Porter, 1998). Porter (1998) incorporates freedom of market information amongst primary firms and complementary businesses in a cluster (Nordin, 2003; Fernando and Long, 2012) indicating how locating inside a cluster increases innovation by offering better access to market information than firms outside of clusters (Nordin, 2003). Eventually, new businesses form within clusters due to employees and suppliers, being privilege to inside information, holding a vantage point for opportunity and are regularly first to observe opportunities (Porter, 1998;

Baptista and Swann, 1998). Expanding businesses exploit readily available machinery and skilled labour inside of clusters and investors are more informed about industry trends, thus increasing access to capital investments (Porter, 1998).

The question to be addressed in the following section concerns the definition of a cluster and where the spatial boundaries lie. A jump ahead into the insights of Porter (1998, 2000) sets the stage for the future discussion. In his seminal work, Porter (1998) defines a cluster as:

> "Geographic concentrations of interconnected companies and institutions within a particular field. Clusters encompass an array of linked industries and other entities important to competition. They include, for example, suppliers of specialised inputs such as components, machinery, and services, and providers of specialised infrastructure" (Porter, 1998, p78).

2.3. Moving towards a cluster definition

2.3.1. Multidisciplinary viewpoints of cluster definitions

Regional scientists, and specifically urban and economic geographers, look at where and why firms and industries locate in specific locations (Krugman, 1998), to what degree or distances are these entities collocated and what externalities stem from the agglomerations (Rosenthal and Strange, 2003). As Feser and Berger (1999, p3) suggest, "The greatest value in the industry cluster concept is its capacity to help both the analyst and policymaker 'see the regional economy whole'" being a "comprehensive approach for understanding regional economic conditions and trends". Therefore, location theories of externalities (see Rosenthal and Strange, 2003, p3) resemble Marshallian concepts with acceptance that clusters are less dependent on the comparative advantages of natural endowments with growth being a factor of linkages, core industries, available skilled labour and centrifugal forces of agglomeration (Krugman, 1991, 1998; Rosenthal and Strange, 2003).

Innovation scientists, on the other hand, have confidence in addressing industrial cluster growth as being more a factor of knowledge spill overs, interdependencies of firms, and relationships built up between firms within regional clusters (Malmberg, 1996; Simmie, 2004). In this perspective, the spatial proximity of multiple firms within any given industry increases

rates of innovation with the availability and flow of information in new technology, new production processes, and market trends (Baptista and Swann, 1998; Lai et al., 2014, p738). Entrepreneurial existence is a strong contributor of innovation (Hagedoorn, 1996) being the result of market pressures forcing entrepreneurs to find new markets, more efficient methods of production and use the latest technology to remain competitive (Hospers, 2005).

Sciences focusing primarily on knowledge-based economies such as the tech industries match innovative sciences shadowing beliefs that: innovation increases competitive advantages, innovation increases in localised industries and skilled labour migrates to agglomerated industries with higher levels of innovation (Saxenian, 1994). A slight deviation from traditional agglomeration theories and central to the success of high-tech clusters is the pre-existence of technical industries, such as aerospace and transistor firms in the case of Silicon Valley, and scientific institutions like UC Berkeley and Stanford University in the greater San Francisco Bay Area (Klepper, 2009; Adams, 2011). Alongside advancing technologies and innovative talent pools, according to Saxenian (1994), informal and relaxed relationships between firms in industrial clusters is seen as key to fostering innovation as information flows more frequently compared to regions with large scale internalised firms, as was the case with the Silicon Valley and Route 128 in Massachusetts. So, from the perspective of knowledge-based economies, the agglomerations of tech companies are rooted in Marshallian industrial district theories but technical innovation is the key driver towards regional economic success.

2.3.2. Underlining cluster characteristics

So far, the study has outlined the history, assorted trains of thought and various approaches to cluster theory leading into a modern economic mind-set. The next aim is to collect the literature discussed, enlarge the cluster research portfolio and compile a list of cluster characteristics to move forward into the tourism industry. The characteristics are divided into four categories derived in commonalities obtained from the reviewed literature to help construct borders, within reason, to define what constitutes a cluster. The four categories are

a) spatial proximity, b) sharing of a labour pool, c) knowledge spill overs and d) competing and collaborating.

Spatial proximity of firms operating in similar industries is a prerequisite for identifying industrial clusters and, although specific boundaries are often vague, collocation of firms is a mutual starting point to identify clustering (Rosenfeld, 1997; Rosenthal and Strange, 2002). To construct clear and more precise boundaries of proximity, an understanding of linkages existing within a cluster must be examined (Markusen, 1996; Malmberg and Maskell, 2002, p438). Backwards and forward linkages assist in defining boundaries by providing invisible borders to business practices. It is worthwhile noting how regional clusters can acquire external linkages while remaining part of a cluster, for example wine clusters in the Napa Valley (Porter, 1998), tourism regions in Portugal (Estevao, 2011) or technology clusters in Silicon Valley (Saxenian, 1994; Klepper, 2009; Adams, 2011). Buyers of Napa Valley wines extend outside California and outside the continental US, but the cluster remains in the Napa Valley region (Porter, 1998; Nordin, 2003, p44). The firms that obtain benefits from collocation further clarifies cluster borders, Nordin (2003, p12) suggests, "The boundaries of a cluster do not generally follow ordinary administrative borders such as municipalities, counties or countries. Neither do they follow the normal industrial borderlines, since the linkages go beyond that point. Clusters are dynamic with boundaries in constant change".

Sharing a common labour pool observed by Marshall (1890) is another core characteristic of industrial clusters; a constituent in the Italian school of agglomeration (Overman and Puga, 2009; Morkute, 2014), a cog in the wheel of flexible production studies (Kuhn, 1986; Scott, 1988), as well as a factor equally in Krugman (1991) and Porter (1998). Maskell and Kebir (2006, p6) expand on Marshall's (1920) concept of a skilled labour pool, calling it "A deepening of the local division of labour so that a higher level of specialisation and knowledge creation may be within reach". This implies lower search costs for technically informed skilled labour while concurrently improving job security for workers (Folta and McCann, 2008). Higher volumes in labour pooling can be the result of rapidly expanding job markets causing an

increase in the demand for skilled labour, as was the case for Silicon Valley in the early 1990s (Saxenian, 1994; Adams, 2011). Of significant importance for the effective allocation of a skilled labour pool is continued support from upper level management acknowledging the essential values of a skilled and educated workforce (Rosenfeld, 1997, p11).

Knowledge spill overs and information sharing are crucial benefits according to innovative sciences and often arise from close-knit relationships built up over time within industrial clusters (Saxenian, 1994; Baptista and Swann, 1998). This reasoning suggests that spatial concentration and agglomeration of firms intensifies inter-firm knowledge sharing through existing social networks occurring from trade meetings, social contacts or trans-firm employee exchanges (Folta and McCann, 2008; Nordin, 2003; Enright and Roberts, 2004). Malmberg and Maskell (2002 p439) maintain "with regard to observability, spatial proximity brings with it the special feature of spontaneous automatic observation" illuminating how firms in close proximity are able to observe and learn each firm's actions.

Firms competing and collaborating within an industrial cluster is less of a concern in economic geography whereas Michael Porter considers cooperation a vital part of agglomerated industries success (Porter, 1990, 1998; Nordin, 2003). The theoretical foundation lies in inter-firm relationships, interdependencies of cluster actors and the benefits received from engaging in cooperative behaviour while competing in an innovative environment rendering the local industry more competitive in a global marketplace (Porter, 1998; Nordin, 2003; Rocha, 2004; Capone, 2004). To maintain a cluster, firms must place the value of the cluster's competitiveness above internal business affairs (Rosenfeld, 1997). Nordin (2003) investigated the origins of the Napa Valley wine cluster, revealing how founding member Robert Mondavi, a family owned and operated winery and wine maker, elevated the sector from "jug" wine to a world class wine region due, in part, to his realisation that he could not achieve success without the existence of a wine industry consisting of multiple players (Nordin, 2003, pp42-44). Porter (1998, p81) asserts, "A host of linkages amongst cluster members results in a whole greater than the sum of its parts".

Competition within a cluster is important for improving regional competitiveness (Crouch and Ritchie, 1999; Dwyer and Kim, 2003) by way of keeping individual firms within the cluster in check with production processes, product quality and provision of service (Porter, 1998). If a particular firm allows product quality to fall, consumers take their business elsewhere. Complications from fierce competition are to be considered, but Porter (1998, 2000) believed that long standing relationships and the general understanding of mutual benefits will balance out competitive intensities, eventually reaching fair trade levels due to the way that competition and cooperation exist on different spheres (Porter, 1998, p79).

2.3.3. Identifying Industrial Clusters

With four cluster identifiers being spatial proximity, sharing of a labour pool, knowledge spill overs and coopetition listed above, a look into what defines a cluster will be discussed according to previous works cited in this chapter. A list below reveals industrial cluster definitions from the literature reviewed, beginning with reiterating Michael Porter's (1998) definition:

> "Geographic concentrations of interconnected companies and institutions within a particular field. Clusters encompass an array of linked industries and other entities important to competition. They include, for example, suppliers of specialised inputs such as components, machinery, and services, and providers of specialised infrastructure" (Porter, 1998, p78).

Noting that Porter (1998) does not delineate specific regional size or boundary but does mention "geographic concentrations" (Rocha, 2004, p24).

Stuart Rosenfeld, citing his 1996 work, reveals the definition from 26 academics, consultants and policy specialists being, "A geographically bounded concentration of interdependent businesses with active channels for business transactions, dialogue and communications, that collectively shares common opportunities and threats" (Rosenfeld, 1997, p8).

According to Rosenfeld (1997, p2), "A 'cluster' is very simply used to represent concentrations of firms that are able to produce synergy because of their geographic proximity and interdependence, even though their scale of employment may not be pronounced or prominent."

Baptista and Swann add, “A geographical cluster is defined here as a strong collection of related companies located in a small geographical area, sometimes centred on a strong part of the country’s science base” (Baptista and Swann, 1998, p525). While Enright and Roberts (2004, p100) specify, “Modern industry clusters involve integrated and often dissimilar firms and public agencies/institutions specialising and collaborating on R&D, innovation, commercialisation and marketing to produce a range of new or re-engineered products and services.”

Another definition is offered by Ross Brown (2000, p4) who defines clusters being, “a group of business enterprises and non-business organisations for whom membership within the group is an important element of each member firm’s individual competitiveness.”

Nordin (2003) cites a useful definition from the OECD,

> “The cluster concept focuses on the linkages and interdependencies among actors in the value chain producing products and services and innovating. Clusters differ from other co-operations and networks in that the actors involved in a cluster are linked in a value chain. The cluster concept goes well beyond the simple horizontal networks in which firms, operating in the same end product market and belonging to the same industry group, co-operate on aspects such as R&D, demonstration programs, collective marketing or purchasing policy. Clusters are often cross-sectorial (vertical and/or lateral) networks, made up of dissimilar or complimentary firms specialising around a specific link or knowledge base in the value chain” (Nordin, 2003, p12; OECD 1999, p13).

Clusters and networks are connected in that multiple networks, both vertical and horizontal, can co-exist with a cluster. Although networks exist within clusters, core differences exist as networks frequently exhibit closed memberships while clusters tend to remain open. Networks often rely on contracts where clusters are based upon relationships (Nordin, 2003). The OECD website separates networks and clusters,

> “Clusters and networks are different yet linked phenomena. Clusters are agglomerations of interconnected companies and associated institutions. Firms in a cluster produce similar or related goods or services and are supported by a range of dedicated institutions located in spatial proximity, such as business associations or training and technical assistance providers. Vibrant clusters are the home of innovation-oriented firms that reap the benefits of an integrated support system and dynamic business networks” (unido.org/ourfoucus/).

2.3.4. Counter Arguments

Agglomerated industries, location theory and industrial cluster theories have drawn opposition, cross-examining the findings of Michael Porter including his co-cluster enthusiasts. Due to the widespread attention drawn by Porter's works, there are various discrepancies questioning the "panacea" of cluster theories (Martin and Sunley, 2001). To begin with, both Porter (1990) and Krugman (1991) have been accused of disregarding previous works on agglomeration theory by simply repackaging industrial district theories of the past (Saxenian, 1994; Martin and Sunley, 2001). Striking similarities are found between Porter's (1990) diamond model and Marshall's triad of industrial agglomeration and external economies (Martin and Sunley, 2001, p 8-9). Alternatively, spatial proximity and agglomeration is debated as being the product of inner-firm agendas reaching internal economies of scale, for example the reduction of transport costs performed internally without considering linkages or cooperative behaviour (Rosenfeld, 1997; Simmie, 2004). According to Feser and Bergman (1999), Porter's cluster concepts are "short on specifics", making the broad spectrum of his competitive agglomeration theories merely a "point of departure" in the world of policy formation (Feser and Bergmann, 1999, p7, Martin and Sunley, 2001).

A lack of proven quantitative methodologies plagues empirical cluster research with undefinable borders, inter-firm relationships and clear, proven reasons for innovation presenting constant research challenges (Simmie, 2004). Measuring production in terms of innovation, coopetition, knowledge spill overs and internal-cluster relationships are vague and challenging to quantify (Rosenfeld, 1997; Martin and Sunley, 2001; Simmie, 1994). Martin and Sunley (2001) comment on location quotients being regularly employed to determine special proximity with high values indicating a presence of clusters. However there are complications in that there is no general "agreement on what degree of spatial concentration in an industry or industry group constitutes a cluster" (Martin and Sunley, 2001, p31) Broadening this argument exposes a greater dispute with deciphering the outcomes of smaller firms agglomerating from the contributions put forth by multinational firms, for example outsourcing

sections of production to external firms, taking into consideration national or global economic success (Amin, 1994). This mixture of industrial agglomerations and multinational corporations becomes complicated in the context of greater urban areas, as Simmie (1994) concludes, “there is limited amount of comparative evidence on the firms operating within clusters as opposed to those that do not’ (Simmie, 1994, p1109). Once again, the common theme amongst critics is blurred boundaries with too many uncertainties in scientifically measuring cluster-induced effects. However, putting the criticism into greater context, sufficient evidence exists to strongly support the benefits contributed by industrial clusters towards regional and national growth (UNIDO, 2013, development of clusters and networks).

The appeals erupting from critics suggest that further research is required before cluster-based programmes are sold to national policymakers (Martin and Sunley, 2001). Admirers and critics of Michael Porter’s cluster theories commonly agree that Porter’s research contributes by providing a platform on which to analyse cluster performance while promoting further investigations into cluster related studies (Fernando and Long, 2012). His popularity is reflected in a study by Lazzaretti et al. (2012, p5) quantifying citations to selected agglomeration studies. The findings revealed Porter’s (1998) ‘Clusters and the New Economics of Competition’ is the most cited cluster-based research in absolute values.

2.4 Application of cluster theory into tourism

2.4.1 Tourism industry overview

Tourism has emerged as a key driver in global economic growth over the past 30 years (Crouch and Richie, 1999; Page, 1999; Cunha and Cunha, 2005). According to a 2018 United Nations World Tourism Organisation (UNWTO) report; aggregate international arrivals grew 5% to 1.4 billion arrivals (UNWTO, 2019). Tourism has ascended to the third largest industry regarding exports with cumulative tourism exports falling behind only the chemical and fuel industries. A UNWTO report revealed tourism total export revenues surpassed merchandise exports for the seventh consecutive year, producing 29% of global service exports (UNWTO, 2019). According to Eliat and Einav (2004), this accounts for almost 10% of all international

trade under normal economic circumstances. With benefits from the tourism industry spanning from employment to GDP growth (Page, 1999), initiatives for better understanding the various industry segments that drive tourism growth trends have increased over the past three decades (Capone, 2016). Cluster based policies are one pathway towards better understanding competitive success, industrial make-up, employment trends and development strategies in tourism (Rosenfeld, 1997; Porter, 1998).

The use of the cluster concept suits the tourism industry according to Cunha and Cunha (2005) as regional and national tourism products are often inclusive of heterogeneous, small to medium sized enterprises (SMEs) competing and collaborating in the production of a complete tourism experience (Hjalager, 1999; Rocha, 2004; Katchniewska, 2013). Furthermore, a regional tourism industry, similar to industrial cluster cases in the literature reviewed, recurrently contains multiple businesses and services that contribute towards a larger product that attracts visitors (Crouch and Ritchie, 1999; Buhalis, 2000, p3; Nordin, 2003; Rocha, 2004). According to Capone (2004), when tourism firms work together with common goals, the outcome impacts the success of the regional tourism industry, thus underpinning the importance of collaborative behaviour, cooperative competition, innovation, a trained pool of labour and a network of relationships founded in trust (Porter, 1998; Nordin, 2003). Moreover, as tourism firms in a region congruently exhibit propensities to locate within proximity of well-known attractions such as natural endowments, museums and historical areas, a chain of events begins to occur; agglomeration stimulates firms to practise business methods in conformity with industrial cluster models. Meanwhile reciprocal patronage between tourists at hotels, restaurants, craft shops and tourism operators (Brenner, 2013, p4; 2017). The following sections present the adaptation into tourism of Michael Porter's clustering concepts, followed by further contributions to tourism of the application of agglomeration theories.

2.4.2 Extending Porterian concepts into tourism

The Porterian theory of cluster competitiveness often functions as a theoretical framework or background for application of cluster concepts into tourism related industries (Hjalager, 1999;

Jackson and Murphy, 2002; Dwyer and Kim, 2003; Rocha, 2004; Flowers and Easterling, 2006; Kim and Wicks, 2010). Porter (1998, p81) wrote, “In a typical tourism cluster, for example, the quality of a visitor’s experience depends not only on the appeal of the primary attraction but also on the quality and efficiency of complementary businesses such as hotels, restaurants, shopping outlets, and transportation facilities. Because members of the cluster are mutually dependent, good performance can boost the success of others.” Regional tourism industries often consist of multiple actors, products and services where the sum of firms’ products and actions make up the tourism experience (Porter, 1998; Hjalager, 1999), where the poor performance of one firm negatively affects other tourism firms (Cunha and Cunha, 2005, p52). An optimum situation arises when a mutual understanding of interdependencies between tourism businesses materialises alongside industry growth. Inter-firm cooperation enhances interdependencies and relationships developed over time, which eventually benefit the entire regional industry (Crouch and Ritchie, 1999; Nordin, 2003; Jackson and Murphy, 2006).

According to Jackson and Murphy (2006, p1022), “The principles of his (Porter, 1990) diamond model can be combined with cluster theory to provide a more comprehensive and balanced approach to regional economic development and tourism’s role within it.” Competition between firms within the tourism cluster refine tourism product, improving the competitive advantages of the region as Dwyer and Kim (2003, p392) declare, “Competition between firms creates an environment for excellence.”

In 1999, Anne-Mette Hjalager published ‘Tourism Destinations and the concept of industrial districts’, often regarded in tourism literature as a major step forward in tourism cluster research (Jackson and Murphy, 2002; Katchniewska, 2013). Considering the assembly of cluster characteristics discussed in the literature, Hjalager (1999) incorporated Porterian cluster concepts with prioritisation on inter-firm and communal relationships amongst five key ingredients for the success of a tourism region (Hjalager, 1999, p3):

a) Interdependence of firms.
b) Flexible firm boundaries.

c) Co-operative competition.
d) Trust in sustained collaboration.
e) A “community culture” with supportive public policies.

In comparison to broader industrial cluster research, Hjalager (1999) places stronger emphasis on cooperation, trust and communal relationships. Additionally, from an industrial structure perspective, Rocha (2004) chooses three criteria for verifying a tourism cluster beginning with distinguishing a group of SMEs clustering in proximity to the tourist destination. Secondly the businesses should enhance the natural assets of a destination, its cultural endowments and local heritage and, finally, there must be established relationships between commercial operations and local residents (Rocha, 2004, p 9). According to this philosophy and vital to the mechanics of tourism operations, whether food and beverage, activity operations, park management or transport, successful tourism industries depend on inter-personal contact between businesses and their clients. Rocha (2004) and Hjalager (1999) both recognise the importance of personal interactions be they intra-firm or between visitors, operators and restaurateurs. Therefore, tourism destinations often require local residents and businesses to act in partnership, not only for regional management (preservation) but to assist in producing a superior quality tourism end product (Katchniewska, 2013). The modification of industrial cluster theories into tourism reflects the industry’s foundation in interpersonal contacts and the importance of prioritising inter-firm to visitor relationships.

2.4.2.1 Putting Porterian theory into practice

A considerable step in applying industrial cluster concepts to tourism was taken by Jackson and Murphy (2002) who directly employed Porter and Hjalager’s work into two locations; Victoria, B.C. and Albury-Wodonga, NSW Australia. Their study used Porterian cluster theories with consideration of Hjalager’s (1999) work to ascertain organisational strong points and weakness of both tourism destinations with the underlying objective of constructing analytical methods for determining the competitive status of a destination. (Jackson and Murphy, 2002; Ferriera and Estevao, 2009, p42). Categories under investigation were the five cluster components from Hjalager (1999) in addition to Porter’s (1990, 1998) diamond model

cluster characteristics. These were: private sector leadership, wide involvement of cluster participants and institutionalisation of relationships (Jackson and Murphy, 2002).

The analytical study used Porterian cluster characteristics as a framework to assess observations taken at the two locations with the intention of rating the status of each location as a cluster. Findings revealed a strong correlation with all classifications for Victoria but Albury-Wodonga exhibited marginal parallels with the categories falling short of the Canadian location. Reasoning discovered that the strong correspondence in Victoria was the destination's involvement in tourism for a century. Additionally, local participation in Tourism Victoria, was rated as being strong with open membership to all who had an interest in tourism and the organisation's leaders were highly active with pre-existing experience. The first CEO was a sport and recreation professor from the local university and the second was a marketing and communications specialist (Jackson and Murphy, 2002, p48). Findings uncovered drawbacks in cluster component correlation with the Australian location and this could be a consequence of an emerging cluster status requiring supplementary improvements and development (Jackson and Murphy, 2002, p50).

Sarah Nordin expanded on the use of the Porterian diamond model of competitiveness, presenting four cluster scenarios functioning as comprehensible pathways originating in Porterian theory but employing broader concepts into real-life situations (Capone, 2016). The Napa Valley wine cluster, with origins in the 1960s, exemplified an existing cluster that was upgraded to include more industries including tourism beyond regular day visitors from surrounding San Francisco Bay Area locations. By initiating the Napa Valley Economic Development Corporation, working with the hospitality and tourism cluster and related marketing groups succeeded in broadening the economic base of the county (Nordin, 2003, p45-6). The joint information sharing initiated by Robert Mondavi in the 1960s correlates to Porter's (1998) cooperation and knowledge sharing, while cluster-based organisations add value to the competitiveness of the region.

In South Africa, a cluster initiative, Tourism Collaborative Action Initiative, successfully drew tourism into Khayelitsha, a township in suburban Cape Town through a consortium of international clustering and economic development organisations. Differing from Napa Valley, Victoria B.C. and NSW, Australia was that, in Khayelitsha, there was no clustering activity in the region (Nordin, 2003). The Khayelitsha experience showed that clustering initiatives performed best at local levels and strategies developed were custom-made to suit the local situation (Nordin, 2003, p56).

In the far north Queensland clustering scenario, a rescue plan involved developing wider assortments of industries via cluster-based organisations. Large-scale investment into the tourism industry, primarily from Japan, collapsed in 1991 as a result of the Japanese economic troubles. The region realised an unhealthy dependency on tourism and elected to embark on a plan to diversify the local economy through cluster projects (Enright and Roberts, 2004). The region successfully expanded the fishing sector, fruits and education providers by using strong relationships between local actors and government, along with founded beliefs in clustering initiatives (Nordin, 2003; Enright and Roberts, 2004, p114).

2.4.2.2 Destination competitiveness

Influential studies undertaken by Crouch and Ritchie (1999) and Dwyer and Kim (2003) augmented cluster-based tourism research further in the direction of establishing criteria to understand, analyse and model a destination's competitive standing (Crouch and Ritchie, 1999). In both works, Porterian concepts are considered in developing a "systematic model of destination competitiveness" (Crouch and Ritchie, 1999, p145) and a set of competitiveness indicators to be used in determining "what aspects or factors influence tourists in their decision to visit other countries" (Dwyer and Kim, 2003, p369). This reasoning is defined by Cracolici et al. (2006) as "whether tourist destinations operate efficiently i.e., are able to deploy the inputs at their disposal in an efficient manner in order to attract a maximum share of tourists' demand and to be competitive against key competitors" (Cracolici et al., 2006, p3). Crouch and Richie focus on 'what makes a destination competitive' instead of asking 'how a

destination can become more competitive' (Fernando and Long, 2012, p77). This reasoning suggests that increasing the competitive standing of a destination can best be attained by firstly recognising its competitive and comparative advantages, after which superior pathways to identify its shortcomings and, ideally, suggest improvements and modifications (Crouch and Ritchie, 1999; Fernando and Long 2012, p78). Dwyer and Kim (2003) employ Porterian concepts and add to Crouch and Richie (1999) in detailing endowed resources – natural and heritage - with created resources being tourism activities such as shopping, service quality, destination management and regional infrastructure (Ferriera and Estevao, 2009, p45-6; Fernando and Long, 2012). A generalised model for measuring the competitiveness of a destination (Dwyer and Kim, 2003, p378) in consideration of a region's endowments followed by a set of indicators to measure the competitiveness of a region (Dwyer and Kim, 2003). The contributions of Crouch and Ritchie with Dwyer and Kim are two examples of seminal works based on clustering concepts branching outward, or evolving, into different fields of tourism research.

2.4.2.3 Further contributions

A further development was using the cluster theories presented by Capone (2004) to define regional agglomerations and determine their ability to create wealth and employment considering socio-economic and cultural factors (Capone, 2004, p3). The study employed location quotients (LQ) to identify and map tourism districts, which provided a step towards quantifying tourism clusters and the benefits provided to regional employment (Capone, 2004). Ferriera and Estevao considered regional development by implementing an interactive system, the tourism product (natural, historical and cultural resources), the touristic destination (marketing and management) and the tourism cluster (Ferriera and Estevao, 2009, p46-7). Cunha and Cunha (2005) grasped Porterian cluster theories to build a model directed towards sustainable development, reflecting a global outlook on the value and potential of tourism to enhance the lives of inhabitants living in tourism regions and as a tool for poverty reduction. Tourism cluster research traversed into regional development, poverty eradication,

competitiveness, innovation and destination product development eventually becoming accepted policies to global organisations envisioning tourism as a powerful tool for economic growth.

2.4.3 Expanding cluster research applications

An emerging theme in cluster policy is enhancing the quality of life for inhabitants of tourism regions via preservation of the touristic assets of a destination, improved business environments and a vision for future economic growth (South African Tourism Collaborative Tourism Action Process, 1999). Regions stricken with widespread income inequalities and higher levels of poverty prioritise tourism as being a long-term solution, mixing economic growth with natural and cultural conservation (Cunha and Cunha, 2005, p53). Tourism cluster research has expanded into South Africa (South African Tourism Collaborative Action Process, 1999), Istanbul (Nasir and Bulu, 2007), Vietnam (Trihn, 2016), and the Caribbean (Allahar, 2015). In a 2016 bibliometric analysis of tourism cluster related research, Capone (2016) found a rise in the late 1990s and in the early 2000s of an average of 10 publications per year rising to 20 by the end of the decade, with the total number of publications nearing 1 000 (Capone, 2016, p21). From the examples presented in Nordin (2003) and the South African Tourism Collaborative Action Process in 1999, tourism cluster initiatives brought tourism into a region otherwise deemed unsafe by travel publications (Nordin, 2003).

Global monitors, such as the United Nations Industrial Development Organisation (UNIDO) have followed and used clustering policies as tools for economic growth. Cluster concepts are perceived to benefit SMEs by providing access to specialised suppliers, skilled labour and knowledge spill overs that occur within inter-firm relationships (UNIDO, 2013). SMEs in clusters can achieve mutual gains from shared purchasing of materials, advertising and equipment. The UNIDO approach to cluster development “focuses on initiatives that encourage enterprises and institutions in selected clusters to undertake joint actions that could ultimately yield benefits to the cluster as a whole and the communities in which they are embedded”. (www.clustersfordevelopment.org). The underlying aim with UNIDO is to

stimulate economic growth for the poor. Industrial cluster formation is a plausible avenue towards poverty eradication across multiple industries dominated by SMEs.

The United Nations World Tourism Organisation (UNWTO) sponsors partnerships involving tourism cluster projects such as the Iceland Tourism Cluster (www.icelandtourism.is) and a joint project in 2015 with the Botswana Tourism Organisation to create tourism clusters in Kasane, Kazungula, NW Ngameland and Maun (UNWTO, 2016 Annual report). A 2012 report entitled, 'Tourism in the Green Economy', recognises the benefits of clustering to SMEs, "Tourism businesses can build on the coordination of complementary assets at the destination and cooperatively manage their resources and marketing. Benefits include providing access to research or contributing to market data, effective lobbying and collective action for trade-focused activity, better business opportunities and marketing support" (UNWTO, 2012, p64). Additional UNWTO clustering programs are in effect around the globe, often functioning in partnerships with local tourism organisations working towards implementing the policies originating from the agglomeration works of Alfred Marshall.

2.5 Conclusion

The works presented in the literature review uncover relevant history, core characteristics, divergence in theories and policies, seminal works and pathways towards development in the tourism industry applying industrial cluster theories. Key to cluster promotion is a vision to uplift regional tourism industries and increase national tourism competitiveness via agglomerating participants in local tourism locations (Dwyer and Kim, 2003), jointly achieving economies of scale (UNWTO, 2012, p64), building cooperative relationships while stimulating competition between firms and increasing innovation, all for the benefit of the region (Nordin, 2003). A more globally competitive national tourism sector originating from a bottoms-up approach stems from higher quality regional tourism products. Further benefits are possible from positive externalities in the form of the development of new industries stemming from tourism growth as well as poverty eradication from increased employment and improved environment for SME creation.

Formation and implementation of cluster policies occurs at local levels, firstly by identifying the competitive advantages and shortcomings of a specific region as delineated by Couch and Ritchie (1999) and Dwyer and Kim (2003). Established organisations, for example DMOs, are recommended to act as builders, teachers and mediators of cluster policies, guiding local tourism actors into collaborative behaviour envisioning collective benefits (Porter, 1998; Crouch and Ritchie, 1999; Dwyer and Kim, 2003; Enright and Roberts, 2006). To accomplish this task, forming and achieving common goals while fostering long established relationships built on trust empowers the tourism cluster to withstand future challenges that may often be presented by external conditions such as poor global economic performance or viral pandemics. National governments, in collaboration with global agencies, encourage cluster initiatives incorporating poverty eradication and increased employment (UNWTO, 2012; UNIDO, 2013; South African Tourism Collaborative Action Process,1999). However, additional attention is required due to tendencies of firms to operate efficiently, maximising profits and employing higher skilled labour at the lowest attainable wage (Rosenfeld, 1997). This scenario does not necessarily lead to poverty eradication. Cluster theorists elucidate, in terms of efficiency, that it is not always in their best interest for firms to locate in regions for the purpose of lower costs and wages. More efficient usage of materials and production processes are where industry strength exists (Porter, 1998, p87). The final goal illustrated by research is the key long term benefits to clusters in enhancing and improving the lives of people, preserving natural, cultural and historical endowments, and providing extended vision for economic growth (Crouch and Ritchie, 1999)

The study changes focus from industrial cluster theory to the regional analysis of Swakopmund, Namibia. In the light of the material presented in this chapter, there is reason to suspect the existence of a tourism cluster in Swakopmund, exerting economic benefit to the local community extending into greater competitiveness of the national tourism industry. Chapter 3 investigates the existence of spatial proximity, labour pooling, interdependencies built around the collaborative and competitive behaviours of local firms in Swakopmund. The

aim in the following chapter is to look at regional, national and sub-continental history to find the origins and depth of the suspected cluster before devising appropriate methods to measure the agglomeration effects of the tourism cluster.

Chapter 3:

The growth of tourism in Swakopmund

3.1 Introduction

This chapter presents a chronological viewpoint highlighting events that contributed towards the current tourism industry in Swakopmund. Explicit and systematic analysis of localised industrial districts acting as clusters requires not only the disentanglement of business alliances and supply chains but a comprehensive understanding of past social networks responsible for cultivating clusters (Becattini, 2002). Nordin (2003, pp 63-4) states, "The history of the destinations is of utmost importance in providing an understanding of the current structures". Recent agglomeration studies undertaken by: Giacomin (2017) the Malay - Indonesian palm oil clusters and ecotourism in Costa Rica; Cirer-Costa (2020) the creation of Mallorca's tourism cluster and Evren and Ocktin (2017) Istanbul's jewellery cluster, consider the history of businesses within clusters as being a key component to understanding benefits of agglomerated economies. The aim of this chapter is to establish industry foundations leading up to the investigation into the existence of a tourism cluster in Swakopmund. Each segment is designed to elucidate important events that occurred regionally, nationally or globally that lead into the formulation of research methods in the following chapters. As Porter (1998, p84) stated, "A cluster's roots can often be traced to historical circumstances." The subsequent section investigates early Swakopmund history and the transformation from a remote German colonial port town into Namibia's premier seaside tourism destination.

Swakopmund is the second most populated city in the Republic of Namibia and the country's premier coastal holiday destination with the 2011 census population pegged at 44 700 (Erongo Regional Council), although current estimates are much greater (The Namibian, 2008, 2019). The city straddles the shores of the South Atlantic Ocean bordered on the southern fringes by the Swachaub (Swakop) River and a twenty-three kilometre dune field

leading to Walvis Bay, the main port for Namibia (Simon and Ekobo, 2008, p55; Kalb, 2018, p18). Eastern views extend over vast plains of the Namib Desert (Wassenaar et al., 2012, p127) and the well-known topographical bad land terrain of the Moon Landscape. Directly north of the town, a 200 kilometre salt road leads to the infamous Skeleton Coast Park. The capital city of Windhoek is 387 kilometres to the east, which allows feasible access to Swakopmund from residents and visitors arriving at Hosea Kutako Airport, 40 kilometres outside the capital. With the city's basic attributes at hand, this chapter points out the challenges beset upon early settlers to overcome survival in the Namib Desert and the developing social issues between indigenous African and western cultures. A key argument in the reviewed literature underlines the relevant contribution made by tourism actors towards regional success. Since the late 1980s, agglomeration literature places initial emphasis on a region's social history as being influential towards agglomeration trends (Saxenian, 1994; Nordin, 2003). This is supported by Nordin (2003, p34),

> "Industry clustering is a dynamic process that must be cultivated over a long period. Clusters usually develop according to a bottom-up perspective and cannot be created by policy alone. There is much more to it than what can be seen on the surface, such as the history of the region, the traditions and structures – in general, conditions that are exclusive for that particular geographical area".

This chapter therefore begins at the end of the 19th century to gain insight on the original inhabitants of Swakopmund and the challenges that formulated what Lorenz (2002) refers to as "Ties, Trust and Trade".

3.2 Early development and tourism in Swakopmund

On August 4, 1892 the German gunboat Hyena laid the foundation for two beacons in proximity to where, two years earlier, Kurt von François had suggested was the place that symbolised the birth of colonial Swakopmund. The German government had officially annexed Namibia as a protectorate in 1884 and were pursuing a viable port option for accessing the central interior farmland. Conveniently, Adolf Luderitz had acquired vast sections of land from the Nama people which contained Swakopmund and Luderitz (Siiskonen, 1999, p287).

Parcels were sold to the German government including Luderitz, one of only two natural harbours in all of Namibia's 1 570kilometre coastline. The alternative natural harbour not included in the sale was Walvis Bay but unfortunately for the Germans, appropriation by the British occurred in 1878, being perceived as a strategic annexation to the Cape Colony (Siiskonen, 1999, p287; Simon and Ekobo, 2008, p54; Kolb, 2018). Luderitz was beset with shifting dune fields constraining access to the Namibian interior, thus Swakopmund, in proximity to Windhoek, was deemed the next best option. An inaugural arrival on August 23, 1893 the Marie Woermann, a passenger vessel from Hamburg docked offshore transporting 140 troops, 40 settlers and supply rations. Upon arrival, hotel or accommodation options were non-existent in Swakopmund necessitating settlers to escape the harsh Atlantic conditions by digging caves nearby the dunes as delays exceeding two months for transport to arrive facilitating the onward journey inland (Massmann, 1983).

Disembarking ships proved a challenge as the rough waters of the South Atlantic were challenging for even the "German determinations" (Kalb, 2018, p16). Therefore, with engineering aspirations to conquer mother nature, the Mole, a rock jetty, was completed in 1903. However, a year later, tug boats could only enter at high tides due to a continuous southerly oceanic flow causing a build-up of silt. By 1906 the rock outcropping was unusable, decimating access to cargo vessels (Massmann, 1983). Construction of a pier underway and ready to use by 1905 with further extensions completed in 1907. Worth noting during this period, the Woermann Lines cleverly employed members of the Kroo tribesmen from Liberia due to their expertise in shore break navigation with oar driven boats (Massmann, 1983). By the turn of the century, Swakopmund with the largest German population of any colony in Africa. Inhabitants established close-knit relationships, relying considerably on the input of each member. Stemming from the activities of Woermann shipping lines, the Damara-Namaqua Trading Company established offices in Swakopmund and presently trades under

Woermann and Brock supermarkets. In fact, many descendants of the original inhabitants, including the Woermanns, still currently reside in Swakopmund.[1]

3.2.1 Change of administrators

Town growth increased until the First World War (WWI) when, in 1915, South African troops, aligned with Great Britain, took over Swakopmund contravening practically two decades of prosperous German driven port activities. Namibia was administered by South Africa under British regime and with the port of Walvis Bay in operation, shipping procedures in Swakopmund ceased operations, disenfranchising the town of its primary function (Kalb, 2018, p29; Massmann, 1983). In hindsight, the contingent of German settlers and soldiers accomplished what is currently perceived by local residents, gigantic strides that Martin Kalb (2018, p32) summarises in quoting Stengels 'Die Bruken von Swakopmund', "the hard fight of inhabitants against the harsh Atlantic waters". Much like the Portuguese conquests of the 15th and 16th centuries, the events that took place during 30 years of German occupation remain in the hearts and stories of modern day Swakopmunders. A brief synopsis of the accomplishments is worth consideration within this study as the events were partial in composing the social glue highlighted by Markusen (1996).

Within 20 years of German administration, a rock jetty was constructed, a 262 metre pier extension and two railroads accessing the interior (Kalb, 2018, pp14-16). The method employed by oaring consignments manned by Kroo tribesmen navigating rough shore breaks of Swakopmund, between 1904-06 managed to import 532 000 sq. metres of goods including a period of 83 days where the seas were too rough to unload cargo. In 1904/5 1 200 people were employed in landing services with frequent ship counts being between 10 - 20 steamships moored offshore awaiting transfer of goods (Massmann, 1983, p30). Before WWI, 11 065 horses arrived from Hamburg amounting to a total of 31 000 horses and 34 000 mules offloaded at (or swam into) Swakopmund. Town services included 38 craft works in 8 industries and 51 commercial businesses including 4 banks and 18 accommodation options

[1] A walk through the Swakopmund Cemetery proved valuable in confirming undocumented inhabitants.

for visitors (Massmann, 1983, p30). Offsetting import costs providing relief to isolated settlers, a brewery began in 1900 with the Swakopmunder Brauereigeselschaft expanding in 1905 and in 1912, the Kronen Brauerei started later to become Hansa Breweries, Namibia's most prominent brewery (Massmann, 1983).

Meanwhile on a social front, small bands and orchestras were assembled performing regularly at town functions (van Zyl, 2016). One cannot imagine, with a population under 2 000, the productivity occurring in Swakopmund and the comradely existence of full time residents. Industrial and tourism studies reveal a core attribute to a cluster's success being deeply rooted relationships built on trust and common historical pasts (Hjalager, 1999; Norden, 2003). Stuart Rosenfeld (1997, p6), referring to industrial cluster formation, states: "the intense social fabric makes it possible for companies to trust their neighbours and even competitors and join forces for mutual advantage". Once more, with a fully functional port in Walvis Bay, Swakopmund became an isolated Germanic town void of a single major industry, and yet still many pre-war inhabitants opted to continue residing, adapting and continuing with the lifestyle carved out alongside the dunes (Massmann, 1983; Kalb, 2018).

3.2.2 Rise in tourism

In the wake of WW I, the 1923 London Agreement was signed empowering Swakopmund as a holiday resort and educational centre subsequently deserting the town in an economic downturn leaving it "nothing more than a fishing village" (Massmann, 1983, p31). During that traumatic period, land claims were abandoned as were 23 houses and 40 flats due to maintenance costs (Massmann, 1983). Tourism development plans did, however, materialise by modifying the dilapidating Mole, turning the area into a swimming hole with a promenade - all with hopes of attracting domestic inland holidaymakers (Massmann, 1983, p32). Pre-war businesses adjusted to accommodate holidaymakers transforming Swakopmund into a coastal holiday destination (Swakopmund town brochure, 1924; Massman, 1983; Simon and Ekobo, 2008).

Global tourism was expanding in the 1920s, specifically in upscale markets from Europe and North America exemplified by the Denver-Africa Expeditions story - the brainchild of Dr C. Ernest Cadle. According to Dr Cadle (1927), the tours are regarded as the event that placed Namibia on the map, generating awareness to sectors of the US upmarket travel circles with a cinematic production of the San people entitled 'Picturing Bushman' portraying the exotic wilds of the 'Dark Continent' (Brietweiser, 2012). Uninvited media attention to Namibia began with an article published in the Denver Post entitled, 'We are going to put Southwest Africa on the map this time" (Brietweiser, 2012 referring to Cadle, 1925). The expedition arrived in Walvis Bay from the US via the UK with a film crew, a team of scientific experts and upmarket travellers aspiring to witness the savages of the African continent (Brietweiser, 2012). Clients were taken to Etosha National Park seeing wild game while mingling with the /Hoam regional indigenous populations (Letters from the expedition obtained at Sam Cohen Library; Brietweiser, 2012).

Early overland travel was engaged by South Africans who promoted similar excursions connecting passengers to Victoria Falls, Kruger National Park and Salisbury (Harare), selling the adventures to growing tour operators such as Thomas Cook and the Woermann Lines (Brietweiser, 2008, p15). An alternate accelerator of tourism in the 1920s was the introduction of motor travel, which transformed Namibian rural society by easing access to greater distances (Gewalt, 2002; Staples, 2006). During this period, road travel to the Namibian interior was challenging at best, being plagued with deep sand, rocky terrain and occasional flowing ephemeral rivers (Massmann, 1983, p20). Travel by road, or later deemed 'overland' travel, gained momentum throughout the African continent with sponsored excursions from trails like Cape to Cairo (Staples, 2006; Pirie, 2011, 2013). The two major South African automobile associations began investing time and funding towards developing extensive road maps and information booklets to members circa the late 1920s initially to promote existing services but eventually marketing intentions shifted towards the stated title of tourism growth (Pirie, 2013). At this point, for logistical and financial reasons, the railroad was a lifeline for

visitation during the early stages of tourism in Swakopmund. Overseas tourism figures in 1924 counted 420 visitors rising to 560 by 1928 (Brietweiser, 2012, p16 citing figures obtained from town clerk in Windhoek).

3.2.3 Further tourism establishments

Conversion into domestic tourism occurred with efficiency, partly due to a prevailing infrastructure being adept at facilitating port activities, immigration, and entertainment for residents. Although the port activities had ceased, adaptation towards tourism was underway as supported by a brochure obtained at the Sam Cohen Library in Swakopmund produced annually for the December festive season. The pamphlet revealed in the 1923/24 season, planned events included 4 excursions to Walvis Bay, 6 athletic events, and 12 galas, balls and events (Swakopmund Publicity Association, 1923). The brochure listed 8 hotels, 4 boarding houses and 2 cafes. A year later in the 1924/25 festive season, sporting events increased to 10 events with a rise of 30 music concerts and ballroom dances (Swakopmund Publicity Association, 1924). The 1924 publication included 26 advertisements from local shops, hotels and businesses. The brochure provided an itinerary of what-to-dos for both locals and visitors, beginning with a thematic expression, “Since 1916 Swakopmund has rapidly developed into an up-to-date seaside resort. Due to its healthy climate it is undoubtedly the first seaside resort on the west coast” (Swakopmund Publicity Association, 1924). Interestingly, out of the 8 listed hotels in 1923, 4 are in existence today. A similar scenario considering multi-generational Swakopmund businesses exists from advertisements placed in a 1924 visitor’s brochure. Several recognisable brands presently operating offer compelling prospects underpinning the early foundations of the possible Swakopmund tourism cluster.

Town infrastructure developed throughout the 1930s accommodating rising influxes of inland December holidaymakers. An example of funding growth is in 1930, a meagre 800 South African pounds was earmarked for road construction from Windhoek to the coast compared to 1955 being equivalent to 23 million rands. Tarred road construction from Windhoek to Swakopmund was finally completed in 1970 (Massmann, 1983, p20). A creative endeavour

undertaken by local residents was the advent of a horse or donkey driven trolley system with rails prevailing throughout the town plagued with sand ridden roads. This system was eventually replaced with the initiation of harder salt roads allowing vehicles to roam freely and accommodating a growth of domestic tourism in Swakopmund. Entertainment options proliferated in the 1930s with 2 libraries, a cinema, swimming and tennis facilities, jewellery shops, bakeries and daily organised transport to and from Walvis Bay available for public use (Swakopmund Publicity Association, 1924; Brietweiser, 2012, p24).

Growing domestic visitation eventually exceeded hotel capacity and, in 1940, the Municipality erected a tent city on the edge of town endearingly named ‘Lappiesdorp’ which later became the municipal bungalows. The summer of 1950 already accommodated an estimated 1 056 visitors in the tents (Massmann, 1983, p33). Endowed with natural air-conditioning from the Benguela cold current as relief from excessive inland heat (Massmann, 1983, p32), multiple outdoor activity options and an agglomeration of hotels, restaurants and entertainment options propelled Swakopmund into being the most popular coastal holiday town on the west coast of Namibia (Massmann, 1983, p36).

3.3 Setting a deeper foundation for tourism growth

Tourism clusters are often characterised by a variety of complementary businesses providing diverse options for visitors that ultimately enhance the overall tourism experience (Porter, 1998, p81). Outside of an assortment of restaurants, activities and accommodation options, tourism firms require supplies and services to maintain standard operational procedures (National Development Plan 5, 2017, p30). Efficient tourism logistics in Namibia (Dobler, 2009, p117) hinge on overland and air travel for transporting visitors throughout the country, rendering vehicle upkeep of utmost importance. Engineers, mechanics, upholsterers, welders and electricians provide important services in the design and maintenance of tourism vehicles, planes and activity equipment that are vital for successful tourism operations. This section considers alternative contributions to the success of tourism in Swakopmund: the local mining

industry serving as a training provider of high level services, the town's proximity to world class natural attractions and the effects of political changes in the SADC region

3.3.1 Uranium mining activities

The Erongo region has endured the effects generated by mining booms that do not necessarily propagate positive economic and ecological impacts (Carpenter, 2009; Puigmal and Kallis, 2011). As a result, Namibian conservationists seldom concede the likelihood of positive externalities from local mining ventures to tourism, as reflected in Wassenaar (2012, p127) who investigated the uranium mining impacts on the Namib desert, "Although the central Namib is recognised as an area of enormous tourism and environmental value, its biodiversity and landscapes are under serious threat from mining". Environmentalists have adopted sceptical viewpoints towards the industry rooted in past occurrences where mining practices customarily clash with local interests triggering employee competition, escalating rents and ecological destruction (Pugimal and Kallis, 2011, p9; Conde and Kallis, 2012; Wassenaar, 2012; Dwyer, 2016) all complemented by all-inclusive objectionable track records of corruption and public deception (Wassenaar, 2012). Negative mining externalities congruently affect tourism industries on macroeconomic scales for example, a study performed by Dwyer et al. (2016) on the mining boom effects on Australian tourism found mining induces currency values causing a reduction in international tourism because of higher costs. A strong local currency increases prices for overseas visitors, leading to a loss in competitiveness. Conversely, there is another angle to mining externalities, as observed in Swakopmund, where economic welfares derived from Rossing's investment in infrastructure, training facilities and educational bursaries benefited local residents and businesses (Rossing social and economic report, 1991; Di Boscio, 2014, p111; Rossing Foundation, 2017; Schneider, 2018). According to Frenus Rorich in an interview, Rossing mine provided extensive training while expediting a build-up of mining service and supply businesses adept at the required services for a growing tourism industry (Rossing socio-economic report, 1991; Di Boscio, 2010).

Uranium in the Erongo region began in 1928 when Captain Peter Lowe and his wife discovered uranium deposits 70 kilometres outside of Swakopmund. Rio Tinto South Africa eventually acquired the exploration rights and the Rossing uranium mine began production in 1976 (Massmann, 1983; Puigmal and Callis, 2011, p15; Pietrzela, 2013, p6; Swiegers, 2014, p104). Subsequent to Rossing's inception, considerable investment ensued into municipality, housing and employee training (Rossing social and economic report, 1991, p7; Di Boscio, 2010, p125). The Rossing foundation was formed to extend education throughout Namibia, providing good faith and much needed education beyond the ailing public school system (Rossing Foundation annual report, 2017). Investment into the Cottage Hospital brought medical expertise into Swakopmund that is still in existence at the present and provides security for tour operators in case of medical emergencies (Christie and Compton, 2001, p5; McKay, 2016, p239). The town of Arandis was constructed adjacent to the mine, accommodating workers and a sub-section of the Namibian Institute of Mining and Technology (NIMT) designated to mining related education (Di Boscio, 2014, p111). Additional substantial contributions towards both national and regional growth of the Namibian economy included employment, tax revenue, and a nationwide training facilities while regional benefits of employment, training, higher wages, housing, investment into local NGOs, and creation of the subset of mining service and supply companies (Swiegers, 2014; Di Boscio, 2014, p96; Rossing annual report, 2017). As stated in Rossing annual report (1991, p9), "Rossing maintained its commitment to encourage development of secondary industries to create employment opportunities." Furthermore, Rossing provided necessary capital investment into infrastructure, training for skills eventually transferrable into the tourism industry, and financed educational bursaries, further advancing the skills of the local workforce (Rossing, 1991, p10; Di Boscio, 2014; Rossing, 2017). Considering investment into the Namibian Institute of Mining and Technology (NIMT) and the University of Namibia, Rossing represented an educational institution (Rossing annual report, 2017). Within this context, while revisiting Porterian cluster theories, Rossing's educational contribution into the tourism industry revives Porter's (1998, p83) inclusion of educational institutions necessitation to industrial clusters. Rio Tinto Inc.

maintained operations, supported local contracting and supply businesses while conducting training programmes spanning 45 years after initially breaking ground in the Erongo Region (Swiegers, 2014, p105).

3.3.2 A comparative advantage: world class parks and central location

Prior to addressing regional political change, the subsequent section touches upon Swakopmund's comparative advantages, these being local natural attractions, a mixture of cultures and proximity to three world renowned parks. The influential destination competitive models proposed by Crouch and Richie (1999) and Dwyer and Kim (2003) include regional comparative advantages as key components of the success of a tourism destination.

Swakopmund is conveniently located between two of Namibia's flagship attractions: Etosha National Park and Sossusvlei Dunes in the Namib-Naukluft Park. Visitation in Etosha and Sossusvlei are positioned the first and third in Namibia and according to the Ministry of Environment and Tourism [MET (2016)] with the Cape Cross seal colony, 120 kilometres north of Swakopmund, ranked the second busiest park in Namibia. All three align with prevalent Namibian travel genres: wildlife and desert scenery (MET, 2012-13; Kimaro, 2015) as supported by Suich et al. (2002, p5) mentioning Fillion (1994) how nature tourism was estimated 73% of reasons for visiting Namibia, asserting, "Within the nature tourism market, wildlife viewing is clearly the single most important activity". Turpie et al. (2005, p2) reports the findings in a Social Impact Assessment and Policy Analysis Corporation [SIAPAC (2003)] study citing that nature based tourism activities were the main reason for visiting Namibia. Tourism infrastructure is not always adequate to attract overseas tourism as Alberts and Barnes (2008, p15) suggest "Hospitality enterprises at the coast of Namibia are rarely an attraction on their own but depend heavily on the natural resource attractions in their surroundings." The postulation in this section touches on how proximity to globally recognised attractions benefits local tourism businesses in Swakopmund. According to Suich et al. (2002, p12) "Namibia is a booming destination in the international nature tourism market. Its diverse

range of wildlife species, fascinating landscapes and wide-open spaces attract tourists from all over the world".

Situated in the Namib – Naukluft Park are the notorious dunes at Sossusvlei. The area is a UNESCO world heritage site situated in a red dune-lined valley reaching heights of 406 metres, in the middle of the great Namib Dune Sea (Bridgeford and Lenssen, 2017). Complementing the sheer magnitude of the dune field, is a reddish colour renowned for extreme colourations occurring at sunrise, which is one of many reasons photographers regard the experience as a high priority in desert landscape photography alongside endemic biotic and vertebrae populations (Wassenaar, 2013 pp. 126-7). According to Suich (2002, p13), "Although Namibia's desert parks have interesting wildlife populations, scenic beauty, wide-open spaces and sand dunes are the main tourist attractions". In 2015 visitation to Sossusvlei was 82 100 establishing the park as the third busiest attraction in Namibia (MET, 2016). Eita and Jordaan (2014, p393) depict the dunes of Sossusvlei as being a unique factor of production, making touristic value measurements difficult to obtain due to the setting remaining unique to a specific destination. A study conducted by Barnes et al. (1999, p104) found "unique and unspoiled landscapes" to be an important attribute ranking highest in a field of attractions.

The north to south overland travellers overwhelmingly visit Etosha National Park before arriving in Swakopmund. Covering 22 700 square kilometres including the 4 590 km^2 Etosha pan, a Ramsar site being essential breeding ground for 340 for bird species (Berry, 1997; Aurecon, 2010; Nyakunu and Rogerson, 2014, p245; Nakanyala et al., 2015, p119) and the single largest population of black rhinoceros subspecies in the world (Hearn, 2003, p8; Christie et al, 2013, p218). In 2015, estimated visitation was 244 000 making it the busiest park in Namibia (MET, 2016) which is supported by Suzman (2004, p221) claiming, "Etosha National Park is the jewel in the crown of Namibian tourism." Established in 1907, Etosha is established game viewing area, with most visitors to Namibia expressing wildlife being a primary incentive for a holiday in Namibia (Turpie et al., 2010). The park has been a primary attraction in Namibia

since the 1920s (see Cadle, 1926 Denver-Africa Expedition) specifically with South African tourists (MET, 2012/13). Weaver and Elliot (1996, p2) report 47 guest farms operating in the vicinity of Etosha providing 290 rooms.

A principal allure of Namibia for overseas visitors is the wide open spaces and desert landscapes (Barnes et al., 1999; MET, 2012-13, p14; National Development Plan 5, 2018, p30) of which the Skeleton Coast epitomises. The 17 500 sq. km park extends from the mouth of the Ugab River to the Kunene River bordering Angola personifying remote and harsh landscape (Cooper et al, 1984). Alongside unforgiving landscapes, the region is notorious for desert lion (*Panthera leo)* roaming beaches in conjunction with desert elephants (*Loxodonta Africana)* and black rhinoceros (*Diceros bicornus bicornus)* inhabiting the eastern ephemeral river systems and slopes of the great eastern escarpments (Owen-Smith, 1984; Hearn and Loutit, 2000, p14-5; Hearn, 2003, p1, 8; Brown et al., 2013, p66-71; Ishida et al., 2016; Standar, 2019). The southern boundary of the Skeleton Coast National Park is located 196 kilometres from Swakopmund accessible by a well-maintained salt road (Google Earth).

The territory draws southern African and overseas visitors by way of harsh landscapes, rough fog-ridden beaches and unforgiving terrain for human habitation. Although the park does not rank in the top five for visitation (MET, 2016), it provides a solid marketing base for the entire coastal region and renowned for top class shore angling (Loutit and Penrith, 1982, p42; Barnes et al, 2010). Currently, accessible regions to day visitors travelling from Swakopmund to Damaraland en route to Etosha or vice versa (Mansfield, 2006, p35), is primarily void of shops and basic infrastructure excluding gravel roads and the occasional tyre repair stand. An absence of provisions ensures the lion's share of shopping and vehicle repairs occur at arrival-departure towns. In consideration of being located within a half-day drive from three well known national parks, the local tourism businesses benefit simply from being established in the middle of the three attractions. Although tourism products and services play a major role in attracting visitors and enhancing the tourism experience, consideration of locality is presented to better understand the success of tourism along the Namibian coast.

3.3.3 Political changing environment

On par with natural surroundings, political stability plays an important role in tourism growth. The SADC region has undergone various political transformations during the past 50 years which has, to an extent, prevented the tourism sector from maximising tourism numbers (Moonga, 1999, p63, 73; Rogerson, 2004, p185; Visser and Rogerson, 2004, p201; Kabote et al., 2013, p657) in line with increasing global travel trends (Signe, 2018). A substantial increase in tourism numbers occurred in the wake of free elections in Namibia and South Africa. Signe (2018, p2), reporting from a World Bank (2011) report, reveals tourism performance in Africa during in the wake of the global financial crisis of 2008-09 showed a 3.7% increase while the rest of global travel markets declined 4.3%.

Namibia has undergone three political handovers within 120 years; the third being independence in 1990 after 24 years of conflict between the South African forces and the Southwest Africa People's Organisation (SWAPO). Following Namibian independence were South African elections in 1994 and, in hindsight, the two events imposed a considerable impact on tourism in the entire Southern African region (Page, 1999; Visser and Rogerson, 2004). Prior to independence, regional tourism had been jaded by global sanctions against the apartheid government, political unrest in South Africa and Namibia, and knowledge deficiencies about the overall security of the region (Page, 1999, p11; Visser and Rogerson, 2004; Grundlingh, 2009, p107, 113). A destination's risk is an important consideration, especially to North Americans, in visitor choice when deciding on travel destinations (Eiliat and Einov, 2004, p1326; Naudé and Saayman, 2005, p379; Du Plessis et al., 2004, p10) confirming that regional political disruptions negatively affected tourism (Weaver and Elliot, 1996, p206; Visser and Rogerson, 2004, p201; Fourie, 2008, p5; Grundlingh, 2009).

The 26 year "bush" war in Namibia (see Tapscott, 1993; Stiff, "Nine days of war") adversely altered tourism by hampering security perceptions. This prevented the region from marketing the network of natural and cultural assets to overseas visitors (Green, 1977). Throughout the conflict, tourists in Namibia consisted of domestic travellers, limited overseas visitors and

South Africans (Green, 1979, p44; Massmann, 1983; Schalken, 2001, p3). An alternative perspective of the tourism industry being neglected as an integral part of the national economy during the war period is articulated in a UN sponsored report by Green (1979, p5) who, in his summary economic data from 1977-79, fails to include tourism as an independent industry. Green (1979, p44) discussing tourism and the dominance of "Europeans" (Colonialists), claims the industry will be depleted shortly after transition stating,

> "Whether the sectorial closure is a good thing or not is somewhat irrelevant, the personnel and institution creation (or partner negotiation) needed to preserve a significant tourism industry have much more urgent uses."

Shortly after independence, and in contradiction of Green (1979), Namibia experienced tourism growth from 160 000 in 1990 to 213 000 in 1991 (Weaver and Elliot, 1996, p209). Although consistent growth prevailed, domestic tourism product development was constrained to meet the demand of a narrow market seeing as the "black" population did not possess the means to afford holidays to the attractions (Tapscott, 1993; Page, 1999; Grundlingh, 2009, p118; Visser, 2016, p428). Tourism product diversification was low (Weaver and Elliot, 1996) mainly due to a tapered market (Page, 1999, p11; Schalken, 2001, p3) and partly to a lack of external actors conveying novel ideas to meet global sector demands of the tourism market. In an alternative perspective, benefits of the border conflict can be viewed as twofold in, a) the surplus of established attractions kept pricing low (Suich et al., 2002, p11), and b) the country escaped premature overexploitation leaving it untouched and unknown for the global tourism boom of the 1990s.

In proportion to Namibian independence, South African tourism experienced increases of overseas visitors after the 1994 elections, guided by the relaxation of travel warnings from foreign state departments and shifting visitor perceptions of the Apartheid era transition (Page, 1999; Visser and Rogerson, 2004; Grundlingh, 2009). The election of Nelson Mandela was, in a broad political sense, a monumental event that was not confined to South Africa (Weaver and Elliot, 1996). According to Visser and Rogerson (2004, p202), "The birth of a democracy

ushered in an era of explosive Mandela-inspired growth in overseas tourism." Furthermore, excluding Angola and, to an extent, Mozambique, the Southern African region had overcome political dissent. Looking at the overall recent political history, Grundlingh (2009, p115) reflecting Richter (1992, p40-1) summarises the African political conundrum asserting, "In the period from 1956 to 1985, there were 60 successful coups and 71 attempted coups in Africa. Additionally, there were 120 reported plots in which the military was involved." Moreover, a review of regional tourism statistics from 1990 until 2018 undertaken by Fourie (2008, p4) and the World Bank (data.worldbank.org), reveals tourism trends concurrently increasing succeeding elections. Supporting the reason is Figure 3.1 displaying tourism arrivals from 1990 to 2005 of the four high-ranking African countries being South Africa, Egypt, Morocco and Tunisia. Parallel to rising global tourism trends, the African industry forerunners experienced increasing numbers during this period excluding ripple effects from the 2008 global financial crisis (PwC, 2012, p11; Signe, 2018, p3). Fourie (2008, p2) considers that because North African countries are closer to Europe, visitation models may differ from sub-Saharan subjects.

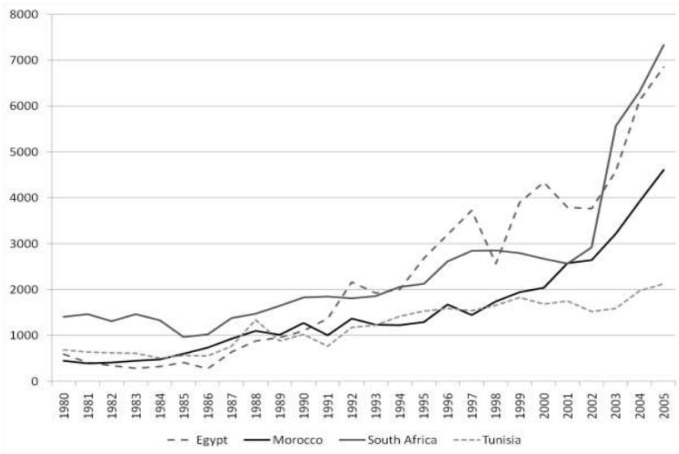

Figure 3.1 Africa's top four tourism arrival countries 1990 to 2005

Source: Fourie (2008, p4)

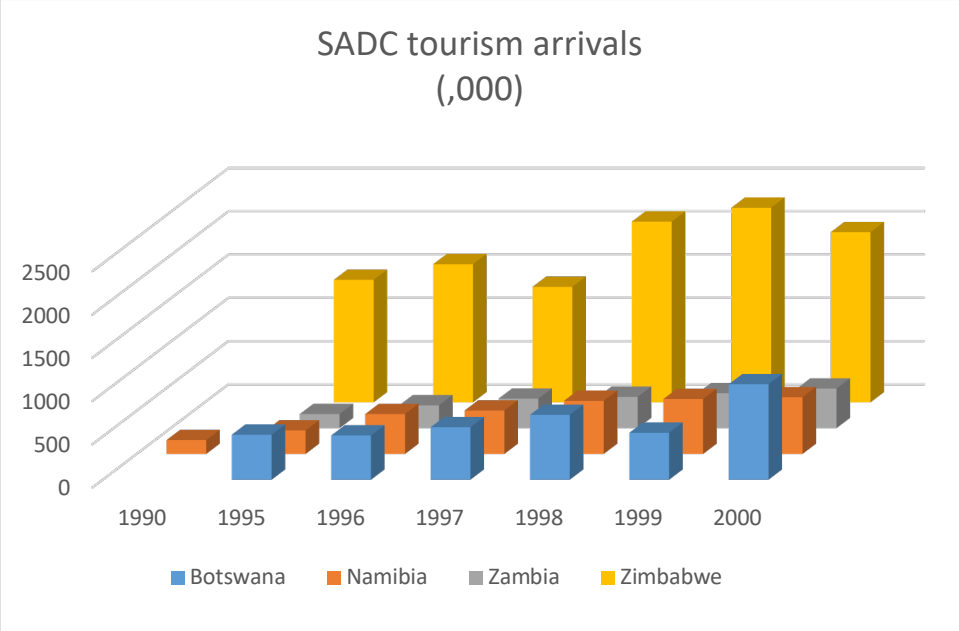

Figure 3.2 SADC tourism arrivals 1990 to 2000

Source: data.worldbank.com (2019)

Rising tourism arrivals from 1990 to 2000 occurred throughout the SADC region demonstrated by Figure 3.2 displaying regional tourism figures for Botswana, Namibia and Zambia. Stability in South Africa created regional spill over effects in multiple perspectives (McGowan, 2007, p28; Mbaiwa, 2007, p413; Jere et al., 2019, p266). For starters, a rising middle class amongst the black population creates an alternative market for Namibia (Christie et al., 2013, p2). Furthermore, in recessionary conditions or periods of economic uncertainty, the wealthier middle class South Africans are more prone to patronise nearby Namibia with similar culture, language and cuisine (Weaver and Elliot, 1996, p213).

3.4.1 The German market and early anglers

The colonial connection between Namibia and Germany has been maintained throughout the 20th century and, although commonly grounded in family visits, the German market preference for Namibia was rooted in adventure, history and a common language (Schalken et al., 2001, p4; PwC, 2012, p20). Buckley (2013, p225 -27) finds “commercial value in colonial-era nostalgia” suggesting marketing opportunities aimed at nations with past colonising histories. Preceding the introduction of English into the German school system, non-bilingual German

travellers relied on translators rendering travel in South Africa, Zimbabwe and Botswana challenging. With strong cultural ties, German schooling and language fluency, Namibia proved a practical safari destination for the German tourism market (MET, 2012/13; 2015; 2017). Swakopmund functioned as an ideal stopover with the lure of the Skeleton Coast and Namibia's largest percentage of German speaking residents. As German nationals visiting Swakopmund regularly commented how the town appeared 'more German than Germany.'

South African nationals contribute to SADC region visitation with a long-standing history of regional exploration (Pirie, 2011, 2013; Christie et al., 2013). Namibia was considered part of South Africa for more than 50 years with far-reaching business, family and cultural ties that have resulted in consistent flow of South African visitors (Alberts and Barnes, 2008; Pricewaterhouse Coopers [PwC], 2012, p19; Pirie, 2013, p86). Moreover, with the majority of Namibian roads remaining gravel or dirt, regional visitors perceived the vast territories as being unexplored, raw nature and, above all, a challenge to navigate across (see South African Voortrekker history; Pirie, 2013). Luring South Africans to Swakopmund were the comforts of urban luxuries and the abundance of fish caught along the Skeleton Coast (Turpie et al., 2005; Van Zyl, NACOMA, 2005, p12, 28). South African anglers flock to the Namibian coast to participate in the hunt for massive Silver Kob (*Argyrosomus inodorus*), west coast Steenbras (*Lithogn athus au reti*), Galjoen (*Coracinus Capensis)* and the occasional shark (Nghipunya, 20012, p3). Placing the importance of angling on the Namibian coastline, a 2003 study undertaken by SIAPAC reported 8% of visitors regarded fishing as a primary incentive for visiting Namibia (Turpie et al., 2005, p2). With limitations in accommodation and shopping options, there is scarce opposition that Swakopmund benefits from angling tourism. The input into the accommodation sector was measured by Ngipunya (2012, p6) finding 49% of the respondents were from the SADC region spending N$144 974 202 on accommodation in 2011. Although the small enclave of Henties Bay, 70 kilometres north of Swakopmund, is regarded as the fishing "Mecca" of Namibia, Swakopmund benefits from this tourism sector in providing alternative options for angler's family members, supplies and relief from the harsh

conditions of the predominantly flat wind-ridden Skeleton Coast. Of the fishing permits issued for the season, measured by Ngipunya (2012), 47% were issued in Swakopmund.

3.4.2 Growth of regional tourism: Zambia, Zimbabwe and Botswana

Persistent visitation from South Africa concurrently aligned with positive SADC regional tourism growth trends in the late 1980s through the 1990s (Page, 1999; Moonga, 1999; Christie and Compton, 2001; Mbaiwa, 2003, p449-50; Rogerson, 2004; Muchapondwa and Pimhidzai, 2008; World Bank Zambia report, 2011), where increasing visitation spilled over into Namibia from three neighbouring countries: Zambia, Zimbabwe and Botswana. In this circumstance, tourism growth can be seen as a combination of political stability, increasing interest from overseas markets and, primarily, a repackaged travel phenomenon known as 'overlanding' (Rogerson, 2004, p186). In this respect, overlanding has been a part of African travel expeditions since the advent of the motor vehicle (Pirie, 2011, 2013). A venerated route derived from Cecil Rhodes' all Africa vision, is the Cape to Cairo journey by automobile, which was first completed by Major Court Treatt's two car entourage from September, 1924 to January, 1926 (Merrington, 2001, p357; Pirie, 2011, p41). Overlanding in context of this section is a group excursion defined by Slocom and Backman, (2011, p34) as "a form of self-contained travel in the back of a truck or bus." According to Nicholas van Edmond (2007, p75), overland tourism contains similarities of conventional bus tours except the vehicles are often converted trucks and the accommodation includes tented camping allowing the tours to go "deeper" into regions (see Sarmento and Henriques, 2009, p289; Newsome-Magadza, 2020). Overland travel style typically parallels nature-eco-adventure tourism (NEAT) although much debate arises with pinpointing defined boundaries and codes of conduct particularly concerning "ecotourism" (Buckley, 2000, p438).

Overland truck travel reached Africa in the early 1980s with excursions such as Dragoman, departing Europe in the summer of 1982 en route to Nairobi (www.dragoman.com). Similar tours subsequently grew during the decade as mass-market adventure travel shadowed global economic movements shifting away from Fordism mass produced holiday packages and into

more specialised production in the form of adventure travel (Sarmento and Henriques, 2009, p284; McKay, 2016, p2). In the case of African tourism, production innovation translated to accommodating a market that "must see themselves as travellers and not tourists" (van Egmond, 2007, p77). Progressive tourism marketers reacted to a resurgence in interest of the Cape to Cairo route winding down the east African "British empire" (Pirie, 2012). In early stages, and due to the notoriety of the Serengeti, Ngaruroro Crater and Zanzibar, initial interest from the operator's perspective was placed on the East African leg of the journey (M. Black, personal communication, September, 2019). African overlanding, "in the early days of overland travel" in Africa when adventure held priority, itineraries conducted 'vague at best' itineraries (www.africanbudgetsafaris.com/blog, 2014; personal contact with Murray Black). The extended voyage eventually split over the course of the first decade allocating Victoria Falls in Zimbabwe as the midpoint.

3.4.3 The first overland tourists in Namibia

Research in the subsequent section is scarce in that, excluding personal interviews and intimate business records of the participants, documentation of the events is scarce. Pinpointing an exact arrival of adventure tourism to Swakopmund and Namibia is problematic due to a wide variance in exactly what constitutes adventure tourism that is deciphering locals camping, fishing and sliding down dunes and commercial operators. Furthermore, a long-standing undocumented chronology elucidating adventure tourism leaves uncertainty in scientific terms. Therefore, the broad-based source of the events is personal contact with early participants. Adventure tourism encompasses long range overland tours or guided nature-based, adrenaline and cultural activities. To simplify a definition of adventure tourism, UNWTO (2014, p10) cites the Adventure Travel and Trade Association's (ATTA) criteria "a trip that includes at least two of the following three elements: physical activity, natural environment, and cultural immersion". For clarification purposes, this research labels long range adventure travel as 'overland' and day tours as 'activity' tourism.

Adventure tourism-based overland tours reached Namibia in the late 1980s as trip planners identifying the region as vast, unspoiled and unexplored. The pre-existing tourism infrastructure built up from decades of domestic and SADC regional tourism assisted long-haul tour operators bestowing groups with organised campsites and affordable park pricing by international standards (Black, M. *Interview by J. Sarro.* September 20th, 2019). Initial segments of mass adventure travel incorporated bush camping on a regular basis to lower trip costs and provide the guests with an authentic African experience (van Egmond, 2007, p75). Foregoing adventure-based camping travel was a part of Namibian culture so a universal acceptance of wild camping had been established earlier by South African and domestic travellers enabling overland tours to participate in the tradition without hostilities (Schalken et al., 2001, p3). This, according to Murray Black, an overland driver for Kumuka, was fundamental to initiating overland travel into Namibia. Mr Black claims it was Gary Hayes, contracting tours from Acacia Overland Company, who first focused on Namibia in the late 1980s and Mr. Black followed suit a year thereafter (M. Black personal communication, 2019). According to Murray Black, proximity to the world-renowned Okavango delta and a good road infrastructure facilitated movement into Namibia. To his clients, Namibia was a vast and unexplored country.

3.4.4 The birth of adventure activities in Swakopmund

Newly infiltrating overland adventure-seeking itinerants introduced a demand for more than just a view of the Victoria Falls or the dunes bordering Swakopmund, as mentioned by Giddy and Webb (2017, p41), “People are no longer in awe of the sublimity of nature, but feel the need to directly interact, engage, and, in many instances, overcome the obstacles provided by the natural environment in different ways." Semi-intrepid travellers aspired to raft down the Zambezi, swim in Devil’s Pool on top of Victoria Falls and ride down Namib Desert sand dunes on flat Masonite boards at 80 kilometres per hour. This class of adventure travel market is defined by Buckley (2007, p1428) as being “guided commercial tours, where the principal attraction is an outdoor activity that relies on features of the natural terrain, generally requires

specialised equipment, and is exciting for the tour clients." Eventually, as adventure travel reached Victoria Falls, a discernible change in demand was spotted by a steadfast group of New Zealanders who had rafting experience in their native Queenstown, professed as being the re-birthplace of modern adventure activities (Cater, 2006b, p319; Buckley, 2010, p35). The example set in Victoria Falls was to have a future impact on activity tourism across sub-Saharan Africa including Swakopmund.

Affecting the supply-side of tourism, overland journeys venturing southbound through Namibia onward to Cape Town brought the adventure market into Swakopmund where only limited activity options were available outside of fishing (M. Black, 2019). Local entrepreneurs reacted with additional input from expatriate residents to accommodate the shift in demand by transforming traditional and club-based activities into adventure tourism businesses. Porter (1998, p84) mentions, "Individuals working within a cluster can more easily perceive gaps in products or services around which they can build businesses." This was the case with a key role player advancing activity tourism in Swakopmund, Chris Van der Nest, a seasoned backpacker from South Africa, allegedly noticing the activity gap in the local market while working at JJ's Hotel in Swakopmund. Mr van der Nest, Beth Sarro and Frenus Rorich promptly opened up Alter-Action Sandboarding and the Alternative Space Backpackers (Watkin, 1998; Rorich, F., Sarro, B. *Interview by J. Sarro.* October 11, 2019; www.alter-action.info, 2019). Shortly thereafter, Jeff Welsh, a hotel owner and entrepreneur, launched Desert Explorers quad biking operation along with Fagan's Pub explicitly aimed at overland travellers. Three local Swakopmunders and ex-Rossing employees converted a skydiving club into Ground Rush Adventures while local entrepreneurs experimented with other options such as jet skis and land yachting. A booking office was opened in front of Fagan's Pub with promotional activity ongoing into busy evenings often with the activity operators being present to accommodate bookings.

From the demand side, overlanding introduced an eccentric style of visitor (in comparison to domestic tourists) consisting principally of overseas travellers necessitating a diverse or

broadened understanding of the clientele. Expediently a small contingent of backpackers and well-travelled locals with previous experience in the style of adrenaline activities occurring at Victoria Falls, recognised the potential in adrenaline activities in the surrounding environment. Adventure tourism products found in Swakopmund exist elsewhere. Therefore skydiving, sandboarding and quad biking were not innovations of the new wave of entrepreneurs, but rather desert adapted activities specifically aimed at the adventure tourism market (Out There Adventure Guide, 2002, p120; Buckley, 2010, 2007; McKay, 2012, p33; UNWTO, 2014, p13; www.skydivelongisland.com; www.sand-boardingnation.com). A prime example is the modifications made to snowboards for riding dunes. Furthermore, local entrepreneurs identified the town's provincial distinctiveness from the rest of Africa with the South Atlantic fog dressing faraway Germanic buildings with existing infrastructure befitting tourism (Watkin, 1999). Soon thereafter, Swakopmund became endorsed as an out-of-the-way German town in the middle of the Namib Desert turned into an adventure activity hotspot where it was achievable in a day to slide down dunes at speeds up to 80 kilometres per hour, , skydive and ride over 100 metre dunes on a quad bike (Welte, 2005). To facilitate timing due to weather and duration of visitor stays, activity operators needed to cooperate with scheduling, marketing and competitive behaviour necessitating cooperation between individual operators. In essence, market demand did not merely shift from traditional sightseeing into activity-based products, expectations intensified as ambitious adrenaline seekers sought to maximum experiences with minimal disruptions. Tourism firms collaborated in meeting the demand for visitors to squeeze two to three activities in a single day.

3.5 Millennium growth in Southern African and Namibian tourism: 2000 - 2010

In this section, tourism growth in southern Africa is juxtaposed to Namibian (local and regional) tourism expansion. Economic growth in both mining and tourism during the millennium decade shaped the current condition of the tourism industry in Swakopmund, especially from heavy-sided investment in commercial real estate and increased traffic into touristic areas in the Namib Desert. In response to widespread global attention towards the tourism industry, private

sector investment into tourism ventures escalated. Meanwhile, burgeoning regulatory guidelines changed operating the protocols of a once simple “fun” oriented industry. These guidelines aspired to ensure global benchmarked operating standards for tourism entities. This section matches Namibian tourism growth to SADC and similar tourism regions to understand the forces of growth that were not entirely a result of the local tourism industry. Subsequent to presenting global tourism trends, consider various segments of visitors with the intention of deciphering the impact of tourists, other than cross-border shoppers and family visits. on Swakopmund’s industries.

3.5.1 Adventure tourism and regional tourism growth

Paradoxically, the uranium mining boom moderately affected tourism in Swakopmund due to continued global growth trends, economic progress in bordering SADC nations and rising interests in Southern Africa from overseas markets (Christie, 2013, p2; Lui and Mwanza, 2013, p32). The escalation of tourism arrivals was not isolated to Namibia. In fact, a look into tourism influxes in neighbouring SADC nations reveals similar trends in growth during the millennium period.

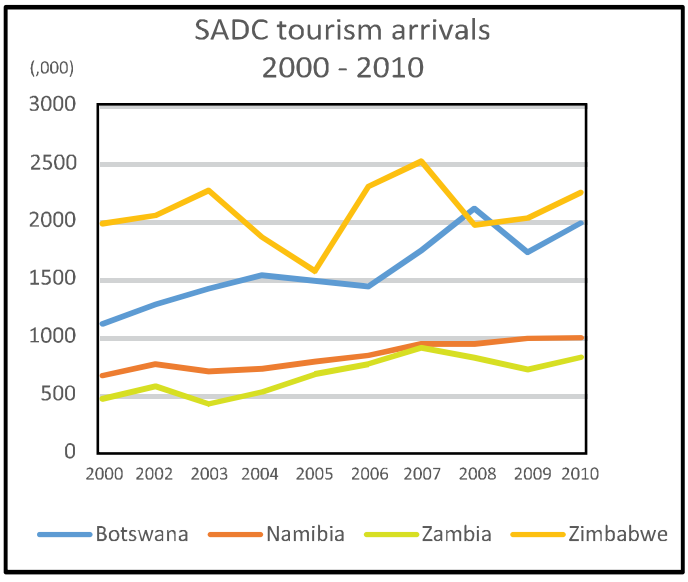

Figure 3.3 SADC tourism arrivals 2000 – 2010

Source: data.worldbank.org (2019)

Demonstrated by Figure 3.3, rising visitor numbers remained persistent, excluding 2009 where the global financial crisis affected tourism industries world-wide (PwC, 2012, p11; www.data.worldbank.org; UNDP, 2010, pp. 39-40). The World Bank records reflect an overall rise in tourism globally as illustrated by regional tourism increases (excluding Zimbabwe) in Figure 3.3 and in Figure 3.4 comparing Namibia with related adventure tourism industries. Figure 3.4 considers well-known nature-based destinations in disconnected regions (separate continents) demonstrating continual tourism arrival increases. The selected locations are major European and North American eco-touristic destinations that were awarded from the World Economic Forum's Travel and Tourism Competitive Index (TTCI) presented by Christie (2013, p32) compilation of data from the with the purpose of measuring sub-Saharan African nations against world-wide competitiveness. The addition of Iceland and Oman represent emerging nature-based destinations within proximity to densely populous middle to higher income tourism markets, being Europe and the Middle East.

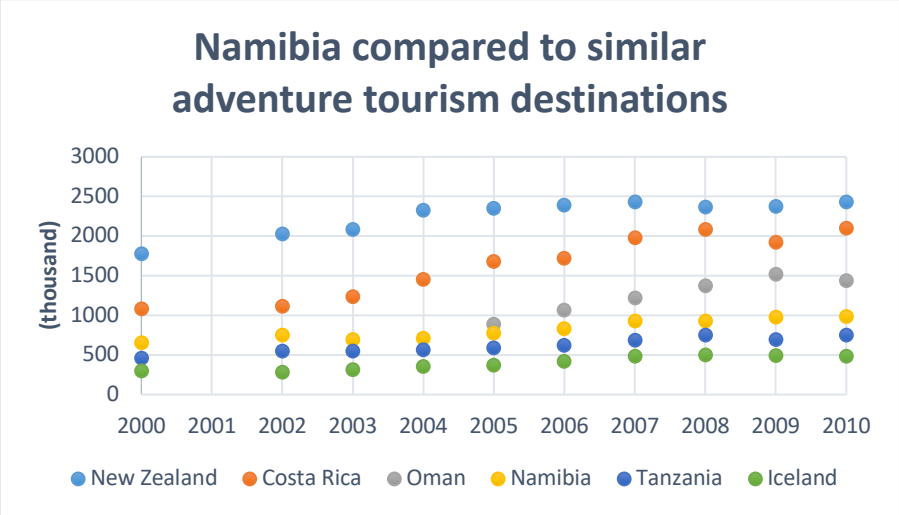

Figure 3.4 Comparison of similar adventure tourism destinations

Source: data.worldbank.org (2019)

As global adventure tourism trends indicated increasing volumes, regional economic improvements in bordering nations impacted tourism volumes in Namibia. Tourism arrivals climbed from 670 497 in 2001 to 984 099 in 2010 with the lion's share of visitors originating

from African nations (72.6%) dominated by Angola and South Africa (MET, 2010, p11-12; Signe, 2018, p11). A closer look into explicitly who made up arrivals and what were visitor intentions is warranted to better understand potential impacts into the Swakopmund tourism industry. According to MET (2010), a profusion of movement across the northern border posts are refuted to be for tourism purposes, although historically supported by a MET (2004, p27) report finding in 2003, 52.7% of arrivals in the north eastern border posts were visiting friends and relatives. The task of deciphering leisure tourists - or those visiting parks, staying in hotels and purchasing activity experiences - from visitors with alternative interests becomes complicated without qualitative investigations as in the case where, in 2012, 95% of Angolan nationals entered through the northern border posts on tourist visas. It is widely known amongst northern residents that many Angolans work, shop and visit relatives on a regular basis in Namibia (Nangula, 2005; Dobler, 2009).

December 2019 witnessed several Angolans crossing the border 2 kilometres east of Rundu pursuing construction work in Namibia, which is documented by Brinkman (2019). Contrarily, visitors originating from South Africa exhibit dissimilar objectives to their northern counterparts. This is supported by MET (2012-13; 2015) tourism exit surveys aligned with Signe (2018, p11) mentioning “South Africa dominates in intra-regional travel, accounting for 47 percent of visitors”. Dissimilar to the northern borders, MET (2012-13) shows arrivals at southern border posts and Hosea Kutako International Airport with estimates touching on 33% and 20.5% respectively. The survey demonstrates holidaymakers intending to visit Swakopmund is established by MET (2012-13, p21) to exceed 50% of total holidaymakers visiting Namibia. However, alternative arrival categories must hold esteem as Naudé and Saayman (2005, p381) point out, entrants visiting friends and relatives can be considered a valuable aspect of tourism. Looking at the impact of Angolan spending in Oshikango, Namibia where one observed similar occurrences recorded by Dobler (2009, p121) witnessing, “In the offices of the large warehouses, it is possible to see people paying for truckloads worth more than US$100 000 quite literally out of their pockets”.

Table 3.1 Namibian international tourism arrivals 2005 to 2010

Nationality	2005	2006	2007	2008	2009	2010	AAG %
Africa	601,737	628,588	690,148	676,444	723,762	714,287	3.5
Europe	146,361	166,972	194,605	204,115	206,496	219,070	8.4
N. America	11,979	16,325	19,342	26,346	24,940	22,793	13.7
Other	17,811	21,459	24,819	24,205	24,980	27,948	9.4
Total	777,888	833,344	928,914	931,110	980,178	984,098	4.8

Source: Tourists Statistical Report 2010, MET

Recognising the motives of northern Namibian cross border movements according to Brinkman (2019, p48) finding, “Often they have relatives living in Angola, Namibia, Zambia and South Africa, and their visiting patterns and connections are highly complex”. An auxiliary clarification of visitor’s intentions is provided by MET (201 -13) discovering 39% of total surveyed were holidaymakers of which merely 10% originated from Angola; the findings are consistent with previous investigations placing Angola highest in total arrival figures albeit representing lower percentages in touristic intentions (MET, 2004; 2010; Nangula, 2005). Comparing Angola with just 10% of total tourists - visiting purely for holiday reasons - South Africa was 36% and Germany was 17% underpinning the value of the two nations for tourism revenues in Namibia (Novelli and Hellwig, 2011, p210). Considering Table 3.1, corroborating tourism increases from overseas and South African markets correlates to rising tourism figures for Namibia. Reviewing tourism figures from 2005 until 2010, total tourism arrivals climbed an average of 4.8% per year. Considering Europe averaged 8.4% and North America 13.7% (MET, 2010, p11), growth in overseas tourism outperforms total average local figures.

Table 3.2 Purpose of visit by country of origin

Country of Residence	Total *	Holiday *	VFR *	Business *	Medical *	Other *
RSA	28.3	36.3	35.7	19.2	0.1	6.2
Botswana	3.6	0.8	6.3	4.9	1	9.5
Angola	35.8	10.2	37.7	51.4	98.9	69
Zimbabwe	4.1	0.8	3.2	10.9	0	2.3
United Kingdom	1.9	3.4	0.6	1.5	0	0
Germany	7.7	16.6	3.4	1.8	0	0.1
France	1.4	3.1	0.2	0.4	0	0.3

Italy	1.1	2.7	0	0.2	0	0
USA	1.6	3.3	0.6	0.7	0	0
Other	14.6	22.7	12.2	9.2	0	11.7
Total	100	100	100	100	100	100

* values in percentages

Source: MET: Millennium Challenge (2012-13, p9)

Table 3.2 illustrates a breakdown of visitor intentions by nationality, further untangling holidaymaker percentages from alternative motives of entering Namibia. With the exclusion of South Africa, primary interests exist in reasons other than holidays. Another verdict of the MET (2012-13, p18) report states average length of stay was nearly twice that of bordering nations, again highlighting the value of overseas arrivals pertaining to tourism. A precise measurement for the division between non-holidaymakers is unclear, for example business travellers visiting a game park for a weekend, the figures illustrated in the above charts indicate rising tourism arrivals in Namibia. The overall value of interpreting arrival motives to tourism industry in Swakopmund is in estimating accurate percentages visiting the coast and what are visitor's intentions. MET (2016) estimates nearly half of tourism arrivals pass through the central coast (also see: Turpie et al, 2005; Alberts and Barnes, 2008).

3.5.2 Economic crisis in Zimbabwe

Overlapping the tourism boom in Sub-Saharan Africa was an onslaught of political and economic crises in Zimbabwe, a previous frontrunner in sub-Saharan African tourism arrivals from 1996 to 2000 (Naudé and Saayman, 2005, p368; www.tothevicfalls.com) with tourism growth averaging 17.5% from 1989 to 1999 (Abel and LeRoux, 2017, p131). The economic misfortunes of Zimbabwe were accelerated by three chain-linked events being, a) failed attempts in redrafting the constitution, b) an immediate "fast tracking" of land reform after the failure of the new constitution and c) the opposition party winning a considerable number of seats in the parliamentary elections (Chaumba et al., 2003; Muchapondwa and Pimhidzai, 2008, p2). Rising political instability, the threat of nationalisation of private entities, fast tracking farm reforms and international sanctions cast a shadow of uncertainty over the security of

Zimbabwe (Zhou, 2018, p8, 13). Adding to policy misfortunes, the Indigenous and Economic Empowerment Act, initially aimed at the mining sector, included tourism businesses in threats of future mandating 51% ownership by previously disadvantaged (pre-1980) indigenous Zimbabweans (Makoni, 2014, p164).

International tourism played an important role in the Zimbabwean economy (Zhou, 2018), which was sliding at an average rate of 4.5% from 2000 until 2005 (Muchapondwa and Pimhidzai, 2008, p2-3; www.tothevicfalls.com). At the helm of regional tourism, visitation at Victoria Falls shifted across the Zambezi River to Livingstone, Zambia as local tour operators relocated across the river escaping unrealistic regulations and hyper-inflated goods (Rogerson, 2004; Ngomahuru, 2008, p9; Zhou,2018, p15-16). In hindsight, instability in Zimbabwe remains a catalyst sending overland tours to ride on the coat-tails of Namibia's locational advantages, infrastructure and political stability (Rogerson, 2004, p186). So ultimately the transgressions of Zimbabwean policies are viewed as bilaterally benefiting both tour operators and the Namibian economy.

3.5.3 Continuing growth in Overland Travel

Global attention towards Namibian adventure travel delivered multifarious tourism segments consequentially impacting tourism firms vis-à-vis opening opportunities to diversify routes and focus marketing efforts into specialised categories of adventure travel. Replacing backpackers of the past, this contemporary breed of high value travellers is willing to pay premium prices for unique, adventure-related experiences spending an average of US$3 000 per person on 8 days of travel (UNWTO, 2014, p10). Tours aimed at bicycle enthusiasts, hiking and cultural experiences sprouted alongside conservation-oriented voluntourism projects (see www.voluntourism.com; UNWTO, 2014, p15). Interviews with participants in regional tourism; Jackie Burton, Murray Black and Beth Sarro mutually state substantial growth during 2004 to 2010 was positive in their respective business volumes. Alter-Action stand-up sand board quiver increased from 17 boards in 2000 to 44 in 2010 notwithstanding broken equipment. Chameleon Safaris based in Windhoek ran 3 vehicles in 2000 and, by the end of 2010, there

were 10 vehicles in operation (J. Burton, personal contact, December, 2019). Overland companies such as G-Adventures, Nomad and Acacia Safaris split routes, for example the Vic Falls to Cape Town, into two legs with Windhoek being the midpoint. Subdividing routes complimented emerging sub-Saharan tourism markets consisting of travellers with interests in adventure and cultural experiences but often hindered by career-driven time restrictions. Long-haul tours from Nairobi or Vic Falls were unattainable to the modern adventurer, so tour planners were able to drop off and collect passengers in Windhoek on their way to Cape Town. This convenience offered travellers more options and benefited overland companies with increased revenue from slicing long-haul, value for kilometre tours into shorter and slightly more expensive versions. According to Beth Sarro, overland tourists had less time but more money to spend at each stop.

3.5.4 Rise in tourism agencies in Namibia

Growth in the private tourism sector engendered pleas for upgraded management and monitoring organisations beyond the duties of Ministry of Environment and Tourism was answered by a mixture of tourism related entities (Novelli and Hellwig, 2011, p215). Porter (1998) alongside Dwyer and Kim (2003) emphasise the importance of government tourism agencies towards a destination's competitive advantage in an ever globalising tourism market. Assisting MET with matters concerning tourism were a handful of privately run organisations and international NGOs regularly collaborating with international entities (Rogerson and Nyakunu, 2014, p9). Five prevalent associations (Tour and Safari Association of Namibia (TASA); the Hotel Association of Namibia (HAN); the Federation of National Tourism Association (FENATA) and; the Coastal Tourism Association of Namibia (CTAN) are examples of the comprehensive exemplar of privately operated organisations in Namibia. These organisations facilitated basic but crucial tasks for tourism firms, such as; working visas for overland drivers; obtaining road carrier permits for foreign overland vehicles and providing assistance to navigate through challenging situations involving larger-scaled business

acquisitions and interest driven ministerial policies. The Namibian Tourism Board (NTB) is touched upon, being a governmental enterprise set up to manage the tourism industry.

Founded in 1989, TASA is an independent tourism-based organisation with a vision to "encourage the development of responsible tourism in Namibia, ensure standards and reliability in the Namibian tourism industry and further the common interests of Namibian Tour Operators" (tasa.na, 2019). Organisational priorities concern maintaining professional standards while providing a communication platform between tourism actors and government agencies. TASA provides immigration services facilitating foreign overland guides and drivers' working visas which is vital for the long-haul overland tours travelling through Namibia onward to other SADC nations.

Shortly before TASA, the Hotel Association of Namibia (HAN) was established with 16 original members. Tasks were to consolidate the complete spectrum of the hospitality sector and provide an "umbrella body" promoting set standards, training and government liaison for the overall purpose of strengthening tourism in Namibia. To date, HAN is well known as the most effective agency for providing statistics while being proactive in tourism issues relating to the government. Current membership falls just under 400 (hannamibia.com, 2019) HAN is regarded amongst hoteliers and tour operators alike as being the most effective privately run tourism agency proven by years of statistical data collection and aggressive solution-oriented actions. HAN is foremost proactive in the Airbnb conundrum and recently was involved in a Swakopmund street hawker issue affecting local hotels.

Another parasol organisation is the Federation of National Tourism Association (FENATA) encompassing twelve tourism associations mostly representing hospitality, car rental agencies and tour operators (Nyakunu, 2013, p40; www.namibiantourism.info/fenata, 2019). The overall goal of the organisations is to bridge a long-standing gap between governmental agencies and the private sector (hannamibia.com, 2019: Rogerson and Nyakunu, 2014). Possibly, the

organisations crossed over into conservation, labour issues or wherever conflicts arose within the tourism sector.

According to Christie et al. (2013, p31), “The government’s primary role in tourism should be to develop the strategy for the sustainable growth of the sector, to formulate policy, to create the conditions for public investment, and to provide an enabling business environment to complement private sector activity.” Formed in 2000, the Namibian Tourism Board (NTB) is the government’s flagship agency to deal with the monitoring of industry standards, compliancy to rules and regulations and overseas destination marketing for Namibia (NTB, 2015). Initial actions were focused at establishing a Namibian brand overseas and regulating the tourism sector by dividing the industry into 10 categories (NTB, 2000, p8). Offices were set up in London and Berlin, strictly for marketing purposes, with plans for expansion into the Asian and North American markets. Regulation in the lodging sector was the first step applying 2% bed levies to all levels of accommodation businesses. Therefore, initially, variances in regulations between backpacker lodges and high end hotels proved minimal (NTB 2000). Rogerson and Nyakunu (2014, p10) elaborate further on issues of policy differentiation towards Namibian businesses in tourism by stating “Although SMEs are a vital component in driving tourism in Namibia, they are seemingly not involved in the initial planning, formulation and implementation of the tourism policy.” In a personal interview with Jackie Burton, owner and operator of Chameleon Safaris in Windhoek, she expressed core support for the NTB in that tourism mandates a regulatory board to keep industry operational standards high while protecting the interests of Namibian tour companies. A general consensus in Namibian tourism circles is that the NTB has fallen far short of the initial destination marketing projections and has become yet another state-owned enterprise (SOE) chasing tariffs while steering askew from promises due to underfunding (J. Burton personal contact December, 2019: B. Sarro personal contact, April 2019). This observation is supported by MET (2012-3, p45) where, in 2002, 6.7% of visitors retrieved information from the NTB and in 2012/13 the figure fell to 5.6% using the SOE’s services. Although tourism requires government support to operate efficiently

(Christie and Compton, 2001; Nyakunu, 2013; Christie et al., 2013, p34) the NTB has suffered greatly from mismanagement issues similar to other Namibian SOEs.

On the coast of Namibia, the Coastal Tourism Association of Namibia (CTAN) was formed to amalgamate tourism businesses on the coast and collaborate with larger agencies in Windhoek. An example of a challenge in which CTAN was entangled was the 2005 Dune-belt Association's fight against privatisation of the National West Coast Recreation dune field in between Swakopmund and Walvis Bay. As with many concession plans viewed negatively by the general public, takeover of the dunes fizzled into dust. The overall issue with the organisation is that members eventually perceived CTAN as having little or no influence with government as depicted during the most recent uranium rush (B. Sarro personal communication). Several large-scale environmental challenges affecting the tourism industry were unfortunately lost to organisations, including CTAN. The battle was one sided in that ministries supporting mining generally possess greater influence in the decision-making process. Worthy of noting how, with the economic impacts of tourism in Swakopmund, as of May 2020, an officer or department dedicated towards the tourism industry is overlooked.

In addition to the five tourism organisations, a multitude of NGOs and locally formed associations exist throughout Namibia representing specific fragments of conservation and community-based tourism. Communal land conservancies (NASCO, 2008), international organisations such as the UN and USAID's Millennium Challenge have contributed greatly towards community-based tourism, wildlife conservation and the upgrading of tourism infrastructure (see Millennium Challenge, Save the Rhino Trust, Integrated Rural development and Nature Conservation; Novelli and Hellwig, 2011, p209-10). A relatively new player in tourism organisations is Destination Swakopmund, a destination marketing (DM) agency aimed at expanding the local tourism market via trade shows, online travel platforms and partial sharing of marketing expertise. Membership fees vary depending on the desired level of representation as the organisation is entirely funded by private donors. Although it is too

early to register outcomes of the DM, the group has been proactive in conveying information pertaining to industry promotion and empowerment.

3.6 Current (2010-2019) status of Namibian tourism

Tourism arrivals in Namibia from 2012 to the present followed overall growth trends, peaking in 2017 reflecting analogous developments world-wide (UNWTO, 2014, p10; ATTA, 2015; WTTC, 2018). From the demand side, the industry experienced a rise in self-drive tours; expansion of overland adventure tourism products and routes; and an overall rise in visitation to Namibia and the SADC region (Lapeyre, 2011). The supply side of tourism developed in the overall number of tourism related businesses, especially in the accommodation and tour operator sectors (www.namibiatourism.com). Offsetting occupancy rates is the wave of 'shared economy' self-catering units otherwise known as Airbnb rentals. This section presents current tourism statistics and reviews changes in the tourism market between 2010 and 2019. The result of the weight of demand-side market changes is increased foreign tour operator presence, a further investigation follows in Chapter 4.

3.6.1 Recent National and regional tourism statistics

Tourism arrivals increased consistently as shown in Figure 3.5 from 984 099 in 2010 to 1 387 773 in 2015 climbing to 1 557 279 in 2018 being the latest available MET report (MET, 2018, p6). Visitation trends vis-a-vis tourism arrivals are consistent with percentages presented in previous sections with local SADC nations occupying top positions. However, a substantial decline in both visitation and spending was experienced by Angolan nationals as a consequence of the 2014 global oil crisis (Grynberg, 2019). Overseas tourism growth continued to overshadow regional percentages averaging 6.92% from 2013 to 2018 compared to African nations averaging 2.96% growth during the same period (MET, 2015). Qatar, Ethiopian, Condor, KLM, Eurowings and Lufthansa international airlines provided direct routes from overseas destinations by 2017, transporting 20.3% of airline passengers into Namibia (MET, 2018, p24) creating approximately 23 000 new arrivals. Rising growth trends were evident in both Zambia and South Africa with Botswana stabilising partially due to an ongoing

tourism plan focusing on “low volume - high cost tourism” bearing higher all around costs compared to neighbouring countries with additional limitations in accommodation in the Okavango Delta (www.worlbank.org; World Bank, 2004, p6; Mbaiwa et al., 2007, p421).

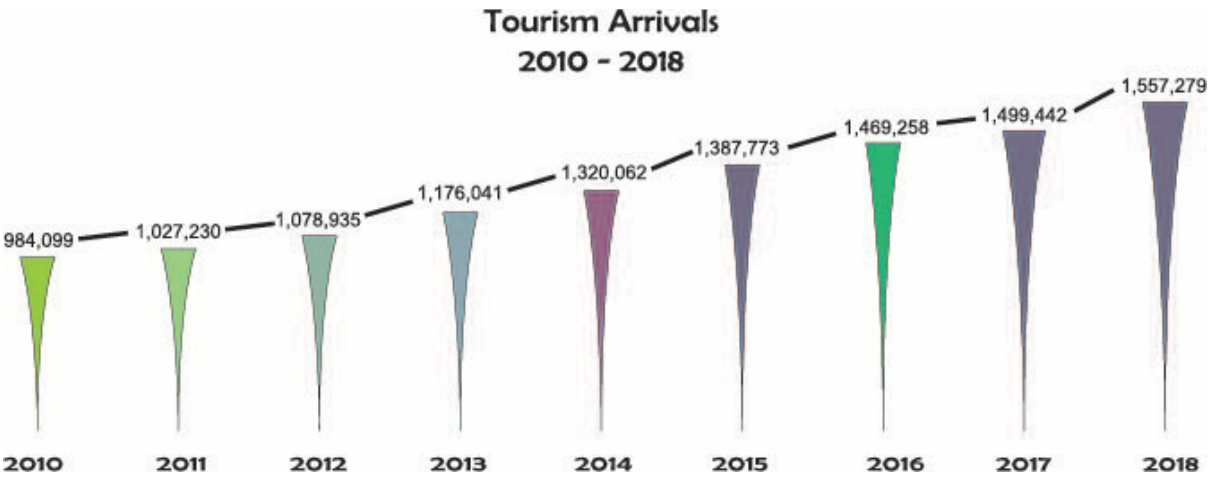

Figure 3.5 Tourism arrivals from 2010 to 2018

Source: MET (2018, p6)

3.6.2 External tourism related firms

A significant change in the tourism industry over the past decade has been the impact of web-based marketing sites (Hjalager, 2010, p3). Online business platforms such as Trip Advisor, Booking.com, Airbnb, Instagram and Facebook provided launching pads for new businesses and easy access to communication channels between SMEs and clients (McKay, 2016, p238). Electronic word of mouth (eWoM) advertising via tourism rating sites, akin to Trip Advisor, provided inquisitive travellers with information confidence surpassing past travel gurus paralleling ‘The Lonely Planet and ‘Bradt’ guidebooks. The transformation into eWoM marketing and social media presence generated marketing advantages for web-savvy entrepreneurs. Travel and non-travel related multinational companies increased access to marketplaces otherwise considered to be non-cost effective. Search engines affected the global travel industry like never before. Local Swakopmund companies such as *Alter-Action Sandboarding* consistently placed in the top positions in a Google search of Sandboarding

Namibia. The results were achieved timeously by way of early establishment and, subsequently, operating consistently good quality tours resulting in positive eWoM feedback from clients. So the overall tourism industry experienced an increase in dependency of external (usually overseas based) marketing and booking portals.

Overland and adventure tour operations increased in Namibia from 2010 to 2018 mirroring global trends in adventure related destinations (Pomfret, 2016, p9; ATTA, 2018). New business relationships formed between overland companies and local SMEs with better channels of communication and information catapulting specific operators into larger volumes of mainstream adventure tourism. A review of *Openspace Tours* in Swakopmund reveals nearly 70% of 2019 revenue derived from two multinational travel operators. Commission structures shifted from being predominantly driver-operator or tour leader operator based to corporate offices receiving payments supposedly passing a percentage off to the crew members. Due to the fact that many overseas tour operators do not have local offices in Namibia, booking offices play a role liaising between the head offices and their clients. Defined by McKay (2016, p237) as, “Booking agents are operators who do not directly provide the adventure tourism activity that they sell to clients”. A typical scenario is uncovered at a Swakopmund booking office where activity operators pay 20% commission to the office in return for bookings which sides with the findings of McKay (2016). Out of the 20%, 5% is paid to the overland company and 5% to the crew with the remaining 10% collected by the booking office. In the case of boat charters, negotiations between local activity providers and tour operators have exceeded 35% commission agreements payable directly to head office. This leakage is, for the most part, ongoing and unrecorded due to industry-wide avoidance of negative publicity and taxation issues. Pressure from such financial relationships has not only placed economic burdens on local operators in being locked into higher commission structures and growing dependencies on foreign owned businesses.

3.6.3 Tourism market changes

Two notable changes or advancements from the demand side, driven by what Signe (2018, p11) states, “In global terms, tourist demand is increasing most rapidly in the nature and adventure, culture and history, and health and wellness subsectors”, is an increase in self-driven tours and all-inclusive package tours run in 30-seat busses supplying the overseas adventure tourism market. In both cases, the tours are facilitated by Namibian tour operators with assistance from overseas connections as is the case with *Sense of Africa Tours and Safaris* where both self-drive and bus package options are available. Lapeyre (2011, p64) describes this tourism value chain as, “Selling a tourism product to a customer involves a retailer in the source market, and an intermediary agent who buys and packages services, a ground handler in the destination, who organises at the national level, and many accommodation and service suppliers in the attraction area”. An example is *Chameleon Safaris* in Windhoek, who offer both accommodated and self-drive tour options where all bookings for accommodation, park fees and activities in some cases, are pre-paid and booked by *Chameleon*. Self-drive tours are available simply as car rentals where the client books the entire tour online without assistance from the tour operator. In this case, eWoM has been an effective method for obtaining information and references with additional local referencing used at any given point of arrival or via email contact with other local tour operators. The opposite is the case with package bus tours where the entire tour experience is booked by either the agent or the tour leader. In Swakopmund, tour leaders book second evening dinners, activities, and recommend local shops, often accompanying guests into shops to provide assistance and safety. All services are tied into the commission structure. An example of this protocol is elucidated by a meeting with a previous employee of *Desert Explorers*, the only quad biking operator and the largest activity booking agent in Swakopmund. He states commission cheques to bus tour guides on successful visits were as high as N$22 000 over two days of activity bookings.

With most available tour options provided by tour operators, hotels, restaurants and activity providers are required to build relationships with tour leaders and, more so, managers and owners of larger tour operators to receive bookings. This widespread shift in booking sources from local hotels and operators WoM references (McKay, 2016, p237) to foreign run tour operators has changed internal relationships of the local tourism cluster in Swakopmund. Collaborative visions of working together to build and enhance the complete tourism product of Swakopmund is replaced with maintaining good relationships with tour operators abroad in what Lapeyre (2011) calls “a quasi-hierarchic type of governance arrangement” where the large transnational tour companies often hold the most economic and influential powers. Further elaborating and supporting the experience of local activity operators in Swakopmund, Lapeyre (2011, p67) concludes, “the Namibian tourism sector is best characterised as a buyer-driven Global Commodity Chain (GCC) in which generic suppliers in the country remain in a captive economic position towards transnational companies (TNCs)”. The social and economic impact of growth in large-scale tour operators in Swakopmund is void of research to date.

Compounding pressures exerted by expanding TNC driven relationships are the reduced visitation time of tourists in Swakopmund (DECOSA, 2015). According to Beth Sarro, overland companies in the early millennium years averaged three days with companies like Oasis Overland staying four days (B. Sarro, personal contact, April, 2019). By the end of 2018, a typical visit averaged only one full day with an extra half day for tours arriving from closer destinations than Etosha or Sossusvlei (review of *Far Out* Booking sheets, 2018; Openspace Tours’ records). Operators, restaurants and tourism shops are left with scarce quantities of visitor free time. One-day clients typically pre-book, therefore reducing the effectiveness of local WoM advertising. Additional challenges are placed upon start-up companies not yet in the loop of web-based eWoM systems and TNC relationships. Personal interviews conducted in 2018-19 revealed the hardest hit were retail shops and start-up activity operators.

In view of the history of tourism in Swakopmund and the potential economic impact of tourism in the region, regular updating of tourism statistics and economic bearings to the community provide both policy makers and local businesses with valuable information for decision making. In 2016, the local uranium mining industry collapsed after the 2011 Fukushima disaster, followed by global commodity prices, mainly oil, falling in 2014 (Conde and Kallis, 2012, p608; Pietrzela, 2013; Swiegers, 2014, pp. 107-8). Repercussions from mining losses were matched by a national economic slump in 2015 until the present. This drove down construction projects, real estate sales and the promise of eternal growth (Neweralive.na, Brandt, 2019; www.namibian.com, Grynberg, 2019). The tourism industry continued to grow occupancy rates, peaking in 2017 according to New Era article (2019).

3.7 Conclusion

This chapter investigated the foundations of the local tourism industry in Swakopmund by means of illuminating relevant historical events. Early history provides a foundation of rugged adventurers fighting natural elements in the Namib Desert well preserved in the works of Massmann (1983) and Kolb (2018). Political changeovers and coastal locations swayed the region into catering to tourism which remains a primary source of income up to the present. The local tourism industry has survived three transformations in national governance, two world wars, one genocidal war and a 26-year independence struggle. The aim of presenting historical events is to establish the reasoning behind what Markusen (1996) names ‘social glue’ and the ‘community culture’ supported by Hjalager (1999). Congruently, Nordin (2003, p34) suggests, “There is much more to it than what can be seen on the surface, such as the history of the region, the traditions and structures – in general, conditions that are exclusive for that particular geographical area”.

Additionally, geography plays an important role to the success of a tourism region. Located in the SADC region during a global boom in adventure tourism has contributed towards the formation of a suspected tourism cluster on the central coast of Namibia. Timing is uncovered as a significant contributor to the region as political stability coincided with a global boom in

adventure activities, especially in more remote destinations. Specific operators, being entrepreneurs, played an important role in identifying and reacting to market changes, constructing tourism products, maintaining high standards and establishing a business environment conducive to clustering methods. Furthermore, tourism numbers consistently depict growth underpinning the value of the tourism industry to Swakopmund. At the heart of the industry remains a core group of local tourism firms comprising a variety of both long and short-term players. As of 2019, there is a lack of attention given to the local tourism industry, the efforts and talents of local operators and the impact on tourism development engendered over the past three decades. Chapter 4 introduces the methodology to investigate the impacts generated by the tourism cluster into the local tourism industry.

Chapter 4: Methods for identifying clusters and agglomeration

4.1 Introduction

Historical discourse conferred in the previous chapter conveys the conclusion that the tourism industry in Swakopmund has experienced cumulative growth over the past thirty years with minimal support from regional and national policy makers. The national government's conventional policy approach towards tourism customarily focused on income inequalities and exceptionally high unemployment rates without placing value on industry achievements. This study aims to identify whether a tourism cluster exists in Swakopmund and whether this industrial structure is an important component of regional tourism success. Additionally, if a tourism cluster can be identified, more progressive policies can be enacted to align with broader national goals of maintaining (or creating) globally competitive tourism industries, expanding tourism into outlying regions and generating increased employment opportunities. The nature of this research is an exploratory investigation determining the existence of a tourism cluster in Swakopmund and the agglomeration effects bestowed upon the community. This chapter provides the background and rationale to the methods employed in this study where both measures of agglomeration effects and principal industrial clustering methods are explored and evaluated before the methodology that will be used in this study is explained. In concurrence with agglomeration approaches, the relatable historical events presented in Chapter 3 assisted in developing a methodological approach best suited to realise the research goals.

Since the analysis of contemporary clustering behaviour presented in the literature review provided a platform for the methodology and research methods to be used in this study, this chapter begins by presenting an overview of the most important methodological issues identified in the literature, prior to an overview of the typical methods used in cluster

identification. The research design and methods to be used in this study are subsequently explained together with ethical considerations.

4.2 Methodological challenges

At a first glimpse, collecting data appeared to be straightforward and unproblematic as the researcher was involved in the local tourism industry as an operator, employee and in promotional services for nearly 20 years, which was perceived advantageous to obtaining information on collective business networks. Having a grounded knowledge of internal affairs within the local industry painted an illusion of simplistic achievability. However, multiple challenges surfaced subsequent to reviewing cluster literature. First of all, a fundamental challenge was the lack of a clear-cut universal technique for measuring agglomeration effects as supported by Martin and Sunley (2002), vom Hoff and Chen (2006), Terstriep (2008, p16), Kominers (2008, p2) and Estevao (2011, p2) who raises the concern of economists' absence of an all-inclusive agglomeration index stating, "Since agglomeration studies that use inconsistent indices are, as we shall see, rarely comparable, this inconsistency presents an arduous impediment to those hoping to study the determinants and dynamics of agglomeration". Furthering this notion, Benner (2017, p4) finds the lack of a clearly standardised approach for cluster identification rooted in unclear portions of a cluster definition and itemises four explanations preventing solutions to identifying clusters being:

- Definition of the relevant spatial unit.
- Definition of the relevant economic activity.
- Threshold for the definition of an agglomeration.
- Definition of the required connectivity.

Reviewing industrial and tourism cluster publications ascertained how clusters and analytical approaches differentiate depending on several factors, a few of which being: the size of a specific region or industrial density (Briassoulis, 1991, p490); a cluster's age (Fornahl and Menzel, 2007); supplementary industries involved in a cluster (Feser and Bergman, 1999);

which industry is suspected acting as a cluster (Rocha, 2004, p9) and; to what degree do extrinsic forces (i.e. firms and industries outside of the cluster) play in the social make-up and networks aligned within the cluster under investigation (Feser and Luger, 2002; Rocha, 2004; Braun and Hollick, 2006).

With the various agglomeration scenarios at hand, a common theme underpinned in the works of Saxenian (1994), Porter (1998, 2000), Rosenfeld (1997), and Nordin (2003) is the relationships amongst firms acting in industrial clusters, differentiating the groups from localised agglomerations of firms acting independently without strong degrees of collaboration or interdependencies. In the tourism industry, these relationships are often “loose and informal” according to Komppula (2014, p363). Therefore, to quantify collaborative behaviour in a manner suitable for scientific analysis, inter-firm transaction data revealing values and frequencies are a prerequisite (Baggio, 2011). Data of this nature, especially pertaining to microeconomic climates in developing nations, is often scarce or non-existent, requiring a hands-on research approach where individual firms are queried about the inner workings of prevailing supply chains (Feser and Bergman, 1999; Feser and Luger, 2002, p5). Consequently, gathering sensitive inputs to meet the demands of constructing, for example an input-output matrix, poses immense challenges to micro-industrial cluster research (see Briassoulis, 1991; and Feser and Bergman, 1999, p17). This supports a secondary challenge in uncovering sensitive data, in this case booking origin, which is commonly difficult to retrieve (Haber and Reichel, 2005, p259). It is, therefore, essential for a researcher to approach the encounters with a broad-based understanding of what industries are involved and, more so, who are the players and in what historical context does this industry exist in the town or region in focus (Nordin, 2003, p64).

For this reason, a reconnaissance of town history exposing the fundamental underpinnings of regional tourism and the tourism industry in Swakopmund was undertaken in Chapter 3. Paramount to this study was obtaining a comprehensive understanding of the broad panorama encompassed in the field of clustering alongside an extensive look into the origins and

historical events leading up to the contemporary tourism industry. A challenge presented throughout the historical analysis was to seek out occurrences that supported either a build-up of the suspected tourism cluster or rudimentary social and commercial patterns influencing the modern-day tourism industry. As suggested in the literature, acquiring an in-depth comprehensive understanding of tourism origins further strengthened the process of selecting research methods (Jackson and Murphy, 2002; Nordin, 2003).

In a divergence to concentrating merely on agglomerative effects, it was important to reveal factors of Namibia's success on the coast that stemmed from alternative events or geographical endowments. Natural attractions such as the dune fields, beaches, temperate climate and proximity to world renowned parks are regional competitive advantages that initially brought tourism into Swakopmund and continue to be an important factor in the area's success (Rosenthal and Strange, 2002, p24). The chronological summary of global adventure tourism in Chapter 3 presented an additional argument, considering world-wide trends and timing. As with many industrial triumphs, timing unfailingly plays an important role.

4.3 Methods for cluster identification and agglomeration

This section provides an overview of methods used in previous works for cluster identification and measuring agglomeration effects. The format begins with an all-encompassing viewpoint of quantitative, qualitative, mixed methods and geographical measures before highlighting applications and procedures into the tourism industry. Reverting to the findings of previous studies in Chapter 2, where an industrial cluster is defined as being a geographic concentration of firms within a similar industry possessing or operating with degrees of interdependencies and collaborative behaviour (Rosenthal, 1997; Porter, 1998; Estevao, 2011, p38). The following sections aim to shed light upon the challenges in documenting, quantifying and analysing the assorted tasks of identifying clusters and ascertaining the externalities generated form agglomerated industries.

4.3.1 Factors influencing methodological approach to cluster determination

Before engaging in a breakdown of cluster identification and measurement methods, differing approaches to agglomeration research stemming from environmental and geographic factors are discussed. Beginning with the scope of research, Cunha and Cunha (2005, p54) citing Altenburg, Gillegrand and Stamer (1998) along with Stejskal and Hájek (2009) categorise geographic areas of cluster studies into three distinctions. These are Macro being a national level; Mezzo level or the industrial branch; and the micro level focusing on firms. Since the extent of this study exists at the micro level, greater consideration is given to the methods that can be applied to the suspected cluster in Swakopmund. However, a mixture of macro and mezzo level measurements provide significant input to the methods employed in this study and therefore are presented in this chapter.

Once the scope of analysis is decided upon, obtaining an overview of existing industries is followed by an investigation of existing industries and the geographic boundaries of their buyer-supplier relationships. At a micro level, the latter is an examination of individual firms in mixed industries aimed at revealing inter-firm behaviour patterns – primarily this search is conducted to detect cluster attributes of firm interdependencies, knowledge sharing, increased innovation, collaborative actions and sharing of a common labour pool (Rosenfeld, 1997; Porter, 1998; Hjalager, 1999; Feser and Bergman, 1999; Nordin, 2003). Thus in the outlining of geographic boundaries, a rudimentary understanding is required of the networks, supply chains and demand origins, providing a foundation where geographic measurement methods can be selected. Henceforth a preliminary understanding of regional or national industrial make-up complements the vagueness of cluster theories in terms of allocating boundaries (Brown, 2000). In this regard, even Porter (1990, 1998, 2000) does not define geographic boundaries in terms of distance as cluster-based relationships extend past borders and across nations. The preferred method lies in a measurement of inter-industrial linkages mapping firm relationships and buyer-supplier networks.

Subsequent to looking into an assortment of options measuring physical locales, the choice of employing qualitative, quantitative or mixed methodologies is examined firstly from a macro level perspective before funnelling into firm level cluster measurement approaches. Cluster researchers must decide upon methodological approaches of being either top-down or bottom-up (Brown, 2000, p9-10; Feser and Bergman, 2000, pp.19-20). The primary difference lies in that a bottom-up approach begins with each element as an individual cluster and then later merging them into larger clusters, whereas top-down approaches begin with an entire set and then dissect the groupings into smaller agglomerations (Madhulatha, 2012, p719). Top-down approaches classically include quantitative spatial autocorrelation methods, Location Quotients and input-output analyses to determine the degree to which industries are spatially located before identifying regional clusters (Sternberg and Litzenberger, 2004, p774). Bottom-up tends to employ qualitative or quantitative methods mutually such as in surveys and questionnaires (Stejkal and Hajek, 2012, p351). However, Brown (2000, p10) and Estevao (2011) note how the majority of cluster projects (dealing with policy concerns) tend to be a mixture of both approaches.

A clear and concise comprehension of the variables, the nature of the study being explanatory or exploratory, the expanse of available data, and the efforts required for data collection is critical for the alignment of research goals to methodology (Sarstedt and Mooi, 2019). National level agglomeration studies depend on aggregated data provided from government statistical databases that are run through an assortment of equations (econometric for example) and statistical renderings to identify regional and national industrial clusters (see Feser and Bergmann, 1999; Ellison and Glaeser, 1997,1999; Feser, 2000; Rosenfeld, 1997, 2005). In cases where databases provide insight on variables such as buyer-supplier networks, regional incomes and firm growth, sufficient records allow for the more scientifically accepted quantitative analogies (see Rosenfeld, 2005; Rocha, 2004, pp.36-8). However, as a study veers into micro-contexts, exploratory-natured cluster investigations in developing nations, aggregated datasets become fuzzy and often lacking the specifics of inter-firm relationships

as supported by Brown (2000, p6) stating, “any methodology used to measure or select clusters should be adaptable enough to capture the key aspects and group dynamics of smaller industrial groupings of like companies”. In this research situation, qualitative data is required to explore unknown variables and to sift through the ambiguities of incomplete databases. Although the general agreement amongst Capone (2004) and Austrian (2014) concerning the unreliable subjective nature of qualitative data, the pathway achieves substantial results uncovering inter-firm relationships and interdependencies.

The literature that was reviewed to construct the following sections suggests employing mixed methodology when a situation arises where quantitative data is available or collectable, but the outcome will not be sufficient for valid conclusions (Feser and Bergman, 1999; Brown, 2000; Rocha, 2004; Rocha and Sternberg, 2005; Stejskal, 2009; Sarstedt and Mooi, 2019). Similarly, circumstances exist where unknown variables require qualitative investigations to delineate geographic boundaries, inter-firm relationships and achievable data collections. In cluster-based research, the actuality that the dominant theoretical focuses – be they spatial agglomeration, interdependencies, collaborative behaviour, labour pooling or knowledge sharing – are not only lacking definitive qualitative values, but they frequently lack clear-cut methodological pathways and also have not been established in providing an all-encompassing guideline to agglomeration research.

In support of ambiguous guidelines for the field of cluster analysis, Feser et al. (2001, p7) state, “The fact is that the complexity of the cluster concept itself, as well as the significant variation in the policies and strategies that clusters might inform, dictate that no single definition or methodology is appropriate for all analytical or policy needs”. Mixing qualitative with quantitative methods is a solution employed by cluster analysts to navigate around ambiguities and arrive at objective and scientifically applicable results (Rocha, 2004 citing Rosenfeld, 1997). Various options are expounded in section 4.3.5 that lead into the mixed method choice for this study.

To counter procedural ambiguities, research into the agglomeration of tourism firms makes use of methods of identification and analysis derived from conventional geographic, quantitative and qualitative methods employed in both industrial and tourism cluster studies. In the case of investigating tourism clusters, Capone (2004, p9) suggests the three conditions that have to be tested.

a. Verify the existence of a consistent number of businesses that enhance the assets (cultural, natural or historical) of the tourist destination.
b. Verify the set of enterprises that make up the cluster of localised SMEs at the tourist destination.
c. Verify relationships between the tourist location community and the businesses in the suspected cluster.

This review begins with quantitative geographic measuring methods regularly used in cluster verification.

4.3.2 Quantitative - Geographical measures

Agglomeration is, by nature, a convergence of items – be they living entities, topographical features, or businesses. Fundamentally, to analyse and assess groupings, a basic requirement is to measure the size, the density and the content of the assemblage (Chhetri et al., 2013, p564). Numerical distance measurements provide researchers with three primary inputs that are applied to cluster analysis. Firstly, plotting business locations establishes visual interpretation to agglomeration boundaries and densities (Sakata, 2008). Secondly, matrices, scoring and expert opinions use the quantified data for more in-depth analysis that is examined in this chapter. Thirdly, numerical distance measures allow researchers to compare findings to other studies and adapt guidelines for identifying clusters (see Krugman, 1991; Ellison and Glaeser, 1999; Feser and Bergman, 1999; Feser et al., 2001, p7; Rocha, 2004; Capone, 2004). In the following sections, a brief rundown of the commonly employed agglomeration measurement equations is presented for the reader to grasp the various options available in determining tourism clusters.

The task of outlining boundaries in geographic positions is undertaken with a series of measurement methods recurrently involving exploratory spatial data analysis (ESDA). This comprises of a set of geographical information system (GIS) observations (Anselin, 1995; Sakata, 2008; Majewska, 2017; Kim, 2019, p92). In the case of industrial cluster studies, firms or entire industries are located by GIS plotting. This may reveal visual clustering patterns that assist in determining the likelihood of spatial agglomeration (see Boix et al., 2011, pp.11-14). An example of applied measurements are Euclidean distances, measuring the shortest distance between two locations (Mimack et al., 2001, p2791; Madhulatha, 2012), that frequent studies aiming to quantify distances calculated below as:

Equation 4.1: *Euclidean distance*

$$= \sqrt{\sum_{j=1}^{2} \left(x_j - y_j\right)^2}$$

Where the square root sum of squared j^{th} location of x from j^{th} location of y is calculated (Madhulatha, 2012, p719). The Euclidean distance equation therefore computes the square of the distance between each variable, and after totalling the values, taking the square root of those values (Madhulatha, 2012, p719). Alternative distance measurements provide customised options accommodating assorted variable conditions. One example is the Manhattan distance function that calculates distances in grid format as if variable points were located in city blocks, which is useful in cluster analyses in urban settings where straight-line travel is not an option or travel time is a consideration and is offset by traffic. A wider variety of distance calculations is presented by Elmore and Richman (2001, p542), however, according to the authors, the Euclidean distance is prevalent because of a “straightforward” interpretation.

The underlining value of distance measurements in terms of cluster analysis is in numerically delineating agglomeration concentrations and boundaries. Examples of such outcomes are offered to illustrate the distance variances between cluster border determinants in non-related studies (see Boix et al., 2011, p12). Feser and Bergman (1999, p35) discovered, in comparing

an assortment of clusters, that overall spatial clustering was most prevalent in measurements of a 2 to 6 kilometre radius whereas printing and publishing concentrations peaked at 12 kilometres with average concentration measures peaked at 50 kilometres. At the opposing end of clustering, the measures of the concentration of wood products clusters rapidly declined after 7 kilometres, primarily due to expansive distances between mills (Feser and Bergman, 1999). Majewska and Truskolaski (2019, p2378) used a geographically weighted fuzzy clustering approach, defined a neighbourhood weight matrix as being within 20 kilometres of a given centroid. A weights matrix measure of 450 miles was adopted by Carrol et al. (2008, p455) for assembly plants justified by reliable delivery within a day's drive.

Without exact predetermined distance measurements defining cluster boundaries, researchers regularly align geographic distances with measures of industrial specialisation and inter-firm relationships to ultimately define cluster boundaries (Rosenfeld; 1997; Porter, 1998; Feser and Bergman, 1999; vom Hofe and Chen, 2006, p20). Throughout the theoretical content reviewed in Chapter 2, there are methodological consistencies where researchers are less concerned with numerical distances between firms in agglomerated industries but instead, focus on inter-firm relationships. Consequently, the results of GIS plotting are applied to measures of spatial association accompanied by autocorrelation techniques (Anselin, 1995) aiming to mark out degrees of industrial specialisation, inter-firm collaborative behaviour and knowledge sharing. An example of this application is fostered by Ribeiro and Andrade (2015) where Euclidean distances were used to calculate non-hierarchical K-means in a tourism cluster analysis in Brazil. Majewska and Truskolaski (2018) used GPS coordinates to adjust centroids in Moran's I weight matrices (see explanations below) to reflect more accurate centres of tourism activity in suspected clusters. So without an all-encompassing, one-size-fits-all, numerical classification for cluster determination, results from geographical measurements are overwhelmingly amalgamated into formulas calculating concentrations of specialised industries (Santos Almeida and Teixeira, 2008; Stejskal, 2009).

Due to the overlapping nature of geographical, quantitative and qualitative measurements, the following methods are categorised as measurements focusing on spatial analysis, whereas subsequent models fall into qualitative methods with measuring emphasis assigned on industrial specialisation and interdependencies rather than distance based computations. The field of econometric options for quantifying densities expands beyond the methods listed below but, due to a lack in aggregate data in Namibia, this study primarily considers attainable options and additional methods that contribute to the construction of qualitative methods.

A) Locational Gini coefficient

The Gini coefficient is commonly used in the calculation of inequalities in income distribution and employment levels (Lacher and Nepal, 2016, p5). Based on the Lorenz Curve, the locational Gini coefficient identifies the relationship in terms of similarity of location patterns in employment in a given industry (regionally) compared to national location patterns in employment. The resulting coefficient lies between 1 and zero (Brown and Eades, 2006, p9; Titz et al., 2008, p12; Calino and Kerr, 2015, p3) where zero represents perfect equality and 1 is perfect inequality (Lacher, 2016). The locational Gini is calculated by ranking the share of regional employment shares (s_{irt}) for industry *i* or $\frac{x_{irt}}{mean\ x_{it}}$ (Suedekum, 2006, p9):

Equation 4.2: *Locational Gini coefficient*

$$GINI_{it} = \frac{N}{N-1}\left[\frac{2}{N}\frac{\sum_{r=1}^{N}(r \cdot s_{irt})}{\sum_{r=1}^{N} s_{irt}} - \frac{N+1}{N}\right]$$

Where N = the number of territorial units

To measure industrial agglomerations in the tourism industry, Alonso (2006) used the Gini coefficient measuring income inequalities to capture the agglomeration of inhabitants and the social welfares created by local tourism industries. Sternberg and Litz (2004, p774-5) support the Gini as a measure of concentration but suggest the coefficient must be weighted with the size of the region in focus. Suedekum (2006, p10) supports the use of Gini coefficients in localised contexts over national intra-industry scenarios due to the “strong appeal of being

very easily interpretable". For this reason, Faulner and Tidswell (1997) adjusted the Gini to represent the type of tourists throughout Australia conveyed in the number of tourists that were international or seasonal where zero represented an absence of seasonality and 100 signified maximum inequality. The highest Gini value calculated was in Darwin at 10.1 compared 3.71 result from the more visited Gold Coast (Faulner and Tidswell, 1997, p10).

B) Getis and Ord G Statistic*

The Getis Ord G* Statistic is a spatial measure determining employment concentrations in industry clusters by detecting patterns of spatial association among neighbours in defined areas (Feser et al., 2001, p15; Carrol et al., 2008, p 251). The G* statistic is based on a cluster's level of employment alongside the employment levels in neighbouring counties. The results uncover industrial hotspots or locations where firms exhibit similar specialisations with neighbouring businesses (Carrol et al., 2008, p455). It is calculated as:

Equation 4.3 *Getis and Ord G* statistic*

$$\frac{\sum_j w_{ij}x_j - W_i\bar{x}}{\sqrt{\left(nS_{1i} - W_i^2\right)/(n-1)}}$$

Where *x* is the total employment in the cluster, W_{ij} is a spatial weights matrix represented by {0/1} that defines neighbouring counties/regions to county/region *i* as $W_{ij} = 1$ and non-neighbouring counties/regions being 0. **W**i is the sum of weights $\{W_{ij}\}$ and $\bar{x}$ is the mean of country/regional cluster employment on a national level $S_{1i} = \sum W_{ij}^2$.

Before engaging in further discussion of spatial agglomeration measures, the weights matrix is discussed as it influences ensuing calculations. The weights matrix defines the neighbourhood for each spatial unit by assigning nonzero numbers to relevant neighbours (Anselin, 1995, p95). The formula can be worked out by two methods, which largely depend on the study: contiguity or distance measures (Majewska and Truskolaski, 2018; Kim, 2019, p94). Contiguity matrix is a binary matrix consisting of 1 or 0 with 1 being deemed a neighbour and all other locations are given a value of 0 (see LeSage, 1999, p11). Kim (2019)

derives three contiguity measures from Le Sage (1999) illustrated in Figure 4.1 where Rook contiguity indicates neighbours bordering on all four sides and Bishop Contiguity border on adjacent corners. Queen contiguity border on all sides in contact with the centroid.

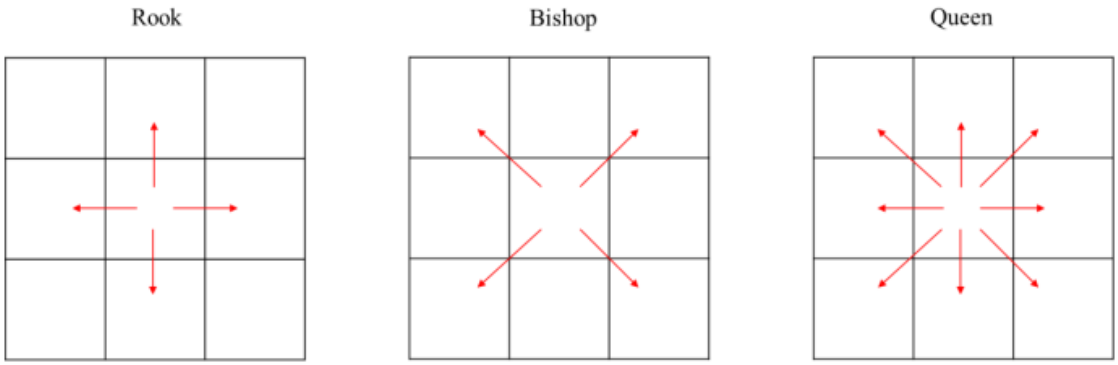

Figure 9.1 Contiguity measures

Source: Kim (2019, p94)

Distance based matrices use calculated distances between centroids within a spatial dimension providing numerical weights as guidelines for agglomeration (Majewska and Truskolaski, 2018, p2368). The Euclidean distances are an example of distance calculations employed in distance-based matrixes (Kim, 2019). Allocating which distances correspond to spatial correlation is more flexible as Caroll et al. (2008, p455) state that the choice of a weights matrix should be derived from cluster literature even though little delineations of spatial boundaries exist.

C) Moran's I:

The Moran's I statistic is a frequently used calculation measuring the degree of spatial autocorrelation in geographic observations to measure patterns across regions (Brown and Eads, 2006, p11; Carrol et al., 2008, p450-1; Chhetri, 2013; Brenner, 2017). Spatial autocorrelation relates to how a specific node *x* or firm location *x* is correlated with the location of node y or firm location y. Moran's I assesses whether or not "similar values occur close to each other or whether features (an area, for instance) with similar values are randomly

dispersed" (Chhetri, 2013, p568); in essence, this is a determination of whether a pattern is clustered, scattered or located randomly (Esri, 2020).

Equation 4.4: *Moran's I*

$$I_{it} = \frac{n}{S_0} \frac{\sum_i \sum_j w_{ij}(x_{it} - \bar{x}_t)(x_{jt} - \bar{x}_t)}{\sum_i (x_{it} - \bar{x}_t)^2}$$

where, n is the number of observed regions; W_{ij} is the special weights matrix; x is the variable analysed with x_{it} being the i[th] observation at location *t* and $\bar{x}$ is the mean of observations at location *t*.

The outcome of Moran's I exists between -1 and 1 with -1 being negatively auto correlated, 1 showing positive spatial autocorrelation and 0 indicating no autocorrelation. In context of this study, the Moran's I statistic represents aggregated and multinational datasets that are inapplicable to this study.

D) Local indicators of spatial association (LISA) – Local Moran's I

LISAs are designated to dissect global *Moran I* figures to identify hotspots in a localised context for mezzo and micro regions in tourism (Anselin, 1995; Chhetri, 2013; Majewska, 2017, p10). It is measured as:

Equation 4.5 *Local Moran's I*

$$I_{it} = \frac{(x_{it} - \bar{x}_t)}{\sum_i (x_{it} - \bar{x}_t)/(n-1)} \sum_j w_{ij}(x_{jt} - \bar{x}_t)$$

With the same definition, Chhetri et al. (2013) and Kim (2019) employed LISA statistics to quantify spatial clustering in the tourism and hospitality industry in Australia whereas Kim (2019) performed similar measures to calculate concentrations of higher tourism labour productivity to identify tourism clusters. To test whether or not there was spatial correlation in Indonesian tourism regions, Budirahmayani (2018) also used the Moran's I method to measure the effects of spill overs on tourism growth. Majewska and Truskolaski (2019)

compared local Moran I statistics to the total number of tourist establishments in Poland and marked the frequency and direction of autocorrelation of the variables in each district in Poland. From the results, spill over effects were identified showing high levels in agglomerated tourism districts. Although the local Moran's I requires more aggregated data than is available for this study, the basic principles are transferred into qualitative approaches in the research design.

4.3.3 Quantitative – Measuring agglomeration by concentrations of specialisations, firm relationships and interdependencies

These methods for cluster identification and analysis may use geographic coordinates but overriding practices are founded in measuring levels of agglomeration by industry specialisation (vom Hofe and Chen, 2006, p9), labour pooling concentrations (Chhetri et al., 2013; Kim,2019), and interdependencies and collaborative behaviour (Stejskal and Hajek, 2019). A straightforward calculation of industrial specialisation is presented initially before measurements inclusive of buyer-supplier relationships aiming to quantify transactional hot spots. Although methods necessitating considerable sums of aggregate data may not be applicable to this study, the wide-ranging usage and theoretical importance of constructing qualitative methods warrants brief explanations.

A) Location Quotient (LQ)

A widely used method for detecting industry concentration levels is the LQ (Rosenfeld, 1995; Feser and Berman, 1999, p16; Sternberg and Litzenberger, 2004, p774; Rocha and Sternberg, 2005; von Hofe and Chen, 2006, p10; Santos et al., 2008; Stejkal, 2009, 2012). The LQ is a calculation comparing an industry's local or regional share of employment to total employment of the region, compared to a percentage of national employment levels of that industry to total national employment levels (Hilal, 2008, p 592; Carol et al, 2008; Lazzaretti et al., 2008, pp. 9-11):

Equation 4.6 *Location Quotient*

$$LQ_i = \frac{z_i/z}{Z_i/Z}$$

The LQ applicable in this study in this study calculates the ratio of tourism employment:

- z_i = Number of employees in the ith tourism sector of the region
- z = Total number of employees in the region
- Z_i = Number of employees in the ith tourism sector in the country
- $\boldsymbol{Z}$ = Total number of employees in the country

According to Capone (2004), the LQ is an appropriate standardised method for measuring tourism industry's concentration computed by calculating employment in the local tourism industry divided by national tourism employment. The outcome of LQs is a widely practised method for determining spatial proximity supported by the general assumption that employment concentrations in a specific industry reflect increased agglomeration benefits accrued to that industry (Kim, 2019). In specific cases, LQ measurements are adjusted to meet specific requirements where the components within the equation change from, for example, a national labour to regionalised labour denominator. Even though labour is the most commonly applied index, according to Benner (2017, pp. 10-12), alternative measures such as sales, patents or publications can be harnessed.

The first stage of implementing the LQ is to decide which business activities belong to the tourism sector (Capone, 2004, p12). Apart from being a simplistic calculation, the formula can then be applied to multiple variables (Peiro-Signes et al., 2012, p1323), such as turnover of firms in a specific industry (Stejskal, 2009, p233), patents and SME start-up levels (Brenner, 2017 pp. 10-12). Majewska (2015) employs a weighted version of the LQ to identify inter-regional tourism clusters.

In terms of numerical measurement guidelines, the general rule with LQ results supported by Stejskal and Hajek (2012, p353) and Carroll et al. (2008, p452), state that an LQ greater than 1 indicates concentration levels sufficient for an industry to be classified as a cluster, although

levels are frequently adjusted by researchers to align with their assessments of each case being investigated (see Santos et al., 2008, p10). Rocha and Sternberg (2005, p 279) set levels greater than 1.5 derived from collective cut-off points selected by previous studies. In a scenario where firm concentration levels were proportionally greater than previous agglomeration studies, location quotients reaching as high as 12 were found in Italian tourism sectors by Capone (2004). In the case of applying the LQ into tourism, Santos et al. (2008) set acceptance levels at 1.60 for general cases and 1.90 for tourism. Therefore, in studies where an attainable estimate of industrial concentration is required, the wide range of applications and reachable data requirements underline the popularity of the LQ. However, the results are merely measures of specialisation and provide very little insight towards inter-firm relationships (vom Hofe and Chen, 2006, p10). For this reason, the LQ results are rarely taken alone as a determinant of the existence of a cluster (Capone, 2004) as recommended by Feser and Bergman (1999, pp. 19-20) who state "location quotients are only useful in concert with methods that use, in some form, information on industrial interdependence".

B) Ellison and Glaeser (EG) model

A more descriptive and widely applied index of localisation is the EG model, measuring the strength of agglomeration effects in specific regions or locations assuming (theoretically) locational choices are founded in profit maximisation (Ellison and Glaeser, 1999; vom Hofe and Chen, 2006, p19; Ellison et al., 2010; Howard et al., 2015). Based on concentrations of employment, a fundamental advantage of the EG model is that it recognises industrial concentrations across borders, capturing spillovers and natural cost advantages incurred by concentrations of firms (see Ellison and Glaeser, 1997, 1999). Kominers (2008, p4) touches on the benefits of versatility with the EG index being comparable across various industries with firm size dissimilarities. The cost-benefit factor is methodologically incorporated by stipulating aggregate limitations on location choices considering the cost of a particular input in relation to the frequency with which the industry uses the input (Ellison and Glaeser, 1999, p311). Mathematically it is calculated as:

Equation 4.7: *Ellison and Glaeser model*

$$\frac{\sum_{i=1}^{M}(s_i - x_i)^2 - \left(1 - \sum_i x_i^2\right)\sum_k z_k^2}{\left(1 - \sum_i x_i^2\right)\left(1 - \sum_k z_k^2\right)}$$

This equation represents a co-agglomeration index for industries i where, S_i is region i's share of the industry's employment, x_i is the industry's share of overall employment, and z is firm k's share of the industry's employment. The $\sum_k z_k^2 = H$ is the Herfendahl index; a statistical measure of concentration that computes the industry's firm size distribution (Feser, 2000, p1; also see Ellison et al., 2010, p1197; Brown and Eades, 2006, p10). The equation takes the square the sum of industry z's market or production percentage share (Rhodes, 2001). Although the EG model has been mentioned in tourism cluster studies, overall usage is less than the LQ or methods following (Santos et al., 2008, p11).

C) Input-Output (IO) Analysis

IO analyses capture inter-industry transactions or interdependencies by evaluating inter-firm transactions in matrix formulas representing the value of output in one sector required to produce one monetary unit of output in another sector (Briassoulis, 1991, p486; Kweka et al., 2001). The IO matrix looks at industry linkages through buyer-supplier relationships where, in cluster identification studies, "hotspots" (Anselin, 1995) are pinpointed in areas with greater transaction levels (Jote, et al., 2013, p2). In this model, traded products are segregated into degrees of significance identifying important and unimportant flows of goods (Titze et al., 2011, p8). Values within the IO matrices are not necessarily monetary standards. Instead, there is a range of supplementary economic indicators such as goods traded tallied by quantities (Jote et al.2013), innovation flows (Feser and Bergman, 1999) allowing for increased understanding firm interdependencies (Santos et al., 2008, p11). Additionally, the ability for IO matrices to capture assortments of variables also allows for the assimilation of transactions with weighted values.

Titze et al. (2008, pp. 8-11) transfer quantitative information pertaining to the relative significance of transactions into an IO weighted matrix where zero represents no link between two sectors and 3 represents a strong bilateral business relationship where goods are traded between both sectors. To implement this method, Feser and Bergman (1999, p20) lay out five steps to performing an input-output analysis beginning with defining industry clusters as either existing or potential clusters and whether or not the agglomeration is localised. Secondly, determine whether a top-down or bottom-up method is to be applied. An analytical method must be chosen before collecting data and the results are interpreted as illustrated by Santos et al. (2008, p14). For a thorough breakdown of constructing, calculating and implementing an input-output analysis see Titz et al. (2008; 2011).

Applying IO analyses in the tourism industry was performed by Kweka et al. (2001) who constructed an IO matrix to better understand the significance of tourism to the Tanzanian economy and visualise the impacts tourism generated to alternative economic sectors. For this study, focused on the tourism industry in Swakopmund, IO analysis is a logical method to map and analyse local tourism linkages, but two hindrances exist. These being that Namibian data is outdated and the tourism industry is fuzzy at best in data categories. Kweka (2001) used data from 1994 and Himavindu and Stage (2014) used the 2004 System of National Accounts (SNA) as the most recent updates where the closest representation of the tourism industry were hotels, restaurants and the transport sectors. The exact issue arose in Kweka et al. (2001, p11) where Tanzanian industrial categories only specified restaurants and hotels as candidates for the tourism industry leading to inaccuracies in linkage results.

D) Shift-share analysis

An alternative method for identifying regional industrial clusters via inter-firm transactions is shift-share analysis. This is a performance-based comparison of assorted regions over a nominated period (Stejskal and Matatkova, 2012). In this approach, variables of economic development and employment growth are broken down into modules representing specific regions to be juxtaposed to components of alternative regions (Fernando, 2020). Three main

components of the breakdown are – applying industry growth as an example - firstly the national growth component measuring the effect of the industry's cycle on regional economic change. The second component is the industrial mix explaining the share of regional industry growth in terms of the national level. Thirdly, the regional shift explains regional competitiveness autonomous of national growth and the industrial mix where a positive outcome suggests the industry in that region has a competitive advantage over alternative regions and/or industries (Shi and Yang, 2015; Caracolici, 2020, p 4). The technique pursues the growth in time of a regional industry's share of production or employment to identify which industry significantly contributed to the economy. Consequently, a positive value in the national component means the national economy is growing faster at the end of the selected period than at the beginning (Shi and Yang, 2015, p2).

Complementing a Euclidean distance-based cluster analysis, Ribeiro and Andrade (2015) applied shift-share analysis to attain the competitive advantages and specialisations of touristic enterprises. Measuring 137 Brazilian meso-regions, 56.2% of tourism industries were determined to possess competitive advantages over other industries (see Ribeiro and Andrade, 2015, p967 – 971). Alongside input-output analysis, shift-share analysis is useful for aggregate data on multi-regional or national levels. For an in-depth breakdown of the shift-share analysis' application into tourism see Cracolici (2020, pp.4-8) and Shi and Yang (2015).

E) Multivariate Statistical methods

Reviewing industrial and tourism cluster studies, two widely employed statistical methods appear in conjunction with the methods presented so far in Chapter 4. Principal Component Analysis (PCA) and Factor Analysis (FA) are staple components and powerful statistical tools commonly employed in agglomeration research, specifically when research findings consist of numerous variables and/or large datasets. In this case, statistical methods to sift out repetitive data and identify key variables assist in identifying industrial concentrations by eliminating excess noise (Sarstedt and Mooi, 2019).

Cumulative research results can be problematic and overwhelming to evaluate. For example, in the case of aggregate input-output matrices, necessitating a method to extract key variables responsible for the bulk of variations. In this circumstance, a systematic approach to dataset reduction is principal component analysis (PCA), which allows researchers to identify and analyse a smaller subset of variables (Stejskal, 2009, p233). In the PCA method, interrelated variables in large datasets are reduced to a set of variables, called components, that explain the majority of variance of the entire dataset (Chhetri, 2013, p565). This multivariate tactic allows the researcher to focus on a smaller variety of principal factors or the number of industries to a more condensed set of clusters that denote the majority of impacts on the variables (vom Hofe and Chen, 2006, p13). The PCA method is generally recommended when the primary incentive is to minimise data into more simplified quantities (Sarstedt and Mooi, 2019, p266).

An alternative method to handle extensive datasets is factor analysis (FA) which is advantageous in detecting structures in the relationships between clusters by revealing dependencies in the matrices and explaining the reasons behind strong correlations (Stejskal, 2009, p234). In this sense, FA allows a researcher more insight into the factors that are the essential stimuli in focus regions by highlighting their correlations (Sarstedt and Mooi, 2019, p262). In a study on tourism SMEs, Haber and Reichel (2005) used FA on eleven subjective performance measures eliciting three main factors to prevail in the final analysis. Meanwhile, Rollins and Vaugeois (2007) performed FA on a series of data to extract key motivations for working in British Columbia's tourism workforce. Feser and Bergman (1999, pp.20-1) suggest FA is useful for top-down analyses. However, whenever data reduction occurs, a researcher must exercise caution in losing data through carefully assessing the techniques of a given program.

4.3.4 Qualitative methods

An essential basis for ascertaining industrial clustering is looking into inter-firm relationships and, in the tourism milieu where weighty concentrations of SMEs occur (Nordin, 2003; Braun,

2005, p3; also see Buhalis and Peters, 2006, p116-17), aggregate quantitative data represented by numbers is not always available. In the circumstance of developing nations, localised tourism statistics are found in urbanised environments, for example Cape Town (www.capetown.travel/wp) or Nairobi (www.globaltourismforum.org), whereas in rural areas these are frequently non-existent. Additionally, Roberts and Stimson (1998, p470) raise concerns over data transformation stating, “Much of the economic data on regions and cities are provided by disaggregating national and state data, with significant errors and anomalies arising from this process”. To safeguard research against disaggregation errors, an alternative investigative approach capable of extracting information directly from the study source becomes compulsory. In ratification of multidimensional research methods, Austrian (2014, p98) states, “Using only quantitative analysis is not enough because the richness and complexity of business and the technical relationships that lie outside the Standard Industrial Classification (SIC) codes are excluded in the input-output relationships and other quantitative sources of data”. In this case, qualitative methods are employed to support or supersede the limitations of empirical results (Brown, 2000, p8; Braun and Lowe, 2006; Butcher and Yodsuwan, 2012) and build up an understanding of tourism SME network operations (Komppula, 2014). Stejskal and Hajak (2009) realised two universally accepted methods to identify clusters. These are expert opinion and indexes of specialisation, such as the location quotient, with the former being widely accepted in tourism network analyses.

In comparison to numerically-based quantitative methods, qualitative data is recurrently exemplified by words, observations, opinions, pictures and stories (Sarstedt and Mooi, 2019, p30). This wide variability in research approaches and desired results lends itself to regular applications in tourism industry studies. Localised tourism industries principally consist of SMEs working in networks (Braun, 2005, p5; Cunha and Cunha, 2005; Braun and Hollick, 2006), overlooked by aggregated data, geographic and measurements of geographic locations and industrial specialisation (Brown, 2000, p8 citing Sternberg, 1992; Roberts and Stimson, 1998). Therefore, to uncover collaborative business systems a deeper investigation

is required as specified by Sarstedt and Mooi (2019) stating, “Qualitative data’s biggest strength is their richness, as they have the potential to offer detailed insights into respondents’ perceptions, attitudes and intentions”. This belief is supported by Roberts and Stimpson (1998), Butcher and Yodsuwan (2012) and Komppula (2014) given that qualitative viewpoints based on surveys, questionnaires and observations consistently fill in research gaps and support tourism cluster analyses.

The following qualitative techniques are used in agglomeration studies and, more specifically, tourism cluster identification analyses. The techniques below can be applied to quantitative methods or mixed methodologies but are located under qualitative methods due to the subjective nature of data collection. Furthermore, in view of the broad spectrum of qualitative approaches and statistical analyses extending beyond the focus of this study, methodological emphasis is placed on techniques that directly pertain to micro level tourism cluster analysis.

A) Expert opinion

When research conditions necessitate a preliminary scope on industry backgrounds - for example firms that are involved in networks and agglomerations, what are the perceived boundaries of the suspected agglomeration or even judgements on research tools - the use of expert opinion is a constructive preference (Feser and Bergman, 1999, pp. 17-8; Feser and Luger, 2002, p5; Austrian, 2014). The rationale behind drawing on experience-based opinions is to acquire local knowledge substantiated through involvement in the local setting that is undetectable by quantitative measures and, according to Feser and Bergman (1999, p18), is commonly used in micro-level studies. The diversity of qualitative methods allows for multiple-method approaches incorporating more than one approach to achieve results (Creswell et al., 2006) where collecting data is regularly applied via questionnaires, personal interviews, and group meetings. One model is the Delphi technique which makes use of a questionnaire in ether a group setting or individual surveys with industry experts who then share responses and rate each other’s outcomes both collectively and individually (Miller, 2001; see Fyall and

Garrod, 2005; Yousuf, 2007). A well-rounded assessment of strengths and weaknesses of the Delphi technique is presented by Fyall and Garrod (2005, p90, 96).

In tourism, the use of expert opinion is effective in gaining first-hand knowledge of local industries or in circumstances where a methodologic pathway is unclear, as with Farsari (2018) who used expert opinion to select an initial set of tourism actors (via snowball sampling) in Idre, Sweden. Simultaneously employing an alternative angle of expertly sourced opinions, Farsari (2018) conducted a validation meeting with aficionados to review the study outcomes. In an investigation into tourism networks in the Western Cape, South Africa, Booyens and Rogerson (2016, pp.345-6) blended responses from tourism actors and industry experts to extract figures due to "poor quality of tourism databases in South Africa". Next to providing a way around incomplete datasets, consulting au fait members of tourism regions explicates intangible or impalpable inner-industry perceptions, which Jackson and Murphy (2006) applied to determine the receptivity of local tourism members to cluster initiatives. Likewise, Du Plessis et al. (2014) explored the perception of tourism managers on employment and employability of workers by implementing a Likert scale based on in-depth analysis of related literature.

Reviewing the literature exposed in Chapter 2 does not reveal guidelines for measuring experience level requirements but long-standing local involvement or high levels of professionalism is recurring. For example, seeking expert opinions by professors allowed Creswell et al. (2006, p6) to safeguard content validity of the survey elements. Expert opinions are also used to appraise quantitative measures as Rocha and Sternberg (2005, p282) engaged local knowledge to assess inter-firm and inter-organisational dimensions and LQ cut-off points. In the field of micro level exploratory tourism research, consulting industry experts provides a flexible and pragmatic solution to acquiring information that is commonly unrepresented in national datasets.

B) Survey

A broadly implemented method for collecting both quantitative and qualitative data is conducting surveys via a questionnaire designed to investigate and seek out information in an

exploratory manner (Feser and Bergman, 1999; Jote, 2012, p2; Sarstedt and Mooi, 2019, p61). Research cases facing deficient numbers or a study focus on micro environments, frequently pertaining to tourism-related enquiries, mandates a first-hand investigation extracting knowledge from local participants. Tourism cluster investigations generally require insight beyond spatial agglomeration measures of geographic location focusing on inter-firm relationships, labour pooling, knowledge spillovers and innovative activities (vom Hofe and Chen, 2006; Braun, 2006; Hilal, 2008, p591). Jonker and Pennink (2010, p81) point out how qualitative research, such as surveys, leads to a foundation for further quantitative and qualitative research. In support of the popularity of survey methods in agglomeration and tourism literature, scanning the academic papers contributing to this chapter brings to light 92 studies out of which 44 implemented qualitative methods. Out of 51 studies involving tourism, only 9 did not use qualitative based surveys or mixed methods.

Conducting industrial cluster research commonly encounters challenges resulting from measuring untouchable latent variables representing cluster characteristics. Recognised agglomeration works of Scott (1988), Porter (1990, 1998, 2000) and Rosenfeld (1997) are sceptically viewed as being an “academic and policy fashion item” comprised of vague, at best, boundaries, delineating which industries can be classified as clusters (Martin and Sunley, 2002, p4). An advantage of implementing questionnaire surveys is the ability to categorise and process the extracted data in quantitative formats, thus broadening analytical options and increasing the scientific credibility of the study. The versatility of analytical methods offered by collecting survey data bridges indeterminate cluster boundaries such as trust and collaborative behaviour. Accordingly, tourism data collected from surveys may vary from qualitative, open-ended opinions to scaled responses that may be transferred into quantitative values (see Braun, 2006). For example, in exploratory circumstances mandating preliminary information on the subject, applying an open-ended approach clarifies ambiguities and unknowns by allowing respondents to give opinionated responses and elaborate on research topics (Creswell, 2006, 2017, p206; Simatupang and Sridharam, 2003, p48). Austrian (2014, p100)

posed open-ended questions to develop “high quality knowledge” about the clusters in focus. In contrast, closed-ended questionnaires present pathways to quantify feedback by obtaining data in scaled measurements depicting grades of importance. In this case, a choice of scaling is decided upon where answers are measured in gradations constructed to be transferred into numerical values, for instance a 5 or 7-point Likert Scale where respondents rate questions ranging from extremely negative to extremely positive (Faulner and Tidswell, 1997; Miller et al., 2007, p7; Beritelli, 2011).

Alternatively, semantic scales present opposing adjectives such as young/old, good/bad or yes/no that are transferrable into statistically measurable formats. Otherwise, responses can similarly be rank-ordered where respondents are probed to rate alternatives by preference (Stejkal and Hajek, 2019). Therefore, questionnaires and surveys are not entirely restricted to qualitative analyses as suggested by Cunha and Cunha (2005, p58) who implemented a field survey where each respondent was asked to rate sub-factors and variable impact on local development on a scale from +2 to -2 in a rank-order questionnaire. In the case of tourism studies, surveys provide valuable input into recognising distribution channels (Pearce, 2004, 2005; Shaw et al., 2011), inter-firm transactions (Hilal, 2008), and relationships alongside delineating the size and number of firms within a suspected cluster (Briassoulis, 1991, p489; vom Hofe and Chen, 2006, p22). The multiplicity of techniques and versatility in design substantiates the employment of surveys in tourism studies considering undocumented or intangible constructs.

Developing a survey begins with pinpointing assessment goals as the objectives directly correlate with the overall research goals and act as the foundation for investigative direction in a questionnaire (Sarstedt and Mooi, 2019). In the field of agglomeration studies, survey goals frequently target insight corroborating the existence of a cluster, delineation of boundaries, understanding business environments and identifying key players within the region in focus (Feser and Bergman, 1999, p27). For example, Richardson et al. (2010, p955) employed a semi-structured questionnaire partially composed of open-ended questions to

explain SME growth in Kenya's coastal tourism region avowing, "it is not enough to look at individual characteristics but considerations should also be given to the characteristics of the business and the business environment". In the case where data is collected by personal interviews, a questionnaire frequently consists of more in-depth investigations into specific topics underlining survey goals whereas when web surveys or group meetings are implemented, survey questions must be presented in a timely manner where the researcher is gathering quick data without losing the attention of the respondent. Whichever survey process is selected, Sarstedt and Mooi (2019) suggest deciding on statistical methods for data analysis before constructing the research questions due to the demands specific statistical techniques place on data. In consideration of the wide-ranging methods employed to statistically analyse questionnaire data, the topic is presented later in this chapter in the research design section.

C) Personal interviews

Speaking to respondents, either in person or by telephone, is an effective method for obtaining qualitative information while building trust between the researcher and respondents (Buhalis, 2000, p119). Interviews are set-up to be structured, semi-structured or unstructured. A structured interview follows an explicit question and answer format as opposed to semi- and unstructured interviews that resemble conversations (see Jennings, 2005, p101). Braun (2006), in an action research approach, conducted personal interviews with network actors to formulate the portal model. Using a questionnaire as a guide, Austrian (2014) assembled expert opinions in 45 minutes to two-hour long personal interviews alongside providing an understanding on industrial cluster concepts to interviewees. Looking into Australian wine tourism regions, McRae-Williams (2004) conducted personal interviews with 32 wine and tourism industry experts to classify tourism clusters. Although an impediment with employing personal interviews is the time required to collect data, Pearce et al. (2004, p399) assert, "In depth structured interviews constitute the main means of data collection for the supply-side

component of the destination". A well-rounded synopsis of interview techniques is presented by Jennings (2005).

D) Observations

An option for collecting qualitative data when no alternative methods are feasible, or in cases where the researcher is profoundly involved in the examination cluster, is through observations made by the researcher. Employing this method is advantageous to resolve unclear issues that are undetectable through quantitative and survey-driven qualitative techniques but require visual documentation in some form to remain useable in scientific research (Sarstedt and Mooi, 2019, p16). In tight-knit tourism communities, surveys and personal interviews seeking to publish perceived sensitive information are unable to extract information (Feser and Bergman, 1999, p28; Beritelli, 2010) leaving little option but to rely on observations. In tourism cluster research, observational methods are limited due to challenges in observing latent variables such as interdependencies, labour pooling and collaborative behaviour. Jackson and Murphy (2002) added personal observations to local tourism industries in NSW, Australia and Victoria B.C., Canada, based on the theoretical works of Hjalager (1999) and Porter (1990, 1998) to analyse clustering properties of the two locations. In specific cases of spatial proximity, observations are useful when an observer is well-versed in agglomeration studies considering geographic distances. However, without a clear-cut geographic distance to delineate clusters, adjoining qualitative and quantitative methods are required for scientific validation of observations made by either the researcher or respondent (Creswell, 2017).

4.4 Conclusion

Closing in on an all-encompassing viewpoint of tourism cluster identification was an onerous task, involving a multi-step procedure beginning with a clear and concise understanding of agglomeration research. Alongside performing literature reviews, an in-depth comprehension of the local tourism industry was required to appropriate theoretical approaches for constructing a successful methodological pathway leading towards an analysis of the local Swakopmund tourism industry. This began with a look into historical events that influenced

the formation of the current industrial set-up. The study uncovered definitive characteristics that supported further analyses and shaped research methods. Swakopmund's tourism industry has undergone multiple governmental regime changes and a handful of economic boom and bust scenarios that have inadvertently bequeathed a sense of steadfastness amongst the community. This was, in fact, an initial characteristic influencing the presupposition of a tourism cluster. Therefore, with Chapters 2 and 3 supporting a further investigation, the challenge was underway to formulate an investigative process to confirm cluster existence in Swakopmund.

Given the significance of statistical and econometric applications towards agglomeration procedures, it was crucial to this study to gain a well-rounded understanding of arithmetic approaches by diving into aggregated methods to analyse industry specialisations and interdependency hotspots. A fundamental challenge in assessing an industrial cluster is measuring intangible latent variables and qualitatively immeasurable characteristics (Feser et al., 2001) requiring the foundation of qualitative measuring techniques to be transferred into appraisable applications. Measuring the geographic proximity of firms in a specific industry is a primary step towards identifying industrial concentrations. However, further evaluation of industrial specialisations, inter-firm behaviour and interdependencies are required to determining clusters. A variety of quantifying options exist such as appraising employment concentrations using the Gini coefficient, while the Getis and Ord G* statistic contribute to identifying similar industries located within regions/countries. An aggregate method of regional comparison is the Moran's *I,* which measures patterns across regions in degrees of spatial autocorrelation. Alternatively, gauging industry specialisations identifies potential interdependencies by measuring trade patterns (IO matrices), regional versus national concentrations (LQ and EG models) and statistically reducing large datasets to identify concentrations (PCA and FA analyses) is actively employed in studies where aggregate data is available.

In the cases involving micro-regional cluster measurements in less developed regions, two obstacles recurrently exist complicating the use of these quantitative techniques. These are the lack of accurate national data and imperfections accrued from condensing or transforming aggregate datasets to a municipal level. This chapter identified that a frequently employed alternative to qualitative assessments is the use of qualitative surveys and interviews. Extracting data from personal contacts fills quantitative research gaps by providing first-hand insight into industrial make-ups and inter-firm behaviour. In addition to missing aggregate trade data, delineating the geographic boundaries, firm interdependency levels and member counts of local tourism industries is not always apparent. A deeper investigation is then required to clarify members and identify business patterns relating to tourism clusters. For this reason, qualitative methods are frequently used in tourism cluster analyses.

Chapter 5 assembles the methods presented in this chapter and lays out the research design in a chronological order. The next chapter covers theoretical foundations in conjunction with the physical undertakings involved in designing the research and collecting and processing the data. It was imperative in this chapter to understand econometric methods employed in related agglomeration studies for two reasons: 1) encompassed within the equations are the key measurable agglomeration characteristics and components proven by research, 2) building a qualitative research tool founded on the models of related agglomeration research facilitates analysis of the results and assessments of the results with regards to ancillary agglomeration studies. The methods discussed in this chapter significantly altered the researcher's procedural approach and furthermore, contributed towards research design and constructing study tools discussed in Chapter 5.

Chapter 5: Research Design

5.1 Introduction

Chapter 4 presented an assortment of methodological pathways to measure the effects of industrial agglomeration. In accordance with research protocols, there is a balance to be achieved in quantifying sometimes intangible variables, requiring either accepting the data limitations of quantitative methods or reducing accuracy in converting qualitative data into numerical format. In spite of the ongoing debate between appropriate applications of qualitative and quantitative research methods, measuring constructs such as trust and cooperation becomes afflicted with immeasurable benefits in the quantitative arena. In fact, this posed a fundamental challenge in this study, exacerbated by the fact that the tourism industry is rife with inconsistencies in industrial structure from region to region.

In the case of this study, a considerable amount of input was gained by stepping away from agglomeration research and into related studies of tourism distribution. The examples presented in tourism distribution papers directly related to this study in many situations. First and foremost were the similarities between Swakopmund and local tourism industries under the works of Pearce (2005, 2009), Schlott (2007) and McKay (2012, 2014, 2016a) where an inclusion of activity-based tourism enterprises in their study regions coincides with the foundations of the tourism industry in Swakopmund. After reviewing a broad spectrum of tourism literature it was realised that, in the lion's share of tourism distribution studies, surveys and questionnaires were employed to extract primary data from semi-sensitive economic environments and, in several cases, expert opinions from locals played a decisive role in research design and final analyses. The outcome of pursuing a wide-scoped look into tourism research resulted in choosing a mixed-method research design to encapsulate the multifarious task of identifying a tourism cluster and measuring agglomeration properties.

This chapter breaks down the research used in this study into three phases corresponding to Creswell et al. (2006) in achieving the research goals identified in Chapter 1 of this study (see also Austrian, 2014). The three phases are summarised in the following figure:

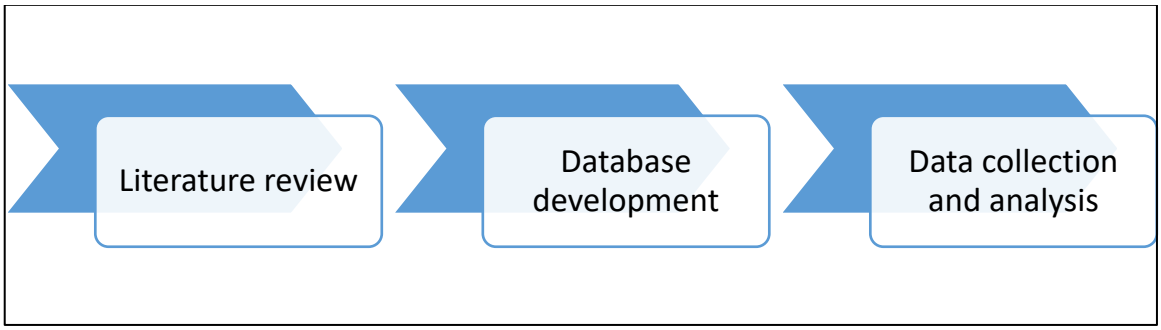

Figure 5.1 Three phases of achieving research goals

Adapted from Creswell et al. (2006)

The first phase began with a deductive approach that is clarified by Kim (2019, p89) citing Neuman, 2014) averring, "The *deductive* approach starts with theory, developed from existing literature and studies, and then the researcher designs the strategy and method to test the theory". Therefore, in the literature review (Phase 1), a wide-scoped viewpoint on agglomeration and clustering theories was gained for the purpose of connecting commonalities found within the literature and local tourism industry structure (Pearce, 2005; Austrian, 2014, p99). Through the cohesions unearthed, an outline of potential cluster character traits was established as a guideline for study direction and appropriation of research methods (Creswell et al., 2006, p6). To obtain a more in-depth understanding of variations in industrial cluster research and methodological options, a systematic literature review (SLR) was performed. The underlying value of the SLR is in assimilating greater quantities of research publications and coding the works into methodological variants, distinctions in objectives, and research topic similarities (Peterson et al., 2008). The findings of the SLR revealed essential methodological pathways to undertaking this study being; a subjective investigation into the history of the tourism industry in Swakopmund highlighting events and industrial structures characterised in agglomeration research and an objective mixed-method approach measuring interdependencies within the local tourism industry.

Phase 2 entails the compilation of a tourism-related business database for Swakopmund (see Figure 5.1). The wide bandwidth of tourism effects on local businesses required a hands-on investigation involving the entire business community. The framework for Phase 2 was derived from the literature and methods uncovered in Phase 1 of this study, where the primary aim was to understand the flow of tourism through the economic system, to identify hotspots of tourism multiplier effects and to define the boundaries of the tourism industry. Feser and Bergmann (1999, p17) outline two stages in regional cluster analysis beginning with “an initial scan of the regional economy using detailed quantitative sources”. Secondly, they suggest a “painstaking investigation of specific industrial features/groupings identified in the scan”. To accomplish the task, personal discussions, historical reviews and observations were made in a wide variety of businesses and local personnel between October 2018 and November the following year to compile a complete database of businesses involved in tourism.

The third phase of the study includes the use of secondary data to do a geographical analysis of spatial proximity; an analysis of the Namibian Labour Force survey data; and determining the existence of interdependencies being labour pooling, cooperation, collaborative behaviour and knowledge sharing. The quantitative methods in Phase 3 developed from information obtained in Phase 1 and 2 investigations underpinning influential agglomeration works, historical events in the town’s tourism industry and common methods of cluster measurements found in the systematic literature review.

5.2 Phase 1: Systematic Literature Review Mapping

Subsequent to the literature review on agglomeration theories, a systematic literature review was used to tackle the wide scope of topics surrounding this study and to understand factors contributing to the formation of a suspected tourism cluster in Swakopmund. Heidari et al. (2018, p679) suggest implementing an SLR to “provide a systematic procedure for identifying the nature and extent of the empirical study to answer research questions”.

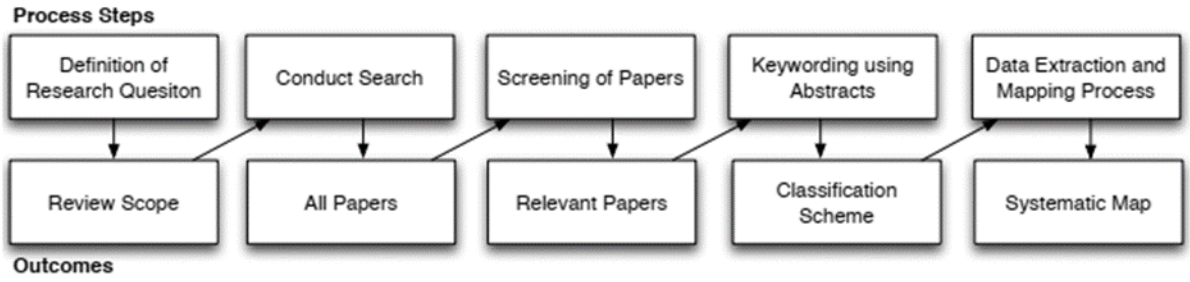

Figure 5.2 Systematic mapping process

Source: Petersen et al. (2008, p2)

The research papers represented in Chapter 2 are organised as a chronological investigation into the history and concepts of agglomeration research, providing a theoretical base for research methodology and design. A look into the history and past events of Swakopmund's tourism industry was followed with an investigation in Chapter 3, which presented a chronological account of tourism growth in Swakopmund and the SADC region. In accordance with Nordin (2003), the historical exposition duly identified the web of business and overall tourism industrial trends of the region. Incorporating regional tourism history provided a platform for study design as supported by den Hertog et al. (2001, p11) stating how a cluster study purely focused on present day clustering attributes, "without such a broad and historically contextualised perspective, will yield a shallow and myopic view". The last part of the literature review focused on planning methodology procedures and building the research design. Especially relevant for the study were works on activity tourism (see McKay, 2016) and tourism distribution (see Peirce et al., 2004 and Andrade and Smith, (2019)). The detailed contributions of Buckley (2007, 2010), Cater (2006) and Swartbrooke et al. (2003) underscored the local adventure tourism industry in Namibia by elucidating positive global adventure tourism growth trends. This research material significantly contributed to the questionnaire design, which is covered in section 5.4.3.1.

5.3 Phase 2: Compilation of tourism-related database

This phase entailed the gathering of business information to compile a database of firms in the tourism industry in Swakopmund. In this phase, both secondary data sources as well as

visits to firms and informal interviews (qualitative design) were used to compile the database. The process followed and the rationale are subsequently explained.

During an upwelling of industrial and tourism cluster research reviews, resident historical occurrences and prior to conceptualising a completed methodological pathway, an investigation was necessary to discern the outer fringes of where tourism reaches various business sectors (Nordin, 2003; Chhetri et al., 2013, p563; McKay, 2016). A fundamental challenge at hand was estimating the scope of measuring tourism businesses and their suppliers. This corresponds with Rosenthal and Strange (2002, p3) in identifying industrial cluster characteristics, where they propose understanding a city's industrial scope, defined as "the degree to which agglomeration economies extend across industries" enables researchers to monitor the closeness of interactions. In a more tourism-related case, Baggio (2011) embarked on gathering brochures and catalogues as well as listings of association members to define existing networks within the local tourism industry. In the broad scope of the cluster research examined, an all-encompassing view emerged that clustering universally incorporates and identifies firms involved and their geographic proximity to one another. With this to hand, establishing an understanding of the geographic location of tourism firms was combined with a preliminary investigation into existing businesses involved in tourism in the area under investigation.

This phase of this study aimed at establishing the extent of the local tourism-related database – which firms are involved in the tourism industry, where they are located and what physical boundaries delineate these networks. A similar process to that of Baggio (2011) was undertaken and was enhanced with informal discussions with business owners to extend the database to include all tourism-related firms. The reasoning is that the tourism industry in Swakopmund is interconnected to a wide variety of businesses, with limited information being available on the entirety and extents of tourism's network boundaries (see Pierce, 2009, pp. 508-9; Chhetri et al., 2013, p563; Andrade and Smith, 2019). Together with the research work investigating relevant literature, the intent of this phase is to:

- Compile an updated database of businesses involved in the tourism industry in Swakopmund.
- Gather information necessary to construct a business classification chart by means of informal interviews.
- Employ a situational analysis framework on businesses interviewed to grasp the pathways of tourism industry into local businesses and key business linkages used for the research design in this study.

Aspirations were set to identify the firms that are most relevant to the tourism industry in Swakopmund in compliance with Maulet (2006, p46) and tourism distribution studies by Pearce (2004, 2009). It is also recommended by Buhalis (2000) to identify a sample size as close to the total population as obtainable and this necessitates the construction of such a database. A similar process as that offered by Baggio (2011) was used. The Swakopmund branch of the Namibian Tourism Board was consulted and tourism registrations were obtained from their website as the first step. This was followed by a physical visit to business establishments and informal engagement with business owners to extend the database. Initial contact was made by phone, email or on a walk-in basis.

To facilitate an orderly process traversing the entire town, the research began in the middle of Swakopmund and worked in an outward direction. The preponderance of businesses identified in town were SMEs. Due to the vast number of micro businesses and informal traders in the township, Mondessa, it was set aside for the tail end of the study with the exception of a complex of registered businesses on the western fringe of the region. Local knowledge of the researcher was further used to decipher business categorisation as the discussions with business owners provided insights into inter-industry relationships and the web of local networks (Feser and Bergman, 1999; Buhalis, 2000).

The situation analysis, inspired by du Rand and Heath (2006, pp16-17) assessing the potential of food tourism in South Africa, allowed business owners to converse about issues vis-à-vis the local tourism industry and the overall well-being of the economy (see also Czernek, 2013, p90). In the case of non-tourism businesses, these informal discussions were pointed in the

direction of their firm's commercial transactions linked to the tourism industry. Each business was also listed as local or non-local with a residence precondition cut-off of two years. The procedure continued from October 2018 until November 2019. The information obtained was recorded on a notepad and transferred into Microsoft Excel. In research cases involving situation analysis techniques, statistical analysis is undertaken to reduce biases and perform data assessments (see Essebar, 2020; du Rand et al., 2004; du Rand and Heath, 2006). However, the aim of using the situation analysis was for structural purpose to conduct open-ended, informal interviews. The information obtained was for building a business classification system and not for a finalised analysis of the local business networks.

The end result of this phase was the construction of a complete database of businesses involved in the local tourism industry. To classify the businesses, a business classification chart (Haber and Reichel, 2005) was constructed. Figure 5.3 illustrates a breakdown of business categorisations derived from tourism agglomeration studies (Capone, 2004; Pearce et al., 2004; Pearce, 2011; Chhetri et al., 2013, p565) with three primary classifications extracted from tourism distribution studies exemplified by Andrade and Smith (2019) who performed a similar reconnaissance on tourism distribution channels in Fernando de Noronha, Brazil. Finally, the geographic locations of businesses were confirmed with the physical visits to the businesses, which led location identification on a town map for spatial analysis, used in assessing spatial proximity (Phase 3).

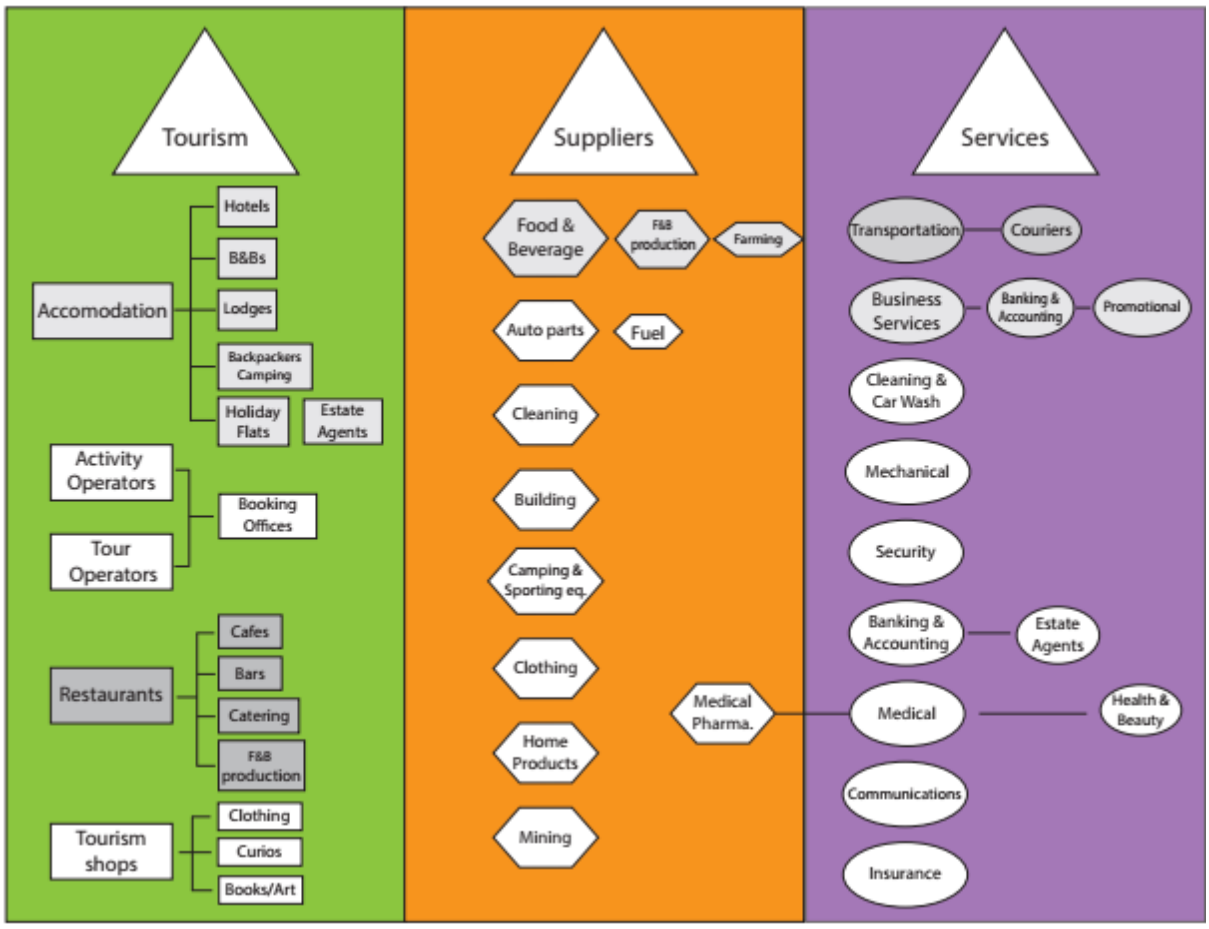

Figure 5.3 Business Classifications

Source: Author's own compilation

5.4 Phase 3: Data collection and analysis

The third phase of the study used a quantitative case study design. The data used in the quantitative analysis were derived from three sources: (i) the geographical database compiled in Phase 2 of the study, (ii) the 2018 Namibian Labour Force Survey (obtained from the World Bank) and (iii) a structured questionnaire. Each of these are subsequently reviewed.

5.4.1 Geographical data and analysis

The analysis of spatial proximity began with identifying business localities in Phase 2 of the study. Geographical data were recorded on paper before being entered into Microsoft Excel and subjected to a network/graph analysis (refer to section 4.3.2). An assessment of previous methods in the literature uncovered that defining geographic boundaries, both industrial and tourism clusters, necessitated calculating Euclidean or Manhattan distances to identify

concentrations and hotspots (see Chapter 4, section 4.3.2). Faulner and Tidswell (1997, pp.12-13) appointed a distance of 4 km to delineate tourism boundaries where, outside of the 4 km limit, were distinguishable suburbs lacking tourism activity. An alternative method defining boundaries is visual inspection as performed by Chhetri (2013, p567) and Kim (2019, p150) revealing the municipal boundaries, excluding riverbed locations, fell within cluster divisions of the two studies outside densely populated metropolitan regions.

The analysis of clustering in Swakopmund began with plotting locations, performed by obtaining a CAD map of Swakopmund from the town planning municipal office and converting the file to Adobe Illustrator CS6 graphics program. The choice of using CS6 was primarily due to familiarity with the software and the flexibility of artwork and layering options within the program. An original CAD map provided plot numbers without disclosure of business addresses, so each business location was recorded manually before being transferred onto the Illustrator map. Business premises were drawn with colour coding according to business segments based on the classification scheme used in Phase 2. Another advantage for choosing Illustrator is using the 'layers' option in the art board. This allowed each business classification from Figure 4.1 to be separated into different layers.

Similar mapping techniques were employed, without Illustrator, to map tourism hot and cold spots by van der Zee et al. (2020) and manufacturing concentrations by Liao (2020). The advantage of layering options, where multiple art boards may be viewed together or individually, are that each segment could be assessed independently or in conjunction with other industries. This option provided a concise method to visualise agglomerations in their entirety, or all businesses together, as well as segmented industries. To further the spatial analysis, enquiries into buyer and supplier perceptions of the impact of spatial proximity on inter-firm relations were included in the questionnaire (see section 4.4.2.3).

5.4.2 Namibian Labour Force survey data analysis

To complement data obtained from the database compilation and to support prospects a quantitative analysis of the concentration of service-oriented employment in the town was

compared to national employment (Austrian, 2014, p99). A key criterion identified by vom Hofe and Chen (2006, p20) suggests the spatial proximity perspective should be measured against a “larger economic unit” such as the nation, which is in line with Feser and Bergman (1999) advocating an overall scan of the regional economy based on quantitative data.

To realise this requirement, the Location Quotient (LQ) (see Chapter 4, section 4.3.3) was selected due to its widespread popularity amongst previous cluster studies (Feser and Bergman, 1999, p19; Santos, Almeida and Teixeira, 2008, p20) and the feasibility of available aggregate data. Therefore, the LQ version used in this study replaced the number of employees with individual firms. The reasoning behind this alteration is that many firms are owner-operated employing only casual or freelance guides. This offsets the significance of smaller firms. Seeing that the aim is to measure firm specialisation and firm location, placing equal values upon businesses was initiated to achieve the desired effects. Furthermore, given the size of informal employment in tourism and potential imbalances in available funding from international tourism businesses versus local SMEs, counting registered businesses provided an adequate and reachable Location Quotient (Novelli and Hellwig, 2011; Janis, 2011, p87; Nyakunu and Rogerson, 2014).

Equation 5.1 *Location Quotient*

$$LQ_i = \frac{z_i/z}{Z_i/Z}$$

The LQ applicable in this study in this study calculates the ratio of tourism employment:

- z_i = Number of employees in the ith tourism sector of the region
- z = Total number of employees in the region
- Z_i = Number of employees in the ith tourism sector in the country
- $\boldsymbol{Z}$ = Total number of employees in the country

As supported by Feser and Bergman (1999), LQ results are in no way a final determinant of an existing tourism cluster. Instead, the figures need to be analysed in conjunction with micro information, typically obtained through questionnaires.

5.4.3 Questionnaire, survey and data analysis

While the LQ measured firm concentration on a relative aggregate scale, it does not give detailed information about characteristics such as labour pooling and firm interdependencies that are prevalent in tourism clusters. Therefore, a survey was undertaken to complement the previous two analyses. The aim of the survey is divided into two objectives: (i) to measure the extent of labour pooling and (ii) analyse interdependencies between firms corroborating the presence of a tourism cluster. Labour pooling is an agglomeration effect and is frequently specified by cluster research as being a benefit from industrial agglomerating (Porter, 1998; Ellison et al., 2010; Chhetri, 2013; Yang, 2105 p435; Kim, 2019). The underlying assumption maintains that, when a given industry concentration intensifies, the local skilled labour suited for that industry increases (Marshall, 1920). Consequently, firms locating workers as well as labour search costs decrease which directly benefits local firms (Marshall, 1920; Krugman, 1991; Feser and Bergman, 1999, p9). Additionally, Porter (1998; 2000, p6) suggests that as labour pooling increases so do knowledge transfers that translate to increases in innovation derived from information and production process sharing. Pursuing the trail of labour mobility was chosen for two primary reasons. Firstly, stemming from Marshall (1920), labour externalities consistently arise throughout industrial and tourism research as being a critical component of agglomeration benefits (Kim, 2019, p81). Secondly, in the light of the situation in 2020 where many tourism firms were non-operational, gathering labour in primary and secondary data levels was operable seeing as employment records existed in the majority of businesses interviewed. This challenge was overcome by employing questionnaires and seeking expert opinions in interviews.

Contravening the benefits of labour mobility, the tourism work force is widely perceived as being transient (Hjalager and Anderson, 2000; Rollins and Vaugeois, 2007) and typically made up of an unskilled workforce as summarised by Riley (2004, p137) who writes, “the majority of jobs, even those that require a degree of skill, contain skills and knowledge that can be easily acquired either by short periods of training or by experience”. Furthermore, Choy (1995, p

133), in an investigation of tourism occupations in Hawaii, found that 50% of respondents working in tourism perceived a lack of opportunity for job advancement. With labour discernments aligning beside industries dominated by unskilled labour (Choi, 2020), coupled with a longstanding perception that ownership in tourism businesses is skewed towards the elite and, in a national policy context, or as Sherborne (2016) perceives it, the Namibian government has put aside the tourism industry in favour of more politically lucrative options. However, in tourism industries, the quality of labour at multiple levels (e.g. from cleaners to hotel managers) and the service provided significantly affects the overall tourism product(s), as supported by Ellison et al. (2010, p435) stating, “Labour productivity is one of the most important variables governing tourism firms’ production activities and affecting their competitiveness”.

In the case of activity tourism products, local experts and well-trained guides provide not only quality, product enhancing services but also ensure safety levels mandatory to maintain their respective activities (Buckley, 2010; McKay 2012, p 38; McKay, 2014, p5). For example, skydiving operations require licenced pilots and tandem masters, dolphin cruises require well trained captains and tour operators frequently require administration staff possessing comprehensive knowledge about the tourism industry (McKay, 2012, 2018; see Buckley, 2010, ‘Adventure Tourism’). This study recognises the abilities and skills of workers in the tourism industry as being vital to the sustainability of tourism SMEs in Swakopmund and managerial decisions frequently require extensive local knowledge of the natural and social environments intermixed with legal and ethical considerations (McKay, 2012, pp.38-9). Henceforth, a final consideration of the choice of investigating labour pools stems from the aim to present a value of employment opportunities created as a result of firms clustering which, according to Kim (2019) and Chhetri et al. (2013), increases tourism labour productivity. Quantitative measurement methods depicted in sections 4.3.2 and 4.3.3 are employed in labour pooling studies by Kim (2019), Chhetri (2013) and Almeida and Rocha (2018) all of

whom made use of available aggregate data in the UK, Australia and Brazil. However, the situation in Swakopmund required primary data collection via a structured questionnaire.

The second aspect examined using a survey, is the fundamental rationale for further considering interdependencies within Swakopmund founded in a widespread practitioner's outlook from agglomeration studies acquiescing firm interdependencies exhibiting cooperative behaviour, which is a fundamental determinant of a cluster (Rosenthal, 1997; Porter, 1998; vom Hofe and Chen, 2006). In tourism, individual firms benefit from engaging in collaborative transactions, as Porter (1998) suggests, to elevate the quality of regional tourist product and in consequence, becoming a more globally competitive product (see also Dwyer and Kim, 2003). The basic assumption is that cooperative and collaborative behaviour – both competing and working together simultaneously – strengthens a local industry by achieving economies of scale with improved buyer-supplier networks, increases in innovation via knowledge sharing and competitive driven aspirations concomitantly fostering a local community-orientated business climate (Porter, 1998, 2000; Ketels et al. 2012).

Developing cooperative business environments integrates fostering, upholding business relationships, knowledge sharing, respecting ethical guidelines and working together to sustain or improve the competitive standing of the regional tourism product. This, according to Porter (1998) is accomplished either via collaborative organisations in the form of destination marketing agendas, knowledge pooling organisations and community action movements or without any guidance from structured associations. Therefore, in industrial and tourism cluster studies, seeking out identification methods vis-a-vis the benefit measurements of agglomerations and obtaining collaborative track records in the target industry are common research goals (Christie et al., 2005).

In the case of tourism clusters, measuring interdependencies is a daunting and difficult task when research methods are reliant on aggregate data providing input-output linkages that are rarely obtainable in the tourism industry (Kim, 2019, p65). Additionally, capturing intangible

constructs such as trust and cooperation is subjective in nature, as stressed by Briassoulis (1991, p489) asserting that input-output measurements of inter-firm relationships fail to summarise a full-bodied picture of interdependencies stating, “Because of the inter-relatedness of tourism activities, the interactions effects may be important and, consequently, the technical coefficients may not realistically represent the true relationships amongst sectors”.

A key challenge in this study was determining an appropriate method to uncover cooperative and collaborative transactions in Swakopmund. From the literature reviewed, employing a questionnaire was the most pragmatic and practical solution in view of the circumstances (Rosenfeld, 1997, p10; Feser and Bergman, 1999, p17; Haber and Reichel, 2005, p260).

5.4.3.1 Questionnaire Design

To encapsulate the investigation of geographic proximity, labour pooling and interdependencies, a single multi-purpose questionnaire was constructed (du Plessis, Marias and Saayman, 2016, p10) and administered by the interviewer. The questionnaire design originates from a mixture of sources, these being the literature discussed in Chapter 2 and analysis methods underlined in section 4.3 in the previous chapter. The questionnaire was constructed to accommodate the assortment of business categories identified in Figure 5.2. Accompanying thematic underpinnings, questions considered qualitative geographic and distance measures (see Chapter 4). The questionnaire is included in the Appendix to this study.

The questionnaire used 5-point balanced Likert scale questions, as proposed by Cunha and Cunha (2005, p58), and was designed containing equidistant scale variations to simplify statistical processing and to maintain a steady and coherent structure for respondents. The balanced Likert scale was used to capture all agglomeration effects highlighted in this study. In conjunction with Likert scale ratings, 7 open ended questions were incorporated to provide more insight and a concluding commentary section allowed respondents to provide further perceptions and observations vis-à-vis the local tourism industry in Swakopmund. Open

ended responses were categorised and coded for statistical analyses subsequent to collecting 50% of the required responses. Before segmenting the agglomeration benefits of geographic proximity, labour pooling and interdependencies; in questions 1 through 5, respondents were asked the age of the business, number of employees and their respective position in the business. An essential component of respondent validity was to determine the position held in the firm and how long they have been employed at the firm and in the industry. Distinguishing inter-firm behaviour from an external standpoint requires knowledge of the local industry's networks and the firm's inter-industry commercial and social transactions (Watkins and Bell, 2002, p18). If the person is an owner, then s/he is asked whether they started the business and whether the firm is part of a larger conglomeration of businesses. This provided a profile for subsequent analyses similar to that performed by Richardson et al. (2010) on a tourism study in Kenya.

A) Geographic proximity

A primary determinant for industrial clusters stated by Porter (1990, 1998), Krugman (1991), Folta et al. (2006) and Chhetri (2013, p564) is the spatial proximity of firms within a specific industry. Although Porter (1998) does not define specific geographic boundaries in Euclidean terms, a collocation of firms is a widely accepted precursor to examining and determining business clusters. Rosenfeld (1997) and Porter (1998) list geographic concentrations of related firms as a foundation for firms experiencing agglomeration benefits. Therefore, even in the absence of a general definition of minimum distances required to undertake spatial analyses at local levels, the questionnaire incorporated business proximities into the study. A criterion for using this technique was provided by Austrian (2014, p100) who presented a constructive layout of questionnaire enquiries concerning firm location decisions. In the case of the questionnaire, results divulging conclusive evidence, either by high Likert-scale ratings, in buyer-supplier networks being affected by spatial proximity within municipal boundaries.

To understand the effects and guidelines measuring spatial proximity, a town map was sub-divided into 7 sections determined from the business survey conducted in 2018 when business

owners and managers were informally queried on their perceptions of a range of areas in Swakopmund (Czernek, 2013). The map is shown in Figure 5.4.

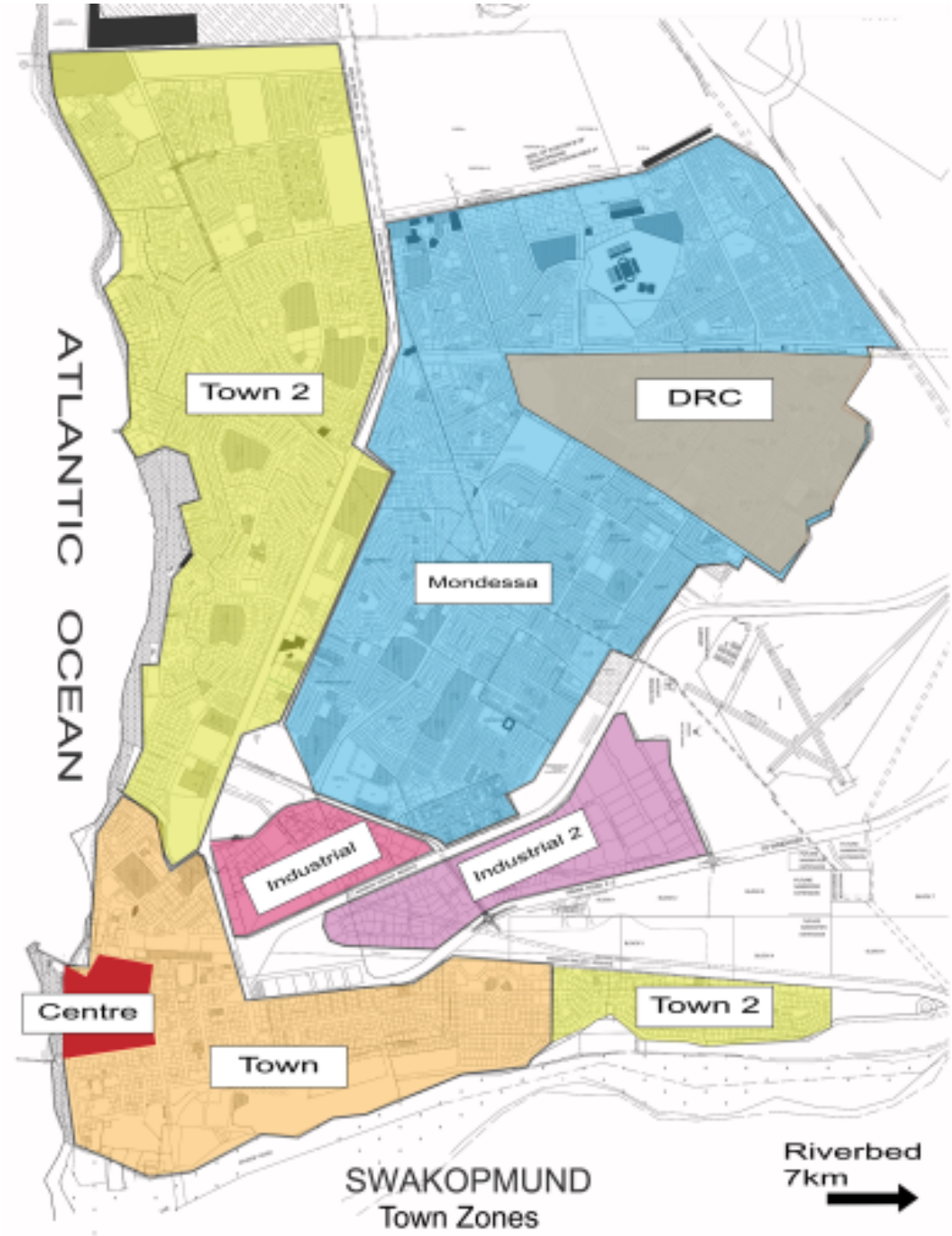

Figure 5.4 Swakopmund town zones

Source: Municipality of Swakopmund

In the spatial analyses phase of the study, respondents were asked to convey their perceptions of the benefits of proximity and agglomeration with a rank order scale ranging from 1 to 5 with 1 being location having zero effect on buyer-supplier networks. A similar

method was employed by Stejskal and Hajek (2019, p10) measuring knowledge acquisition with innovative firms. Question 9 measures percentage of local suppliers used by tourism firms as suggested by Porter (1998) in his diamond model of competitiveness. Question 17 looked into supply-side town zone preferences to assess the significance of location within the city limits. The theoretical foundations are expressed in Rosenfeld (1997) with the cluster concentration distances presented by Feser and Bergmann (1999, p35). Question 18 probed business networks extending to the closest city of Walvis Bay, 23 kilometres south, to further establish agglomeration benefits of firms locating in Swakopmund. Again the concept is derived from the Moran's *I* equation and founded in Krugman (1991) agglomeration and transport costs analyses (see Majewska, 2015, p418-19; Kim, 2019).

B) Labour Pooling

Labour pooling is a benefit from industrial agglomeration where clustered firms in a similar industry hire local skilled labour reducing search and training costs, increasing inter-firm knowledge transfers and innovation (Marshall, 1890; Malmberg and Maskell, 2002, p432). Alongside increased labour availability is an increase in new start-up firms and product innovation as labour pool members share information on inside industry matters as Porter (1998, p88) states, "The social glue that binds clusters together also facilitates access to important resources and information. Tapping into the competitively valuable assets within a cluster requires personal relationships, face-to-face contact, a sense of common interest, and "insider" status".

Knowledge sharing benefits stemming from employees changing jobs was identified by Saxenian (1994) as being an integral part of the success in the building of Silicon Valley's tech cluster. The overwhelming importance of personal contact increasing innovation is supported by Rocha (2004, p26, 37) realising that, from a qualitative research standpoint, "existing official national and international data sources for cluster analyses are limited by conventions on official classification systems of economic activities and industries. These sources were not

designed to cover inter-industry and inter-firm linkages". This challenge is compounded by the globally consistent lack of comprehensive statistical tourism labour data (Riley, 2004, p143)

To adjust for disparities in national data, errors of aggregate data reduction and, in the words of Chhetri (2013, p560), "obtaining tourism industry data in an accessible and usable form is recognised globally as a significant problem", a 5-point balanced Likert scale was constructed to measure the existence and agglomeration effects of labour pooling. The labour pooling benefits queried were knowledge sharing, reduced search costs and increased innovation.

To better understand the field of labour, question 6 in the questionnaire asked respondents to rate the skill levels of their employees according to Table 5.1. The employee skill levels chart was designed from information obtained in informal interviews (see Haber and Reichel, 2005 p265) and a skill chart constructed by Du Plessis et al. (2013, p6). Managers and owners were given the choice to determine the skill levels of each employee. The rating system was in place to counter widespread assumptions that the tourism industry exhibits high concentrations of lower educated workers (Choy, 1995; Hjalager and Anderson, 2000, p117; Riley, 2004). Questions 12 and 16 specifically query labour mobility and opportunity for employee advancement with regards to skill level ratings. A similar approach was performed by Saayman and Geldenhuys (2003) employing a 5-point Likert scale to extract important tourism skills from an employer's point of view. The tourism industry's labour pool quality was rated by questions 13-16 where ease of finding specific skill levels locally was examined and as Kim (2019) hypothesises, higher skill concentrations are indicative of higher productivity levels.

C) Interdependencies and Interconnectedness

A widely recognised industrial endogenous determinant in clusters are interdependencies built amongst firms in a specific industry agglomerating in geographic proximity (Markussen, 1996; Porter, 1998; Malmberg and Maskell, 2002, p433; Nordin, 2003). Buyer-supplier networks strengthen acquired trust leading to increased collaborative behaviour, knowledge sharing and a healthy competitive structure labelled coopetition (see Porter, 1990, 1998 diamond model of

global competitiveness; Czernek, 2013, p87). According to Hjalager (1999, p9), “Trust is considered essential in day-to-day transactions, but is also regarded as critical for the long-term survival and restructuring of the local business structure”.

A consistent challenge with design methods to capture interdependencies is the invisibility of the actions (Malmberg and Maskell, 2002, p435) and, therefore, this section of the questionnaire was designed to investigate intra-industry interdependencies by measuring owner/manager perceptions concerning buyer-supplier relationships, geographic proximity preferences, knowledge sharing and the significance of local collaboration efforts via an organised association. Buhalis (2000) recommends an approach that encompasses both a demand and a supply perspective. When constructing intra-firm behaviour and network structures measurements, the foremost interrogates ruminated were:

- Are firm behaviours and network structures (spatial proximity and buyer/supplier relationships) embodiments of a tourism cluster?
- If so, do the firms exhibit clustering behaviour?
- What are the effects of agglomerating?

The selection of variables was founded in seminal industrial and tourism cluster studies discussed in Chapter 2, where five agglomeration attributes, aside from labour pooling, were present. These were: coopetition, collaborative behaviour, increased innovation, knowledge sharing and relationships built on trust (Porter, 1990, 1998; Rosenthal, 1996, 1997; Feser and Bergman, 1999; Hjalager, 1999; Jackson and Murphy, 2002; Nordin, 2003; Capone, 2004). . To coincide with labour pool calibrations, a 5-point Likert scale was constructed to measure inquiries to detect interdependencies (Sarstedt and Mooi, 2019) with input from industry experts (Christie et al., 2005, p10). The interdependency part of the questionnaire contained equidistant scale variations to simplify statistical processing and to maintain a steady and coherent structure in line with labour pooling for respondents. Scale reliability was increased by labelling all response categories (Sarstedt and Mooi, 2019, p72).

The supply-side investigation was aimed to quantify a 5-point rating on the respondent's values regarding locally available products and services used in the operations of their respective businesses. This began in question 9 where respondents provided a percentage of local suppliers verses external sources. The theoretical foundations are rooted in Porter's (1990, 1998) diamond model of competitiveness, Hjalager (1999) social bonding between tourism firms, along with Feser and Bergmann's (1999) support of Porter (1990) supply chain growth in agglomerated industries stating that, as industries cluster, supply side growth occurs to accommodate increasing demands (Malmberg and Maskell, 2002, p440). Agglomeration supply-side studies on the Silicon Valley by Adams (2005, 2011) and Nordin (2003) support the supply percentage inquiry. Supply loyalty and strength were approached in questions 18 and 22 which crossed over into the special analyses section in the questionnaire.

The demand-side examination in questions 8a-d considered bookings received from local establishments contrasted to external sources such as non-local tour operators or internet bookings. To achieve the desired results, each queried firm's foundations and respondent's experience was examined in line with Komppula's (2014) study on rural tourism manager's perceptions on the competitive environment in the destination area. Respondent perceptions of the global competitiveness of the local tourism industry in question 11a highlights both comparative and competitive advantages in 11b with both enquiries being rooted in Porter's (1990) diamond model of competition. In fact, Porter (1998) places strong emphasis on the importance of cooperative competition between local actors in clustered industries. Commonly labelled coopetition, this is where competition between firms drives higher local industry standards via increased pressure to innovate and maintain a competitive standing. The additional trust built up from long-standing relationships provides a cooperative business environment that shares information and, in specific cases, contributes to greater access to supplies and skilled labour.

Question 27 rates the impact of the competition between firms in the local tourism industry on the respondent's product quality stemming from Porterian diamond model of competition and

additional knowledge sharing benefits addressed by Malmberg and Maskell (2002, p 439) stating, “Collocated firms undertaking similar activities find themselves in a situation where every difference in the solutions chosen, however small, can be observed and compared. First, with regard to observability, spatial proximity brings with it the special feature of spontaneous automatic observation”. According to Brennen and Hill (2000, p 67) these surveillances significantly contribute to start-up businesses from employees having insight on opportunity gaps in the industry. A motivational justification followed in 27b to record the perceived effects of local competition. Question 28 asks about the impact on the business of the quality of the tourism industry as a whole. This is established by Cunha and Cunha (2005), founded in Porter’s (1998, 2000) benefits of coopetition where a cooperative understanding exists between tourism firms understanding that the quality of the whole tourism affects each independent business.

An additional agglomeration benefit of interdependent business relationships stems from trust and increased collaborative behaviour between firms in industrial clusters (Capone 2004, p9; Butcher and Yodsuwan, 2012). Hjalager (1999) and Nordin (2003) draw on trust built up over years of operating in community environments as a noteworthy component of clustering attributes. Collaboration efforts between firms in a clustered industry occur in situations where a shared communal visions and common goals are reachable by joint interactions. In the Swakopmund tourism industry, collaboration efforts have kept the neighbouring dune belt free of concession owners, the Dorob National Park free of entry charge to operators and are currently assisting pandemic revival efforts in formulating public policies. According to Beritelli (2010, p614) the collaborative efforts amongst tourism firms can be contractual, formalised agreements or informal “relation-based” cooperation focused on common interests.

Trust between agents and suppliers is noted as a strongpoint in long-term business relationships in tourism. A tour operator or travel agent relies greatly on the deliverance of a high quality tourism product to be consumed on site (Buhalis, 2000; Pearce et al., 2004). Often, as in the case of travel agents, the seller is far removed from the tourism product and

thus trust in service providers is critical. In the case of adventure tourism, trust in safety is a primary driver of the sector's demand (McKay 2012, p36, 2014). Localised activity operators, restaurants and accommodation establishments all rely on service providers to assure a good standard for their respective operations to run efficiently. Moreover, the importance of inter-firm trust is critical for cluster members to realise the full benefits of agglomerating (Beritelli, 2011; Butcher and Yodsuwan, 2012). Questions 21 and 23 address respondents' perceptions on the importance of trust based on a study by Butcher and Yodsuwan (2012) measuring trust levels as incentives for greater participation in collaborative meetings.

Inter-firm collaboration was measured in two distinct categories These being, firstly, firm to firm collaboration including information sharing and decision synchronisation (Simatupang and Sridharam, 2005 p46) and, secondly, industry collaboration with governmental and tourism organisations. Questions 24 – 26 measure inter-firm collaboration efforts with regards to information sharing, conflict mitigation and changing business environments. Questions 29 through 32 address collaboration from a decision-making perspective alongside both municipal and national public policy standpoints, where respondents were asked about their perceptions of the impact of more improved tourism organisations. Question 29 is directed to the value of municipal tourism's contribution to increasing both competitive and comparative advantages (Miller et al., 2007, pp8-10). Following that, is an inquiry into tourism firms meeting to solve problems and promote new ideas. This is supported by Rosenfeld (1996, p250, 254; 1997, p3), Baptista and Swann (1998), and Feser and Bergman (1999). Question 34 asks whether respondents agree with no effort being put into regulation, tourism management or collaborative measures. The dual purpose of this inquiry is to detect outliers and overall negative perceptions to cluster management policies.

5.4.3.2 Survey

The questionnaire was pretested on a sample of 20 expert tourism owners and managers to gain further insight on the validity of the research tool (Watkins and Bell, 2002, p18). In a related tourism study on SMEs, Haber and Reichel (2005, p269), set their sample goal to be

25% of a total of 1 300 tourism firms (see Rollins and Vaugeois (2007, p635). The tourism business survey conducted in 2018 revealed a total of 685 tourism related businesses. The breakdown comprised 359 accommodation establishments; 190 activity and tour operators; 50 craft and tourism shops; 80 restaurants and cafes; plus 14 car rental agencies. This study concluded with a questionnaire from June 2021 until September 2021, which required adjustments to the population size mainly due to the global pandemic's effect on the tourism industry. A considerable portion of tourism-related businesses either closed or existed in dormant business formats, which made surveying owners difficult. The Airbnb sector had been largely managed by 9 estate agents, therefore 200 businesses were removed from the population and 9 estate agents were subsequently incorporated into the population. Adjustments to the activity and tour operator sector due to the pandemic was a reduction of 25% or 50 businesses. Alternatively, many businesses were double or triple registered with the same owners.

Changes in the industrial make-up of the tourism industry in Swakopmund were accommodated in this study. Firstly, an added sub-sample of suppliers and services with longstanding business ties in the local tourism industry was included to reach 25% of the total sample if 150 tourism respondents were obtained. Secondly, a stratified and convenience sampling method was employed to maximise the number of qualified respondents willing to participate. To ensure additional sample-size guidelines, the sample size of 150 was cross-referenced to online sample-size calculators (quadradics.com) revealing that, with a 95% confidence level, a population size of 385 with a margin of error set at 5%, the ideal sample size is 193 businesses. Therefore, our goal was set to obtain between 150 and 193 responses. A small selection of tourism players was chosen to represent the outlying area known as the River Plots, 7 kilometres east of Swakopmund. The value of this sub-sample was to compare geographic location to agglomeration variables.

The survey population consists primarily of managers and owners of tourism firms with additional businesses to construct a well-rounded collection of material. The aim was

congruent with the initial interviews in attempting to examine the maximum quantity of local firms (see Buhalis, 2000). The researcher aimed to keep business classification ratios in sync with 2018 tourism business survey findings. However, external factors such as unwillingness to participate, absence and unqualified replacement staff will ultimately determine conclusive business classification ratios. An additional consideration into the sample size is the local knowledge possessed by the researcher. With twenty years' experience, and after conducting a tourism business survey, the sample population was chosen with substantial knowledge of the population. As Sarstedt and Mooi (2019, p43) propose, "the strength of samples comes from selecting samples accurately, rather their size".

Due to the ongoing pandemic, the structured questionnaire was e-mailed in Microsoft Word format, delivered in hardcopy form and administered by the interviewer. Respondents were initially contacted and informed of the goals of this phase of the research. At the beginning of each interview, research goals and the basic economic principles surrounding the study were discussed. In the case where a respondent was unavailable, the questionnaire was emailed and, in case ambiguities appeared, clarification was performed by way of phone or email communication. The survey dispersed in the personal interviews was implemented from June 2021 ending in September 2021.

5.4.4 Methods of analysis

Businesses are categorised into business sectors derived from Figure 5.3. After the data is coded, checked for entry errors and outliers and town sections are noted in accordance to Fig. 5.4. Basic descriptive statistics, being mean and median values of the entire sample, are analysed to determine an overall scale rating from a thematic analysis viewpoint before engaging in further statistical evaluations. Following is an assembly of results for geographic preferences of suppliers being located within Swakopmund as the results determine whether further measures of specialisation or firm concentration were undertaken. Coincidently, the quantity of employees hired with previous tourism training is of utmost importance as it is an

indicator of labour pooling within the suspected tourism cluster and therefore is correspondingly thematically analysed.

The study analyses employment figures, skill level percentages and employers' viewpoints towards the existing labour pool. A considerable challenge throughout this study was a lack of clear-cut percentages or values concerning the outcomes of each measure. Existing research such as Kim (2019) and Chhetri et al. (2013) provide substantial methods determining the effects of labour pooling. However, transferring the applications into this study was complicated and plagued with missing data. To rectify absent data, questionnaire findings are juxtaposed with a thematic analysis from the researcher to establish the final impacts of labour pooling. As a result of a single questionnaire encompassing multiple interdependencies, the statistical analysis of labour pooling results are discussed in the following section in conjunction with alternative interdependency measurements.

There are 7 enquiries where respondents are asked to provide a motivation on Likert-scale ratings to provide further insight and reasoning to their answers. The content is assimilated according to content likeness and numerically coded for statistical analyses. A final section provided respondents the opportunity to share any further thoughts on the tourism industry, the current situation or the content of this study. Similar content is correspondingly coded for further statistical analyses.

A total of 51 questions represents 66 variables in the questionnaire. Within this grouping, a partial assortment of variables is measured using a Likert scale from 1 to 5 as well as scaled variables such as the year established or years of experience and motivational comments supporting Likert scale choices. To consolidate variables, the Likert scale responses are subjected to an exploratory factor analysis (EFA) to ascertain the assorted constituents of the factors. Since a number of aspects are measured using a Likert scale, the relationship between the various questions is explored and the number of questions reduced using a factor analysis (as proposed in section 4.3.3). Preliminary tests such as the Kenver-Meyer-Olkin test and the Bartlett's test of sphericity are run to establish validity of performing the EFA. To further

understand the relationships between different business sectors and the principal component variables, an ANOVA test was run. ANOVA results normally confirm significant relationships without clarifying which particular sectors display strong relationships. The Bonferroni and Tamhane tests are subsequently run to capture significant connections. Multiple pairwise comparisons highlighted factors impacted by agglomeration benefits and, consequently, illuminated the benefits of agglomeration. The highest loadings were selected in a rotation of business class.

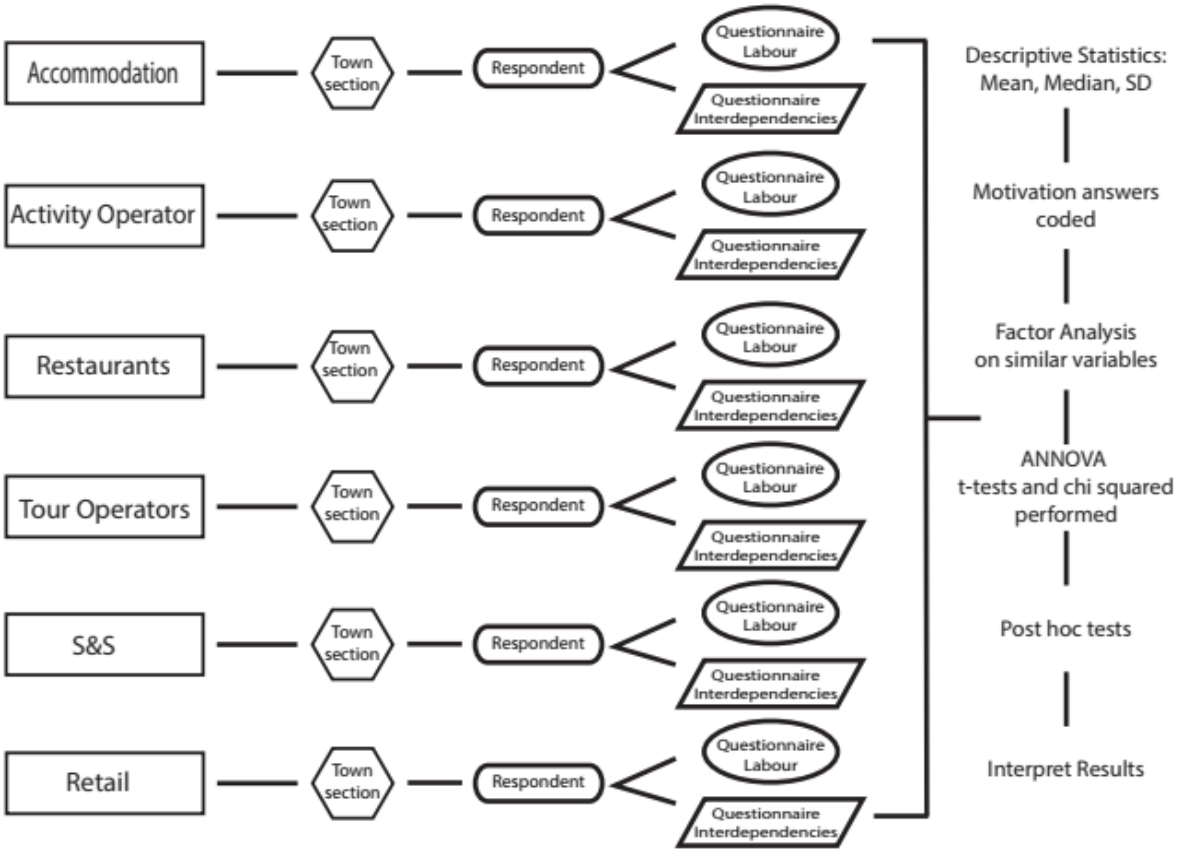

Figure 5.5 Questionnaire analysis chart

Source: Author's own work

Once the results were tabulated and cross-examined in the context of business categories, employee quantities and geographic locations, a thematic analysis is performed. During the meetings, qualitative informal responses were encouraged to sift out irregularities or ambiguities from the outcome.

5.5 Ethical considerations and limitations

Research ethical guidelines provided by the Economic and Management Sciences Research Ethics Committee (EMS-REC) provided protocols for the research design and data collection phases of this study. The ethics number given is **NWU-00654-20-A4**. The aim of this study is to expand knowledge of the local tourism industry and to measure agglomeration benefits produced by the suspected tourism cluster. To avoid probing into sensitive business and personal issues in the sample population, a questionnaire was designed to capture benefits while maintaining the research integrity of the EMS-REC and North-West University (NWU) Potchefstroom. The Geospatial investigation was performed with the consent of the Municipality of Swakopmund and the business participants in the 2018 interviews.

During the questionnaire mailings and interviews, respondents were informed of protocols via an email attachment or, in the case of interviews, by a printed copy. Each respondent remained anonymous and participation was on a voluntary basis. No personal data that can be traced to the respondent will be made public and will be securely stored at the NWU and questionnaires will be stored in secure boxes. Respondents were free to ask questions during the process or before or after providing responses.

5.6 Conclusion

In spite of the ongoing debate between qualitative and quantitative research methods, measuring constructs such as trust and cooperation becomes shadowed with immeasurable benefits in the quantitative arena. A fundamental challenge writing this chapter was a missing clear cut method for measuring interdependencies and, furthermore, the tourism industry is rife with inconsistencies in industrial structure from region to region. In this case, in the midst of Phase 1, a considerable amount of input was gained by stepping away from agglomeration research and into related studies of tourism distribution. Conveniently, research methods presented in tourism distribution studies pragmatically correlated to this study in many ways. First and foremost were similarities between Swakopmund and local tourism industries under investigation. There was an inclusion of activity-based tourism enterprises that coincided with

the foundations of the tourism industry in Swakopmund. In the lion's share of tourism distribution studies, surveys and questionnaires were employed to extract primary data from semi-sensitive economic environments and, in several cases, expert opinions from locals played a decisive role in research design and the final analyses. Therefore, the combination of industrial and tourism cluster analyses, in conjunction with tourism distribution studies, significantly impacted the research design presented in this chapter.

Phase 1 in the research design familiarised the researcher with a complexity of related studies on industrial and tourism cluster theories along with gaining an understanding of the history of tourism in Swakopmund. Obtaining a well-rounded comprehension of agglomeration theories and their origins provided both the theoretical and methodological foundation for the research design that was additionally incorporated in the historical analyses of local tourism. Key cluster-like business patterns outlined in Chapter 2 were uncovered in Chapter 3 and incorporated in Phase 1 of this chapter, which ultimately contributed to the questionnaire design. Phase 2 of the research design entailed compiling a business survey of local tourism firms to identify key players, geospatial analysis and compose a sample population for the Phase 3 survey. Tourism "hotspots" were identified, as were outlying firms to analyse the extent of spatial preferences of tourism businesses and their suppliers.

Phase 3 begins with geographic analyses of spatial proximity by applying a Location Quotient (LQ) from the 2018 Namibian Labour Force survey data measuring firm concentrations on an aggregate scale. Feser and Bergmann (1999) address limitations to using purely aggregate data to determine industrial clusters as many agglomeration attributes are immeasurable in large-scale datasets. Therefore, the questionnaire is designed to acquire additional insight into the local tourism industry and to uncover probable agglomeration benefits. Key points of the survey identified geospatial locational preferences, labour pooling and interdependencies comprised of business relationships built on trust, increased collaborative behaviour and increased innovation. The overall aim of this research design is to provide an all-encompassing view of the local tourism industry in conjunction with extracting the

aforementioned benefits. Following the research methods highlighted in Chapter 4, Phase 3 collects a wide array of clustering qualities in a single survey.

The results of the three-phased study are analysed and presented in Chapter 6, beginning with a discussion on the findings from the theoretical aspects of cluster theories and historical events of the local tourism industry in Swakopmund contributing to the existence of a suspected tourism cluster. The tourism firm survey defines the population sample and a breakdown of firms in their respective business classifications derived from Figure 5.3 in this chapter. The data is plotted on a town map in Adobe Illustrator for a visual assessment of spatial agglomeration. The results of the survey are presented and statistically analysed in SPSS before being considered alongside the geospatial and historical outcomes.

A finishing remark relating to the methods selected in this study looks ahead to the growth of cluster-related applications to developing nations' tourism industries. There is a consistent lack of accurate and usable aggregate data that, in top-down analytical circumstances, prevents effective research and programme implementations. Therefore, this chapter has dealt with the complications at hand and presents a user-friendly approach that may be applied to alternative locations where insufficient datasets exist. Chapter 6 presents the results of this study and corroborates the practicality of employing mixed methods of tourism cluster investigations prior to the study conclusions.

Chapter 6: Results and discussion

6.1 Introduction

This chapter presents the results of this study followed by the discussion section where the findings are analysed and aligned with related agglomeration literature. The research was undertaken in three phases, beginning with a systematic literature review. Due to the impact of the findings of this phase on the subsequent research stages, the results are discussed prior to phases 2 and 3. Phase 2 began with a business review to expose the flows of tourism expenditures and identify the players in Swakopmund's tourism business community. In this phase, the study considers agglomeration works to perform a rudimentary spatial analysis of the tourism firms to determine whether the businesses have agglomerated in accordance to related literature. Included in this evaluation is a look into the resilience of tourism firms against the perils of the 2020 global pandemic. A location quotient was calculated using data from the 2018 World Bank Namibia Business Survey alongside an adjusted LQ where the findings from the business survey are infused into the World Bank data. The findings are also discussed subsequent to presenting the results to portray an overview of the clustering traits found in the local tourism industry. From this vantage point, the findings of the final stage are presented and discussed.

Reverting to Chapter 1, the initial problem statement indicated that the tourism industry in Swakopmund was growing without a policy plan that considered the impact of clusters on the local economy. The primary research questions query tourism firms exhibiting cluster characteristics and, if so, then are agglomeration effects present within the industry? If clustering traits are present, how have the tourism clusters contributed to the local and national economy? To answer these questions, four objectives were stated:

Objective 1 – To analyse literature on tourism cluster and agglomeration theories, development, characteristics and methodologies to delaminate linkages within the suspected tourism cluster.

Objective 2 – To investigate the effects of agglomeration from a Porterian competitive standpoint by measuring firm interdependence, cooperative practices and sharing of a labour pool.

Objective 3 – To measure the extent of clustering in tourism firms in Swakopmund using a mixture of quantitative and qualitative methods to extract results from local tourism industry owners and managers.

Objective 4 - To draw conclusions about the effects of tourism firm agglomeration and make policy recommendations pertaining to the tourism cluster and surrounding industries.

Before Phase 1 results are presented, a discussion of the population and sample size is described. This is followed by a brief rundown of why this research was performed in three stages. Objective 1 has been presented in Chapters 2, 3, 4 and 5, while the third objective will be addressed in Chapter 7. Therefore, this chapter presents results aimed at achieving the second objective.

6.2 Population sample demographics

Swakopmund is the primary coastal destination for both international and domestic visitors with an estimated annual visitation of 300 000 people per year (DECOSA, 2015). To accommodate the demand, 812 registered activity operators and accommodation establishments alongside numerous restaurants and shops exist within the 5x7 kilometre town and the surrounding towns of Walvis Bay and Henties Bay (NTB 2020). Previous 2010 census findings counted 44 500 inhabitants although, in a May 12, 2021 town council meeting, the town CEO estimated nearly 100 000 people now reside in Swakopmund. Looking into the business composition becomes equally confusing as there is no data revealing a breakdown of the respective industries. In fact, a municipal tender was issued for the second time subsequent to the May 12th meeting to find out the number of businesses existing in each category. Breaking this down to the tourism industry, the NTB registration index available from their website does not categorise tourism businesses. With

regards to these ambiguities, the Municipality of Swakopmund (MUN) registration office reveals that 3 900 businesses are registered in the town. How many remain active and which industries they operate in are not on record.

Without exact figures revealing a demographic and cultural breakdown of Swakopmund, observations made during twenty years of residence by the researcher indicate that Swakopmund has a multicultural community that represents all of the of ethnicities found throughout Namibia. The majority of the population resides in the township neighbourhoods of Mondesa and DRC. There is a presence of foreign nationals residing in Swakopmund as well as part-time residents, mostly from Europe. Foreign ownership of land is permitted in Namibia as is the ownership of businesses. The entire town is scattered with business zoned erven with higher concentrations in the CBD and industrial zones as displayed in Figure 6.1 below:

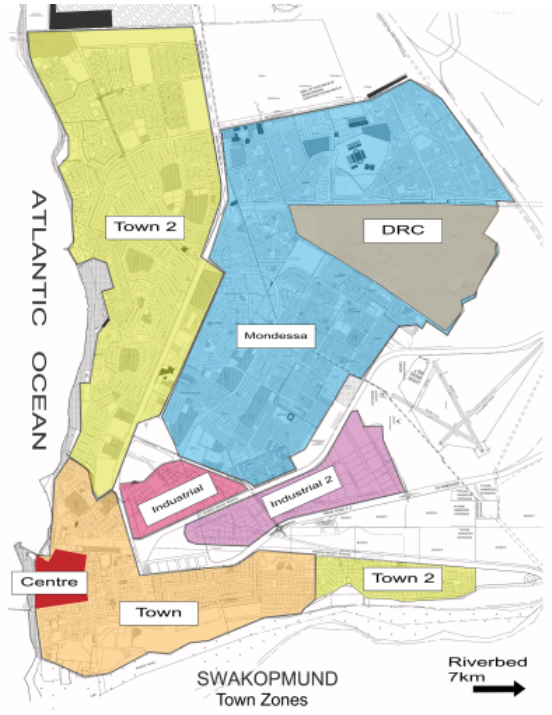

Figure 6.1 Swakopmund town zones

Source: Municipality of Swakopmund

Due to the quantity of small-scale businesses in Mondesa and DRC alongside many illegal accommodation establishments scattered throughout Town and Town 2 zones, a total

business population was not proficiently acquired. Local tourism businesses fall entirely under the classification of SMEs when excluding parent companies and chain store enterprises. At the time the study began, three medium sized operating hotels were the largest tourism entities followed by a tour operator employing 52 people plus 20 freelance personnel. The second phase of the study looked at the entire commercial population to extract tourism businesses. Once a clear picture of tourism firms existed, the sample population was chosen to represent the entire business community or tourism

6.3 Phase 1 findings

The aim of Phase 1 is to identify literature, cluster categories and characteristics to construct a questionnaire structured to measure the existence and effects of the suspected tourism cluster. A secondary intent of Phase 1 is to present how the literature and historic review points toward the existence of cluster characteristics present in Swakopmund. The results of the historical review are a combination of literature reviews and informal interviews with key actors in the tourism industry.

6.3.1 Systematic literature review results

Performing a systematic literature review (SLR) was done to identify core clustering characteristics exhibited by the local tourism industry in Swakopmund and to develop the methods for collecting data. Agglomeration traits uncovered were probed alongside Chapter 3 historical findings as one method to confirm the existence of a tourism cluster and identify the impact of the suspected cluster on the local economy. The SLR scanned 882 research papers downloaded from Google Scholar, Research Gate, Elsevier, Google and periodicals/archives obtained from the Sam Cohen Library in Swakopmund. The aim of this phase was to uncover cluster characteristics and align them with historical findings and survey observations with the aim of uncovering agglomeration traits, congruent characteristics existing in Swakopmund and research design. Additionally, the SLR significantly assisted in the research and the Phase 3 questionnaire design. The aim is not

to provide descriptive analysis or inferential comparisons of the material, but rather to give the reader an understanding of how this research process was designed and implemented. Table 6.1 illustrates a breakdown of the literature reviewed and the purpose each category and sub-category served for this study.

Table 6.1 Systematic literature chart

Source: Compiled by author

Category	Sub-category	Quantity	Chapter	Purpose for study
Clusters	Seminal works	41	2;3;4;5;6	Initial comprehension of cluster theories; provided traits to look for in historical review
	Agglomeration effects	7	2	Writing literature review
	Cluster policy	11	2	Writing literature review
	Collaboration	9	2;5;6	Writing literature review; understanding cluster methodologies; constructing questionnaire
	Destination Competitiveness	14	2;5	Influencial in supporting Porter's competitive theories
	Economic geography	28	2;5	Writing literature review and methods chapters; questionnaire design
	Industrial districts	26	2	Writing literature review
	Labour pooling	10	2;5	Initial comprehension of cluster theories; provided traits to look for in historical review
	Innovation	21	2	Writing literature review
	Networks and value chains	11	2	
	Classic literature	4	2;5	Provided a foundation and framework to look at the tourism industry in Swakopmund;
	Total	182		
Regional tourism	Sub-Saharan tourism	39	3	Regional tourism analysis
	South Africa	37	3;4;5	Regional tourism analysis; activity operators; overlanding history; methodology; labour pooling
Namibia	Namibia	73	2;3;4	Historical analysis; natural endowments;
	Conservation	42	3	Identifying natural endowments
	Government policy	6	3	Discussion on umbrella tourism organisations
	National statistics	49	1;3;5	History of tourism in Namibia; tourism figures
	Cultural heritage	8	3	Provided cultural endowments supporting Namibia's comparative advantages
	Namibian coast	46	1;3;4	Historical analysis; natural endowments;
	Regional history	48	3	Provided events that may have contributed to the existence of a tourism cluster
	Mining	27	3	Highlighting the primary industry in Swakopmund next to tourism.
	UN Global	33	3;4	Location quotient; global tourism trends; cluster methodology
Adventure tourism		53	3;4;5	Global and regional tourism history; methodology; questionnaire design;
		461		
Practical	Textbooks/ writing docs	15	2;3;4;5;6;7	Constructing methodology
	general	79	4;5;6;7	Gaining a broad understanding of various methods
	systematic reviews/ mapping	17	4;5;6	Structuring the literature to build research design
	situation analyses	12	4;5;6	Extracting Chapter 3 findings to questionnaire
Measurements	Geospatial analyses	13	4;5;6	Building questionnaire and measuring agglomeration
	Network analyses	5	4;5	Constructing questionnaire
	Collaboration	10	4;5;6	Constructing questionnaire
	Econometric measurements	16	4;5;6	Spatial analysis LQ; designing questionnaire
	Tourism distribution	9	3;4;5;6	Overall research design; constructing questionnaire
	Labour pooling	25	4;5;6	Constructing questionnaire
	Booking reference	15	4;5	Constructing questionnaire
	Advisor recommendations	23	4;5;6	Methodology comprehension; research desgn;
		239		
		882		

This study began with a review of literature primarily deriving from the clusters category, which amounted to 182 works. Subsequent to gaining insight on seminal works in agglomeration research, a review of economic geography (28 works), destination competitiveness (14 works), and classic literature (3) the review expanded into 7 sub-categories of works focused on clustering characteristics. Figure 6.2 displays the relevant sub-categories along with the

frequency and impact generated. In the following figures 6.2 and 6.3, the further away a sub-category lies from the pie chart centre demonstrates a weightier impact to the study.

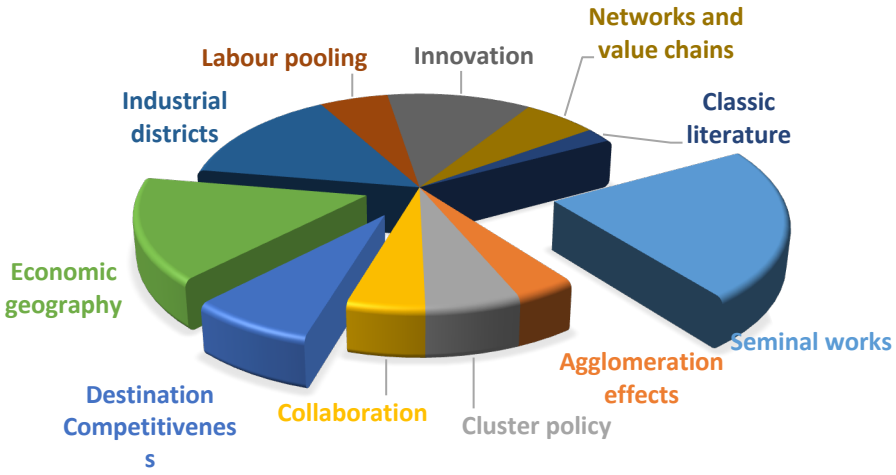

Figure 6.2 Literature review to uncover cluster characteristics

Source: Compiled by author

Clustering characteristics extracted from this step in Phase 1 are listed below in the order of the researcher's perception of each characteristic's consistency within the reviewed literature. Due to the overlapping thematic content in the literature reviewed, a numerical breakdown categorising literature addressing each cluster characteristic has been avoided.

a) *Geographic proximity* - firms in the same industry located near each other.
b) Increased labour pooling
c) *Interdependencies* – firms' dependent on each other to achieve benefits
d) *Coopetition* – increasing the competitiveness of the local industry
e) *Collaboration* – firms working together to reach common goals
f) *Trust* – business relations build on long-term trust
g) *Community culture* – connectedness founded in historical or cultural ties.

The seven listed clustering characteristics were established as key variables to be investigated in the empirical research stages ahead.

It is imperative to discuss the shortcomings of this SLR, beginning with the missing statistical analysis on literature quantities. The SLR technique was realised subsequent to

the literature review in Chapter 2 and was introduced only to provide a systematic method to uncover clustering characteristics, understand applicable methodologies and to design the research. Early on in the research, it became apparent that there is no particular method prescribed for measuring clustering effects in a town such as Swakopmund. Further literature analysis could contribute to this study. However, the main goal in performing the SLR was to extract agglomeration information and not to measure literature quantities. With this stated, more research in this direction could significantly improve research designs in the field of measuring the economic impacts of tourism clusters.

6.3.2 Systematic literature review results of the historical material

The next step was to look into the history of tourism in Swakopmund, Namibia and neighbouring countries to find clustering traits similar to agglomeration studies in related works as suggested by Austrian (2014, p99). In total, 461 research papers and newspaper articles were scanned. This may appear to be excessive in relation to the initial literature or methodology reviews, but the researcher used most of these documents for his tour company as well. Regional tourism category had two sub-categories, these being sub-Saharan (39 works) and South Africa (37 works) that provided visitor statistics and adventure tourism analyses revealing a substantial similarity to Namibian tourism products and source markets. The Namibia category was sub-divided into nine categories being Namibia (73 works), conservation (42 works), government policy (6 works), national statistics (49 works), cultural heritage (8), Namibia coastal (45 works), Regional history (48 works), mining (27 works) and UN global (33 works). Figure 6.3 illustrates the division of sub-categories and their impacts to this study.

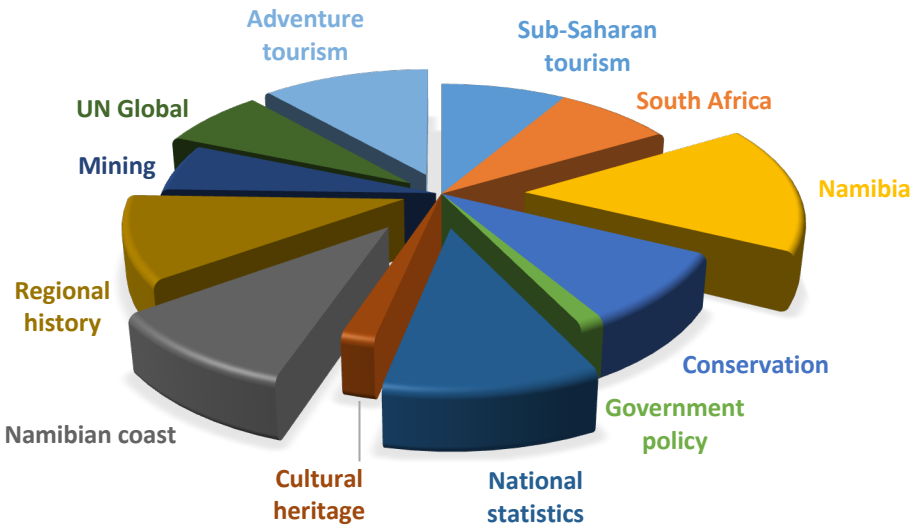

Figure 6.3 Historical analysis sub-category usage

Source: Compiled by author

The findings of the reviewed literature are presented in Table 6.2 alongside alternative economic impacts that could present an argument lessening the impacts of the tourism cluster. Literature references have been withheld from the chart as they are presented in Chapter 3 and in this chapter's discussion.

6.3.2.1 Discussion on the effect of natural endowments on Swakopmund's tourism figures

The first enquiry relating to the historical section is to lay out Swakopmund's natural endowments to acknowledge the impact of comparative advantages on visitation, as suggested by Boiko et al. (2017, p141) where, in the assessment of a tourism cluster, the first method identifies the "uniqueness of subjects' tourism resources available". The Namibia category highlighted factor endowments such as varieties of endemic species residing in the surrounding Namib Desert; the scenery of the dune field bordering the town to the south; as well as the marine rich South Atlantic coastline and the cold Benguela upwelling system (see Alberts and Barnes, 2007). Regional comparative advantages can be sufficient to attract tourists as with the case of Barnes et al. (2000, 2010) finding that significant contributions to the local economy were made by shore angling visitors where,

in 2011, Ngipunya (2012, p7) cited Ministry of Fisheries and Marine Resources (2011) issuing 60 498 fishing permits.

Table 6.2 Historical findings of economic impacts on Swakopmund

Cluster Characteristic	Arguments for cluster characteristics impacting economy
Geographic proximity	The town has always been spatially agglomerated; only 7km x 5km; nearest town is 23 km away
Labour pooling	Namibia is endowed with outdoor peole; farming skills; mining and fishing skills transfer; activity sector
Interdependencies	Geographic isolation drives interdependencies; town members survived 3 regime changes and 3 wars
Coopetition	Interviews confirmed coopetition beginning in the 90s;
Collaboration	DRC Association; Dune Belt Association in 2006; Strong presence of HAN;
Knowledge sharing/ innovation	WoM marketing in the 90s; Mining skills transferred into tourism; Scientific Society hosts seminars
Increased entrepreneurial activity	Entrepreneurial activity has existed from beginning; rapid tourism SME growth in late 90s
Trust	Evidence of early relationships built on trust; Activity sector built trust-based relationships in 90s
Community culture	Strong German community; multicultural township mixed with European decendants;
Non-clustering growth impacts	**Arguments supporting low economic impact of tourism cluster**
Natural endowments	23 kilometre dunefield on southern border; Beaches; Namib Desert; Proximity to Skeleton Coast Park, Sossus
Fishing	Well known in Southern Africa for fishing;
Mining	Proximity to 4 Uranium mines; significant mining service and supply industry; draws foreign investment
Real estate investments	Premier coastal holiday town; long history with domestic tourism;

Although further studies are required to confirm this statement, there is a justifiable argument that tourism in Swakopmund could have grown regardless of the suspected cluster. A similar argument was presented by Crouch and Richie (1999, p142) who acknowledge the role of natural endowments in attracting visitors. However, “wide stewardship of resources” is critical to sustaining long-term competitiveness (see also Dwyer and Kim, 2003, p372; 380-1). To counter this argument, the results of a look into the growth of alternative adventure travel trends and changes incurred by the local industry to cater for new markets follows.

6.3.2.2 Discussion on the growth of adventure tourism

A demand-side look into tourism growth motives considered global tourism trends affecting tourism growth on the Namibian coast. Considering tourism statistics beginning in 1990 reveals how overseas tourism in Namibia is predominantly adventure-tourism based (Barnes et al., 1999; MET, 2004, 2013, 2018; Jones et al., 2015) and therefore a reconnaissance into global trends was performed to identify a cause and effect relationship with tourism growth in Swakopmund and the formation of a tourism cluster. The results of reviewing 53 adventure tourism studies in combination with MET tourism reports, UNWTO statistics and informal

interviews with industry experts revealed that adventure tourism growth in Namibia coincided with global growth patterns. For example, Buckley (2010, p12) highlights strong growth trends in line with an ADTI (2015) who report the adventure travel industry generating US$263 billion serving as one of the fastest growing tourism sectors.

A revisit of Figure 3.5 (see Figure 6.4) offers to support the suspicion that Namibian tourism shared similar growth trends with alternative adventure tourism destinations. New Zealand was chosen as it regularly is cited as a global hotspot for adventure tours (Pearce et al., 2004). Costa Rica, Oman and Iceland were selected as key adventure tourism hotspots that are located near large markets, the US and Europe. In fact, Iceland, Tanzania and Oman experienced similar visitation trends to Namibia from 2000 to 2010. The opposing downward trend of visitors to New Zealand and, more so, to Costa Rica were most likely the after effects of the 2008 global financial crisis. The results of literature reviewed in Chapter 3 revealed increasing adventure growth patterns until 2020, which indicates Swakopmund experienced similar trends.

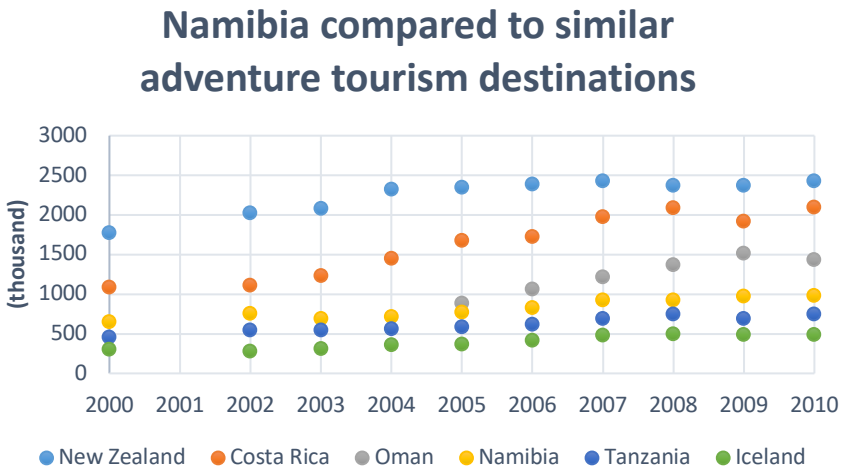

Figure 6.4 Popular adventure tourism locations visitation 2000 to 2010

Source: data.worldbank.org

To understand the likelihood that Swakopmund was part of the global expansion of adventure travel, a look into past examples of adventure tourists arriving in Swakopmund is in order. Four primary routes for accessing Sossusvlei exist, omitting gravel roads and

4x4 routes, of which three are via gravel road with air transport available as an option. Northbound journeys primarily stopover in Sossusvlei for two evenings before travelling directly to Swakopmund. This conveniently makes Swakopmund the first visited medium-sized city in Namibia (interview; Jackie Burton).

Accommodation options in Sossusvlei are overwhelmingly camping or mid to high-end lodges existing outside small towns and providing opportunity for restaurants, hotels, shops and activity operators to benefit from being part of the tourism route. With 248 km of poorly maintained roads, tyre and mechanical repair is mostly performed in Swakopmund (int. Murray Black). Furthermore, a benefit to suppliers is that the majority of southbound travellers leaving Swakopmund for Sossusvlei shop for supplies in Swakopmund. An interview with Jackie Burton, owner and founder of Chameleon Safaris in Windhoek, confirms that the benefits of Swakopmund being proximate to major attractions not only affects local tourism infrastructure (hotels, restaurants and activities) but that mechanical services and supplies are vital to onward journeys to either Etosha, Sossusvlei or Windhoek. During the business census conducted in 2008, a manager at Tren Tyres in Swakopmund claimed 8 out of 10 customers were from the rental car industry after the local mining sector decreased in 2016. Conversely, the owner of Crazy Gecko Engineering stated a “considerable” amount of his 2018 business was from rental car agencies based in Windhoek. The informal meetings with local managers followed a consistent inclination where mechanical services and supply businesses in Swakopmund incurred locational benefits from tour operators and self-drive tourism.

6.3.2.3 Cooperative behaviour and interdependencies in Swakopmund

A common principle uncovered in four interviews and first-hand from the researcher is that, during the first two decades, the overlanding crew consisted of a tight-knit community of travellers (J. Burton, M. Black, B. Sarro; personal communication). Guides, drivers and owners were lifestyle-driven workers who entered the business for reasons other than financial aspirations, seeing themselves as working and living on the forefront of innovation in the travel

sector. During pre-internet times, word of mouth (WoM) travelled far and, by the mid-1990s, tour operators and guides in Nairobi were acquainted with guesthouse owners in Swakopmund, flight operators in the Delta and dive instructors in Zanzibar. Throughout this initial growth period in overland travel, the crew was dominated by experienced travellers who understood the market not so much from an educational or managerial viewpoint but, more so, from lifestyle dedication to modern nomadic regimes. Most crew members had privately undertaken adventure travels, including the overland experience. Thus acting as a tour guide was not only an addition to a resume, it was a way of life. In retrospect, the overlanding community was not a commodity that entrepreneurs bought into, it was earned by living a lifestyle. Strong relationships, extending beyond business, were formed that would, to an extent, prevail for the following two decades (B. Sarro; M. Black; J. Burton personal communication).

Braun (2016, p12) finds certain industries are prone to formulate network and clusters having superior “social cohesions”. Throughout activity development stages, overland guides were encouraged to join activities gratis as a complimentary commission structure evolved serving as perquisites from operators to overland crew for marketing services (B. Sarro, personal communication, May, 2020). Eventually, networks constructed of friendships and bonds beyond business relations formed as crew members, often temporarily residing at local operator’s houses while solving dilemmas, eventually amalgamating into the local tourism social scene. The happenings of the early activity cluster stages created powerful word of mouth (WOM) advertising founded in strong social connections formed between local tourism entrepreneurs and tour guides (Confedente, 2014). Supporting resident’s informal marketing achievements, Baggio et al. (2009) found WoM achieves higher short-term success rates than formal adverting methods; assuming inflated effects of a guide’s WoM on guests after ten days of travel together, the power of suggestion worked in favour of the developing tourism cluster (Opperman, 2000, p78). The results of creating a few high quality adventure activity options, networking and WoM marketing performed by guides, Swakopmund positioned itself in the

overlanding community as Namibia's adrenaline oasis and one of the best "party" towns in Southern Africa (M. Black, J. Burton, personal communication). As Braun (2006, p5) concludes regarding cluster formation, "The social capital that a person accumulates through networking is considered a valuable asset".

Collaborative clustering behaviours highlighted in the literature review began as activity firms worked together to achieve maximum satisfaction from clients, building the Swakopmund brand (Rosenfeld, 1997; Porter 1990, 1998; Rocha, 2004, p18, 26). Outside of the immediate activity providers, hotels and restaurants cooperated by way of encouraging operators to market activities within business premises and, in turn, operators recommended specific businesses to overland tour guides. Explicit parallels to tourism cluster characteristics of cooperation and collaborative practices underpinned by Porter (1998) and local business practices of Swakopmund tourism actors; cultivated out of the initial paradigms was an understanding that each activity was merely a fragment of a visitor's complete Swakopmund encounter. A collectively understood greater concern must be targeted on a comprehensive visitor experience supported by Opperman (2000, p81) suggesting the value in "what attitude a person has about a destination and that those with a positive attitude toward a destination, even though they may not be visiting it (again), will provide positive word-of-mouth". Essentially, as this study suspects, surges in a diversified clientele sparked innovation in the activity, restaurant and hotel sectors driving the evolution of a tourism cluster in Swakopmund.

6.3.2.4 Further clustering characteristics revealed

Being a small community of spatially concentrated businesses, the shared vision of local tourism businesses extending into the industrial sector and service providers was driven by two impacts: economic benefits and the social improvements to the town from a new type of tourist. Advancing alongside adventure activities was craft, cultural and heritage tourism as international visitors had more interest in the cultural aspects of Namibia. In the restaurant sector, Cape to Cairo restaurant opened with an array of African cuisine specifically catering to an intercontinental market spilling over into local food suppliers prospering off bulk

purchases from overland tour leaders. During this growth phase, local firms cultivated the Swakopmund tourism product and facilitated positive overall visitor encounters exclusive of formal or organised clustering incentive programmes. To a large extent, these events occurred naturally.

Furthermore, the town was embedded in local history (Massmann, 1983; Kolb, 2018) with long standing relationships amongst inhabitants, fabricated on trust, where most of the community, excluding a conservative minority sector, viewed new-styled tourism growth as a positive addition to the town. By the time Michael Porter (1998) published his seminal work 'Cluster and the new economics of competition', tourism in Swakopmund was growing, adding economic benefits to the town and spilling over into outer regions. The results of this examination of the history of Swakopmund suggest the formation of a tourism cluster.

6.4 Phase 2 findings

The second phase of this study was a meso-level business survey aimed at obtaining a count or directory of tourism-related firms in Swakopmund, further understanding the tourism impact into the local economy, and spatially analysing tourism firm concentrations to uncover clustering characteristics in local tourism. This section reports the number of tourism related businesses as well as the geographic proximity using a location quotient and visual mapping. Details on location quotient calculations are presented in Chapter 4 section 4.3.3. Geographic mapping measures are found in Chapter 4 section 4.3.2 and Chapter 5 section 5.4.3.1.

6.4.1 Tourism-related business directory

The business survey began in February, 2018 and persisted through November of that year. In total, 896 tourism-related businesses were counted in an estimated total of 3 600 registered businesses with the Swakopmund Municipality (MUN). Businesses were categorised into three divisions; Tourism with 569 (63%) businesses; suppliers with 142

(16%); and services with 185 (21%) registered businesses. Figure 6.5 illustrates a breakdown of the categories.

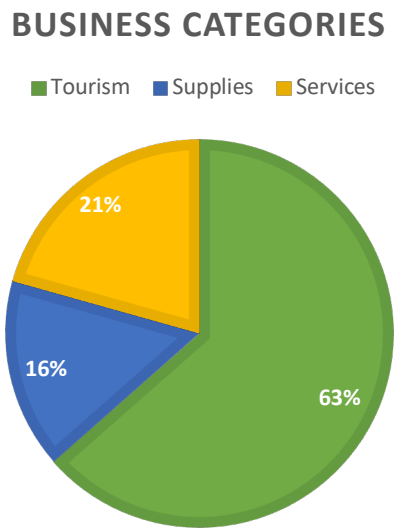

Figure 6.5 Business category percentages

Source: Author's own work

The three sectors operated primarily within 5 out of 8 zones in Figure 6.1 and were extracted by accessing online business directories, the NTB database, Booking.com, Trip Advisor, Airbnb, and performing a physical inspection in the CBD, town, industrial and industrial2 town zones presented in Chapter 5 section 5.4.3.1. Due to time constraints and the enormity of the informal economic sectors, Mondesa and DRC were only scanned for tourism businesses.

The initial informal interviews exposed the presence of revenue from tourism or tourism firms with the exception of the mining sector. Businesses in the service sector showed an overall 86% received tourism revenue (TR) and, after detaching the outlying mining sector, TR increased to 97% in general services and to 91% in mechanical services. Correspondingly, the supply sectors showed 68% of businesses received TR and if the domestic supply-orientated businesses, such as home products or building supplies, were not considered, TR rises to 86%. These results demonstrated two things. First, the web to tourism revenue extends into the majority of non-mining businesses in Swakopmund. Second, this finding presents evidence that business relationships exist throughout the industrial community.

Therefore a further look into interdependencies is warranted. This was supported during a discussion with a local mechanic echoing common rhetoric that existed in the industrial town section during the 2018 interview stating that “without tourism, this town would be dead”.

It is imperative to discuss three issues potentially influencing these results. Firstly, they were conducted subsequent to the mining crash discussed in Chapter 3, which enhanced business owners and managers’ outlook on TR. At the time, there were not many alternatives. Secondly, timing also enhanced respondents’ outlook on the tourism industry as 2018 was an extremely busy year for Namibian tourism (also see Chapter 3, section 3.6.1) that provided an economic boost in the absence of mining and real estate revenue. Moreover, tourism was generating employment in a town that previously swung investment dependency into the mining and construction sectors. Following the 2016 mining crunch, it became apparent that much of the revenue exited the town along with big players in the industry. Tourism was here to stay. Another consideration to factor in is that the aim of this study was not directed at uncovering multiplier effects of tourism revenue and further research could provide more accuracy and insight with respect to the economic linkages within the local tourism industry.

6.4.2 Business directory results: Interdependencies between local firms

With these situations in mind, during the Phase 2 informal interviews, a degree of tourism revenue movement supporting the existence of interdependencies characteristically found in tourism clusters was uncovered. This is in line with Porter (1998, p78) emphasising the significance of revealing the business environment outside of companies when assessing clustering effects. Figure 6.6 illustrates the web of economic and social transactions along with their intensities. Social transactions were revealed to be references or referrals, inspections, consultations, bookings and occasional collaborative efforts.

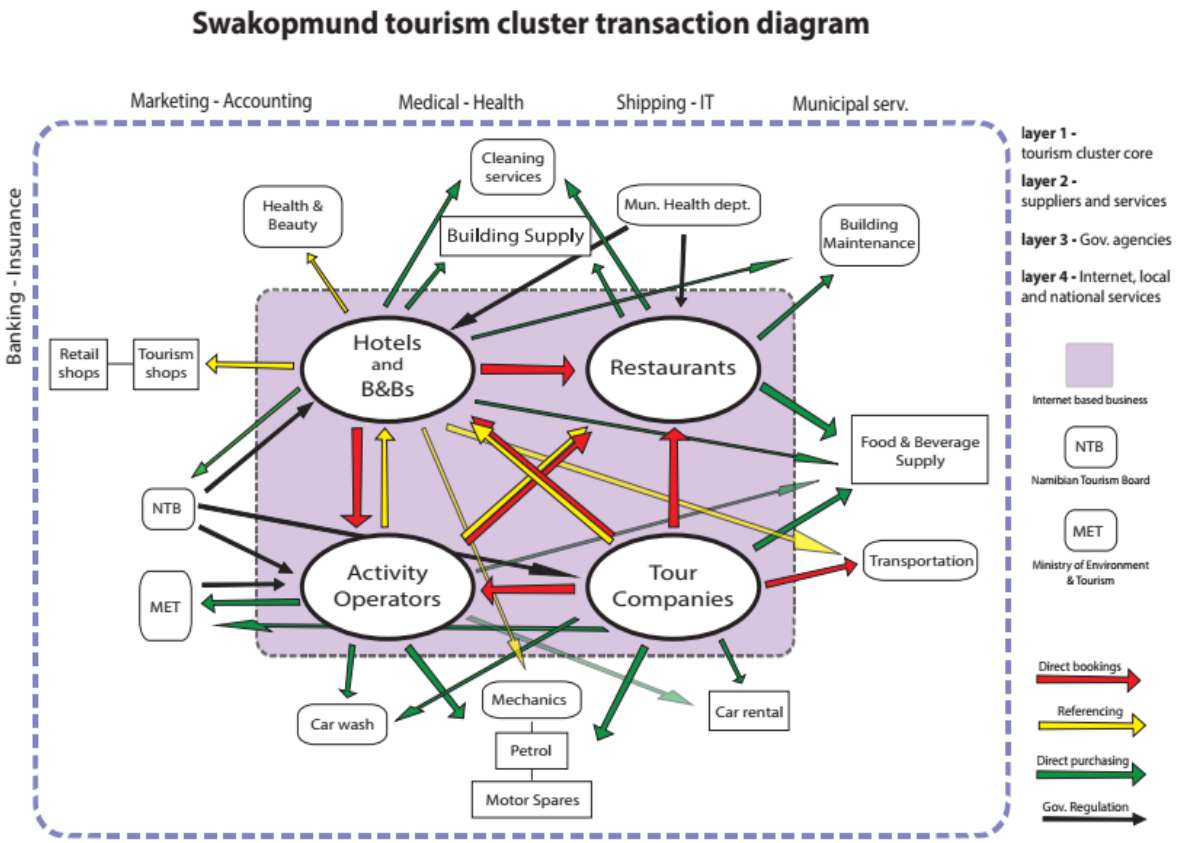

Figure 6.6 The web of business transaction surrounding tourism

Source: author's own work modelled from Cunha and Cunha (2005, p52); also see Austrian (2014, pp 101-6)

Figure 6.6 reveals potential interdependencies found in horizontal and vertical clustering between local actors via social and economic transactions (Braun and Hollick, 2006, p478). The model core displays horizontal clustering traits in the form of referencing between four core tourism sub-categories of accommodation establishments, restaurants, activity operators and tour companies. The deficiency of incoming bookings and referencing to tour companies emphasises a source market made up exclusively of external or overseas bookings. Conversely, tour companies reported significant booking and referencing support to local accommodation establishments, activity operators and restaurants. This was, in turn, confirmed by the establishments during the informal interviews. Hotels were similarly providing bookings and referrals to local activities and restaurants without reciprocal actions. This one-way pattern reflects the rarity of hotel bookings and references being made locally. This does

not infer an imbalance in trade as hotels receive an average commission above 10% on activity bookings. This represents an attractive supplementary income during busy months. Similar distribution channels exist in New Zealand as considered by Pierce et al. (2005), Peirce and Tan (2004) and Andrade and Smith (2019). Although it remains unclear to what degree interdependencies existed within the local tourism network, the business survey provided insight into the existence of Porter's (1998) internal cluster networks. A more introspective look into inter-firm relations is required to accurately determine the existence of clustering impacts.

Vertical clustering characteristics between business sectors outside of tourism in Swakopmund reveals a myriad of one-directional purchasing originating from core tourism firms extending into the local business community. This is consistent with what has been found in previous studies as with Nordin (2003), emphasising the importance of supporting and related industries' role in developing and sustaining tourism clusters. Activity and tour operators exposed strong dependencies on mechanical services – especially in emergency situations - and supplies for vehicle maintenance. Tourism shops, craft sales along with health and beauty sectors rely greatly on hotel references. In line with Dwyer and Kim (2003, p384), adequate supplies of a wide variety of food and beverages is essential for tour operators and restaurants to remain globally competitive. Alternatively, the estate agencies infiltrated Swakopmund's self-catered establishments with results from the survey showing that, out of a sample size of 126 units, 93% were managed by local estate agencies. In line with Jackson and Murphy (2002, pp43-44) the importance of government to see the value in tourism activities, MET offices provided tour operators daily with permits and it was reported by long-time dune operators that the earlier West Coast Nation Recreation warden assisted with formulating conservation strategies allowing for the growth of nature-based activities in the dune field bordering Swakopmund (Int. Beth Sarro).

6.4.3 Uncovering social glue and relationships built on long-term trust

The two clustering characteristics are presented as additional support of a tourism cluster in Swakopmund. Lifestyle entrepreneurship is a widely accepted characteristic of the tourism industry and has been looked at in agglomeration studies by Hjalager (1999) who emphasises the significances of community culture that bonds a tourism cluster together. The pandemic allowed this study an alternative insight to identify what Markussen (1996, p294) labels “sticky places” or places that people prefer to remain despite economic fluctuations.

The business survey data was updated to include business closures in 2020. This complements this study by not only displaying the impact of a global pandemic on the local industry, but supports the presence of a social glue, dedication to the local industry and the resilience to economic shocks. The results displayed in Table 6.3 show numbers of locally owned tourism businesses compared to external ownership. Presenting this data lays the groundwork for further insight that is provided by the Phase 3 questionnaire, which is supported by Hjalager (1999, p9) stressing the importance played by community culture, long-term relationships and trust in the long-term stability of a tourism cluster.

Table 6.3 Percentages of locally owned tourism businesses

Business Classification	Sample size	locally owned	non-local	% local
Activity operators	82	66	15	76%
Tour operators	98	45	53	46%
Restaurants	80	61	19	76%
Accommodation	108	83	25	77%
Acc. Self-catering	126	n/a	n/a	n/a
Craft shops	49	41	8	84%
Tourism clothing	12	6	6	50%
Car rental	14	9	5	64%
Total	569	311	131	70%

From Table 6.3, we see 70% of tourism businesses are locally owned and managed. The outliers in this table are tour operators at 46% local and tourism clothing shops at 50% local. The substantial quantity of non-local tour operators is due to overseas, South African and

Windhoek based companies running satellite offices in Swakopmund. Unfortunately, this study did not record how many of these were locally managed, which might increase the supporting argument for a worthwhile environment fostering long-term trust and lifestyle entrepreneurship. Tourism clothing shops were 50% run by Windhoek based shops that mostly employed local managers.

Activity operators (76%), restaurants (76%), craft shops (84%) and, surprisingly, hotels and B&Bs (77%) reveal a high rate of locally owned establishments. With regards, to activity operators, 11 out of the 15 non-local owners resided in Walvis Bay and regularly received Swakopmund based bookings. As expected in Namibia's premier coastal holiday town, external ownership in accommodation establishments was primarily in hotels. Community support from externally owned hotels was displayed by both the Gondwana Collection and Taleni Africa participating in 2021 vaccination campaigns and Olthaver and List's Strand Hotel sponsoring a mid-pandemic local craft market in front of the seaside premises.

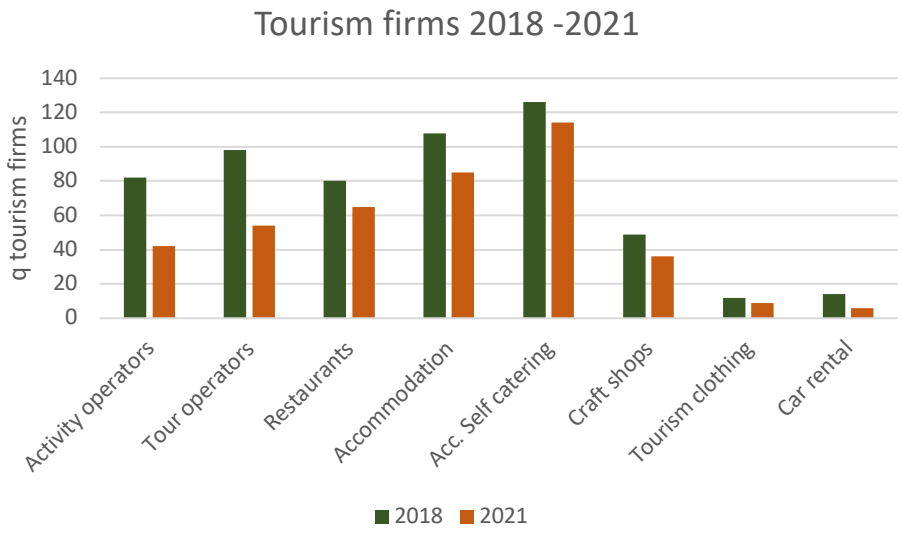

Figure 6.7 Tourism sub-sector population change 2018 – 2021

Source: Author's own work

Looking into pandemic effects, out of the 569 tourism businesses counted in 2018, 412 remained. Of these, 374 remained unchanged (excluding employment figures), 38 changed ownership, 120 closed and 46 were observed to be dormant. Looking into tourism sub-sectors

shows the highest closure rates were amongst the activity (46%) and tour operators (42%). The remaining sub-sectors all averaged 70% or above excluding self-catering units with insufficient data.

A partial explanation of higher closure rates in the activity sector can be due to the products were heavily focused on overseas markets. The pandemic halted foreign visitation beyond the five-month regional lockdown period. Domestic tourism revenue was not viable for some. Furthermore, in April 2021, MEFT increased park fees nationally. Half and full day tours became too expensive in an already saturated market, leading to business closures. As for Tour Operators, 53% were not locally owned and senior management closed Swakopmund offices during the pandemic. Even in consideration of the closure and dormant status of two iconic hotels, The Swakopmund Hotel and the Hansa Hotel, 76% of the hotels and B&Bs remained open. Table 6.4 provides a breakdown of the events.

Table 6.4 Changes in tourism firm quantity 2018 - 2021

Classification	2018 sample	2021 sample	2021 mean	open	%	closed	%	changed	%	dormant	%	local	non-local	%local
Activity operators	82	42	1.7	37	45.1	22	26.8	5	6.1	17	20.7	66	15	76
Tour operators	98	54	1.09	41	41.8	31	31.6	13	13.3	13	13.3	45	53	46
Booking Agent	35	14		12	34.2	21	60	2	5.7	0	0			
Restaurants	80	65	2.06	56	70	19	23.8	9	11.3	5	6.3			76
Accommodation	108	85	2.35	76	70.4	13	12	9	8.3	9	8.3	83	25	77
Acc. Self-catering	126	114	2.71	113	89.7	11	8.7	1	0.9	1	0.8			
Craft shops	49	36	2.1	36	73.5	14	28.6	0	0	0	0	41	8	84
Tourism clothing	12	9	2.31	9	75	3	25	0	0	0	0	6	6	50
Car rental	14	6	1.39	6	42.9	7	50	1	7.1	1	7.1	9	5	64
Total	604	425	1.9638	386	63.9	141	23.3	40	6.6	46	7.6	250	112	0.69

This analysis found evidence for the existence of lifestyle entrepreneurship and overall belief in the local tourism system by underpinning tourism firm survival rates and the existence of locally owned establishments. These results do not provide proof of the local industry being a tourism cluster, neither are they measurements of the effects of industrial agglomeration. The data collected on firm localisation and pandemic survival rates are supporting arguments for clustering characteristics. The effects of the 2020 pandemic in the Namibian tourism industry were offered in the UNDP (2021) report. These findings will be combined with the results of the Phase 3 questionnaire.

6.4.4 Spatial concentration of employment via location quotient

The next step in Phase 2 is to look at industry concentration via an LQ derived from a World Bank (2018) enterprise survey of Namibia. Industry employment measures were included, allowing this study to extract relevant figures to calculate an LQ for Swakopmund, as discussed in Chapter 5 section 5.4.2. Table 6.5 presents regional employment location quotients.

Table 6.5 Employment location quotients

	Accommodation and food service activities	Arts, entertainment and recreation	Other service activities
!Karas	0.775	0.000	0.803
Erongo	1.107	1.551	1.270
Hardap	0.780	0.624	0.981
Kavango East	0.550	0.660	1.669
Kavango West	0.205	0.482	1.560
Khomas	1.122	3.107	1.201
Kunene	1.254	0.353	1.307
Ohangwena	1.244	0.402	0.371
Omaheke	0.884	1.736	0.449
Omusati	1.571	0.185	0.616
Oshana	1.115	0.209	0.848
Oshikoto	1.270	0.884	0.613

Otjozondjupa	1.081	0.738	1.410
Zambezi	0.518	2.144	0.793
Mean	0.9127	0.9339	0.9922
Min	0.0775	0	0.371
Max	1.571	3.107	1.669
Std Deviation	0.4176	0.8538	0.3997

Source: Own calculations from World Bank Enterprise study (2018)

In the World Bank report, tourism, per se, is not entitled to a separate industrial category. Therefore, three categories were selected to represent the industry: accommodation and food service activities, arts entertainment and recreation, and other service activities. The enterprise study was chosen as it was the most updated aggregate data available to calculate the LQ for Swakopmund, as measured by the wider Erongo region[2] In the accommodation and food service activities, the Erongo region showed 1.107 which barely exceeds regional mean LQs and would, according to a study by Capone (2004), signify only moderate to low levels of tourism specialisation. Feser and Bergman (1999, p19) specify an LQ exceeding 1.25 are usually assumed to be signs of regional specialisation, whereas Carroll et al. (2008, p452) cite Miller et al. (2001) that location quotients greater than 1 indicate industrial specialisations. The Erongo region exceeded 1.25 in two out of three categories and all three LQ measurements exceeded 1.00. In consideration of Swakopmund being a premier seaside destination and the ratios uncovered in this study's business survey, a few factors could have influenced the lower than expected LQ numeric outcomes.

The Port of Walvis Bay is the busiest maritime hub in Namibia facilitating shipments to and from Namibia, Botswana, Zambia, Zimbabwe, and southern Democratic Republic of the Congo. Shipping supplies, maintenance and services are based in Walvis Bay. Additionally, Namibia's fishing industry operates primarily out of the port and, if combined with the shipping industry, could offset tourism employment percentages represented in the location quotient.

[2] Towns included in the Erongo region were Walvis Bay, Swakopmund, Arandis, Henties Bay and Omaruru.

Strotebeck (2010, p5) alongside vom Hofe and Chen (2006, p10) point out that LQ measurements can be offset by large firms' employment quantities overshadowing multiple smaller businesses. This could be the case with the mining sector with employment estimates exceeding 4 000 (Mills International Human Rights and Environmental Law Clinics, 2009). Another consideration is a sizable SME business population selling meat, basic foods and meats. Furthermore, the Namibia Statistics Agency reports only 42 tourism businesses in Swakopmund, which is strongly contested in this study's business

survey (www.digitalnamibia.nsa.org.na). Aggregated data can be flawed in extracting precise tourism employment figures due to the heterogeneity of tourism products that are composed of "complementary components" supplied by various entities in the public and private segments (Kachniewska, 2013, p39). Supplementary research into obtaining more precise employment ratios between industries in the Erongo region would benefit our understanding of overall economic impacts derived from the tourism industry.

With the current discussion at hand, the LQs calculated from the World Bank (2018) enterprise survey do not discount employment concentrations being acceptable for a tourism cluster. A reason for this result can be attributed to the data being aggregated regional secondary data not specific to Swakopmund. This issue is not isolated to this study and presents a viable reason for undertaking the research in Phase 3 focused on tourism actors in Swakopmund.

6.4.5 Spatial concentration of tourism firms

A final step in Phase 2 is to look into the spatial concentration of tourism firms in Swakopmund and compare the findings with related studies.

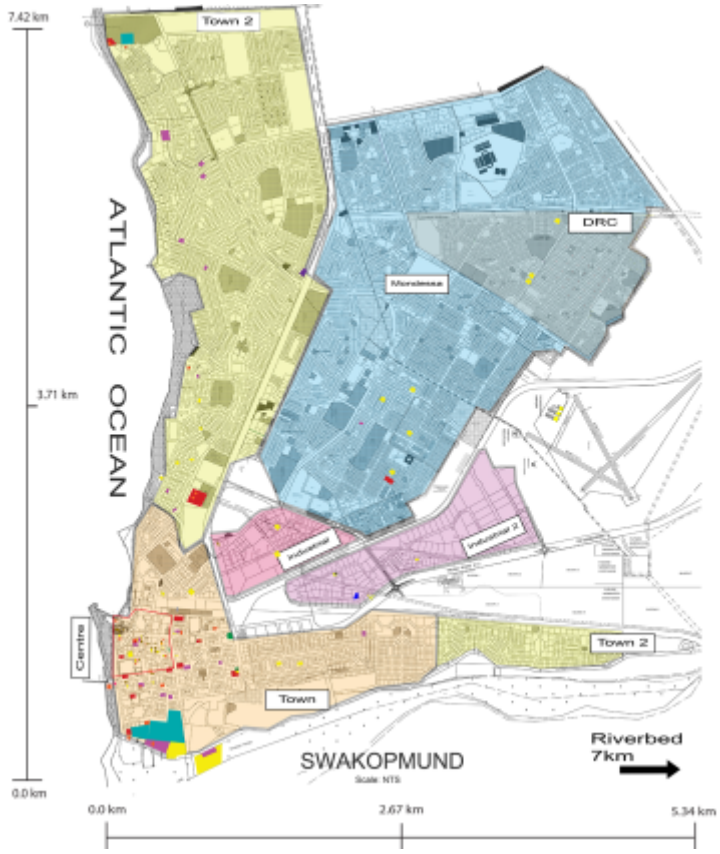

Figure 6.8 Spatial concentration of respondent businesses

Source: Author's own compilation.

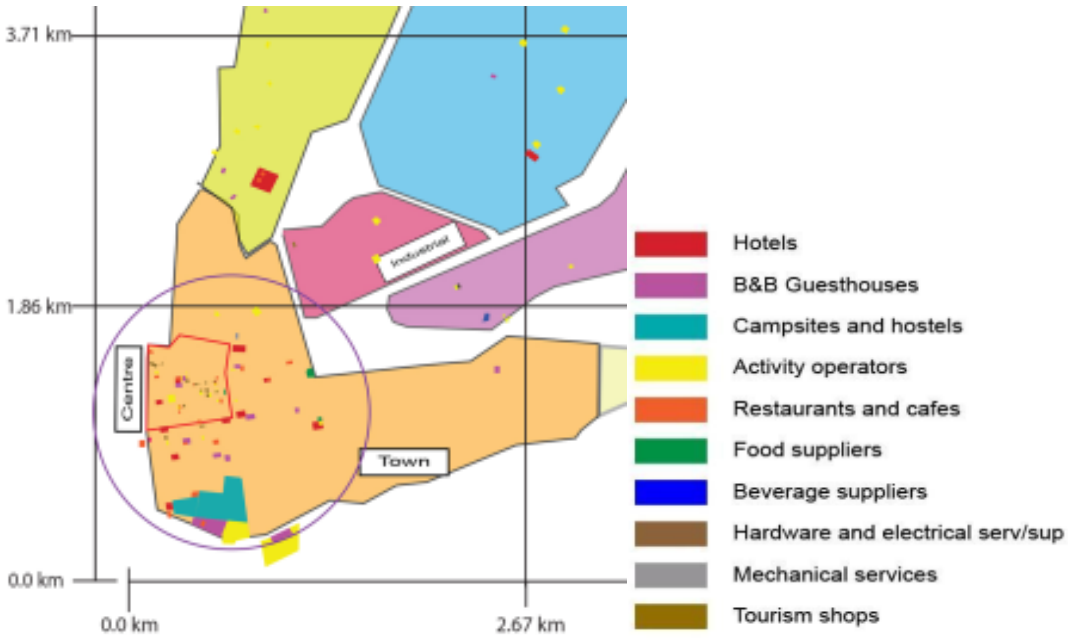

Figure 6.9 Town zone spatial concentration of respondent businesses

Taking a visual inspection of business concentration in Swakopmund shows that locations of firms are more densely concentrated in the town centre or zones 1 and 2. Taking a centre node in zone 1 and 2 extending outward to the outer northeast edge of the black circle is a distance of 2 kilometres. Martin and Sunley's (2002) critical review of Porterian cluster theory raise strong concerns over a lack of clearly defined geographic boundaries for clustering. However, agglomeration works do offer spatial estimations. Carroll et al (2008, p455) found a wide spectrum of geographic determinants for clusters ranging between 50 miles and 450 miles or within a day's drive. Feser and Bergmann (1999, p35) found clustering distances vary depending on the industry. For example, in the automobile industry, spatial clustering had the strongest effects from a 2 to 6 kilometre radius, whereas publishing clusters peak around a 12 kilometre radius. The tourism industry in Swakopmund exceeds density measurements reported in the studies reviewed.

Looking at the density of tourism firms in Swakopmund shows that 94% fall well within the 12 kilometre threshold reported by Feser and Bergmann (1999). Table 6.6 provides a breakdown of tourism firm concentration in various town zones illustrated in Figure 6.8 and 6.9.

Table 6.6 Tourism business town locations

		town zone							
Classification	Sample	1	2	3	4	5	6	7	8
Activity operators	54	16	16	6	0	2	10	0	4
Tour operators	41	17	19	0	2	1	0	0	2
Restaurants	82	54	9	15	1	1	2	0	0
Accommodation	109	21	49	28	0	0	1	0	9
Acc. Self-catering	91	9	42	40	0	0	0	0	0
Craft shops	50	48	1	0	0	0	0	0	1
Tourism clothing	13	1	0	0	0	0	0	0	0
Car rental	12	4	3	0	1	4	0	0	0
Total	452	170	139	89	4	8	13	0	16
		0.38	0.31	0.2	0.01	0.02	0.03	0	0.04
Cumulative percent			0.68	0.88	0.89	0.91	0.94	0.94	1

Included in this study are 10 firms based 11 to 15 kilometres outside of Swakopmund in the river plots that may appear to be outliers, although, according to Feser and Bergman (1999) the distances are not far enough to exclude them from being a part of a tourism cluster. The results from this section supply evidence that, as far as spatial analysis is concerned, the tourism industry in Swakopmund can be considered to exhibit cluster characteristics. However, Phase 3 of this research will provide more in-depth insights to the agglomeration effects. Confirming the exact boundaries of a cluster varies from case to case and, as Porter (1998) and Hjalager (1999) stress, flexible firm boundaries without exact geographic distances is a consistent characteristic found in clustering industries.

6.5 Phase 3 questionnaire results and discussion

A questionnaire survey (see Chapter 5, section 5.4.3) was carried out to extract agglomeration characteristics and gain insight into potential benefits incurred by firms in the suspected tourism cluster overlooked by aggregate data. The survey began in June 2021 and was completed in October 2021. A two-month gap in interviews began in the third week in June lasting until the middle of August. This was due to an outbreak of the Covid-19 virus in conjunction with strict regulations placed upon business meetings. Response via email was sluggish.

The sample consisted of 152 respondents representing various business sectors illustrated in Table 6.7.

Table 6.7 Questionnaire respondent frequencies in business categories

Business Category	Frequency	Percent	Valid Percent	Cumulative Percent
Activity operator	29	19.1	19.7	19.7
Tour operator	9	5.9	6.1	25.9
Booking agent	10	6.6	6.8	32.7
Restaurant	15	9.9	10.2	42.9
Café	4	2.6	2.7	45.6
Hotel	18	11.8	12.2	57.8
Guesthouse	18	11.8	12.2	70.1
Lodge	1	0.7	0.7	70.7
Back Packer / camping	2	1.3	1.4	72.1
Tourism shop	3	2.0	2.0	74.1
Craft sales	19	12.5	12.9	87.1
Art	6	3.9	4.1	91.2
Shop	5	3.3	3.4	94.6
Car rental	1	0.7	0.7	95.2
Supplies	3	2.0	2.0	97.3
Manufacturer	4	2.6	2.7	100
Total	147	96.7	100	
Missing	5	3.3		
Total	152	100		

A difference in population sample percentages exists between the questionnaire components illustrated in Table 6.7 and tourism and tourism dependent business category percentages shown in Table 6.8. Two reasons clarifying the differences are; Table 6.8 does not include percentages of service and supply related businesses that would considerably lessen tourism and tourism dependent percentages. Also, in line with Farsari (2018), questionnaire respondents were required to have both knowledge and experience in the local tourism industry equal to managerial levels. This criterion excludes a significant portion of the local business community from participating in the survey. Three suppliers and four manufacturers were included in the survey who were identified as having significant business relations with the local tourism industry.

Table 6.8 2021 Business count

Business Category	Frequency	Percent	Cumulative Percent
Activity operators	42	9.9	9.9
Tour operators	54	12.7	22.6
Booking Agents	12	2.8	25.4
Restaurants	65	15.3	40.7
Accommodation	85	20	60.7
Acc. Self-catering	114	26.8	87.5
Craft shops	36	8.5	96
Tourism clothing	9	2.1	98.1
Car rental	6	1.4	100
Total	425	100	

Businesses involved in the questionnaire survey were located in 7 town zones identified in Chapter 5, Figure 5.4 with three additional zones being; zone 8 for the outlying Swakop Riverbed 9 kilometres out of town, zone 9 for Walvis Bay 23 kilometres south of Swakopmund and zone 10 for respondents based in Windhoek[3] 389 kilometres from Swakopmund. The 2 respondents based in Windhoek have been active in the local tourism industry for 24 and 17 years respectively. In connection with Figures 6.8 and 6.9, the lion's share of businesses surveyed (50.0%) were located in the CBD or centre of Swakopmund. Moreover, including Zone 1 (23.7%) to city centre concentration levels exhibits a cumulative percentage of 73.7% of businesses surveyed were located within 3 kilometres of the centre of town. Table 6.9 presents a breakdown of business locations of respondents who took part in the survey. One consideration revealed in cross-examining Tables 6.8 and 6.9 is with an estimated population share of Swakopmund exceeding 70% (MUN meeting, May 12, 2021), Mondesa (zone 6) and DRC (zone 7) represent only 5.9% of tourism businesses surveyed. This uneven distribution is in line with the Phase 2 business count illustrated in Table 6.4

[3] Two tourism experts from Chameleon Safaris who have both extensively worked in the local tourism industry. Chameleon Safaris was part owner in Dunedin Star guesthouse.

Table 6.9 Surveyed business locations

Town Zone	Frequency	Percent	Valid Percent	Cumulative Percent
Centre	76	50	50	50
Town 1	36	23.7	23.7	73.7
Town 2	15	9.9	9.9	83.6
Industrial 1	3	2.0	2.0	85.5
Industrial 2	9	5.9	5.9	91.4
Mondesa	7	4.6	4.6	96.1
DRC	2	1.3	1.3	97.4
Riverbed	2	1.3	1.3	98.7
Windhoek	2	1.3	1.3	100
Total	152	100	100	

The surveyed population was composed of 90 business owners (59.2%) and 62 managers (40.8%) with an average of 10.9 years working for respective firms (N=150, Min= 1, Max=33, SD= 7.93). Respondent's total experience in the tourism industry is 18.1 years (n=150; min=1; max=42; SD=9.21). The mean year businesses started was 2002.5 (N=148; Min=1905; Max=2021; SD=15.49) with current business owners who initially started the businesses totalling 112 (74.7%). This line of reasoning is line with Porter (1998, p84) confirming clusters catalyse start-ups and Rocha (2004, pp 42-3) who emphasises the stage of a cluster positively increases growth levels of entrepreneurial activity, although the ownership percentage of businesses surveyed supports the existence of entrepreneurial activity in the local tourism industry, capitalising on what Bell and Lyal (2002) describe as an enhancement of natural endowments. A case could be considered where increased levels of entrepreneurial activity occurred approximately in 2002-3 or a timespan in that vicinity during the average age of surveyed firms started. Alternatively, these results strengthen a point made by McKay (2012) that the South African activity industry contains lifestyle entrepreneurs.

6.5.2 Factor Analysis of questionnaire variables

To consolidate variables, the Likert scale responses were subjected to an exploratory factor analysis (EFA) to ascertain the assorted constituents of the factors. Preliminary tests were run

to establish the validity of performing the EFA. The Kaiser-Meyer-Olkin test scored 0.662, which is above the 0.5 cut-off and the Bartlett's test of sphericity is significant at $p < 0.001$ ($\chi^2 = 355.389$), verifying that there are relationships between the variables and that they are eligible for a factor analysis.

Methods employed to extract the factors were principal components with Promax rotations for increased proficiency in discriminating between factors. The outcome number of factors was founded on Kaiser's criterion where 6 factors with observed eigenvalues greater than 1 were extracted (also see the Scree plot below). The factors explain 65.44% of the variance (see Table 6.10). Factor labelling was based on the literature and, where more than 2 descriptions identified the factor, the Cronbach alpha was determined as a reliability indicator.

Table 6.10 Total variance explained

	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.162	19.765	19.765	3.162	19.765	19.765	2.851
2	2.276	14.226	33.991	2.276	14.226	33.991	1.913
3	1.626	10.163	44.153	1.626	10.163	44.153	1.958
4	1.250	7.815	51.969	1.250	7.815	51.969	1.680
5	1.152	7.201	59.170	1.152	7.201	59.170	1.996
6	1.005	6.279	65.449	1.005	6.279	65.449	1.740
7	0.880	5.503	70.952				
8	0.732	4.573	75.525				
9	0.712	4.449	79.974				
10	0.650	4.064	84.037				
11	0.572	3.575	87.613				
12	0.540	3.377	90.990				
13	0.412	2.577	93.567				
14	0.400	2.501	96.068				
15	0.323	2.017	98.085				
16	0.306	1.915	100				

Extraction Method: Principal Component Analysis.

The eigenvalue readings are displayed in Figure 6.10; with cut-off point of 1, 6 out of 16 components chosen.

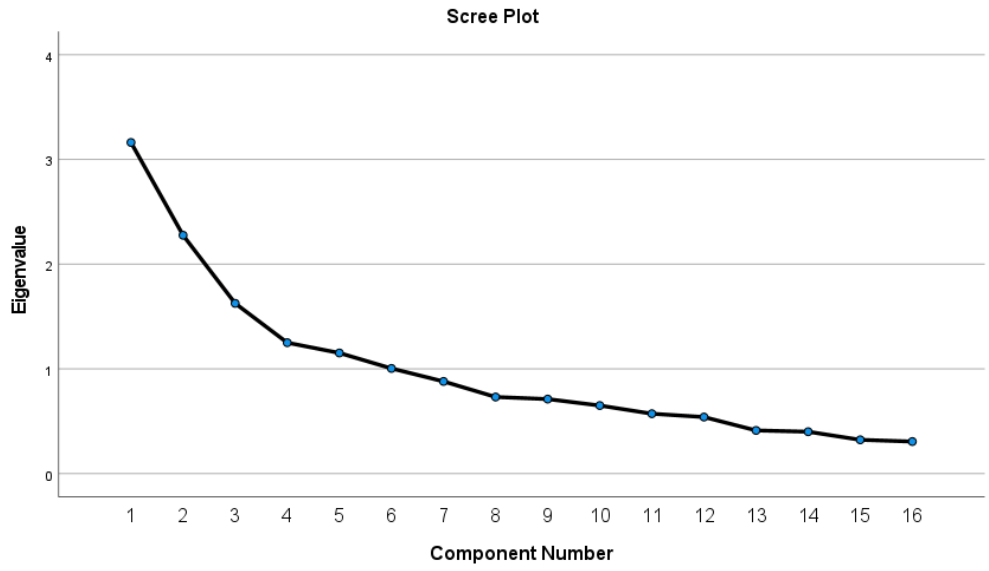

Figure 6.10 Eigenvalue scree plot

The factor loadings are indicated in Table 6.11 and the factors with vales > 1extracted were labelled according to the items that loaded into the various factors and considering the literature. These factors therefore measure the extent of Collaboration, Co-operative behaviour, Geography, Labour, Trust and Co-opetition.

Table 6.11 Factors extracted

	Collaboration	Co-operative behaviour	Geography	Labour	Trust	Coopetition
A municipal tourism organisation to increase competitive advantages	**0.538**					
tourism firms meeting to solve problems and promote new ideas	**0.823**					
Consult outside experts regarding marketing and innovation	**0.852**					
Increased collaboration efforts between tourism organisations	**0.705**					
national tourism organisation to better represent the industry	**0.337**					
Levels of communication and information sharing in the local tourism industry		**0.783**				
Level of conflict resolution		**0.816**				
Tourism firms' flexibility to adapt to change		**0.590**				
Do you prefer to shop within your town zone			**0.811**			

Preference to a supplier being a long-time resident of Swakopmund			**0.773**			
Is it easy to find level 2 employees in Swakopmund				**0.883**		
Is it easy to find level 3 employees in Swakopmund				**0.789**		
Trust with buyers is strong					**0.873**	
Establishing business relationships built on trust					**0.642**	
Impact of competing firms on your product quality						**0.810**
Impact of local tourism industry on the success of business						**0.734**
Factor mean score	***4.1161***	***2.9236***	***2.5135***	***2.8586***	***3.6467***	***3.6453***
Cronbach's alpha	0.777	0.614				

* bold numbers indicate significant correlation

The factors will be discussed in their ranking order from factor mean scores.

Collaboration items display the highest mean score (4.1161 out of 5) representing 19.765% of the total variance, statistically indicating a high level of belief in the benefits of collaboration, effectiveness of efficiently run collaborative organisations and the need to increase collaboration between tourism firms. Farsari (2018) reported similar results indicating a high degree of tourism actors connected collaboration directly to increasing sales. The second principal factor is trust with a mean score of 3.6467 representing 14.226% of total variance indicating strong business relationships built on trust are prevalent in the local tourism network. A high degree of trust with suppliers (0.873) contributing to 10.163% of variance supports Porter (1998) and Nordin (2003) with regards to trust being an intangible component to the make-up of clusters. The third ranking was coopetition (3.6453, 7.815% of variance) indicating high regards from business operators towards the benefits of competition and positive impacts of the tourism industry as a whole has contributed towards their respective business success. Co-operative behaviour (2.9236, 7.201% of variance) ranked fourth with the level of conflict resolution in the local tourism industry ranking high (0.816), levels of communication and information sharing (0.783) and flexibility to adapt to change (0.590). Labour pooling (2.8586,

7.201%) indicates a sufficient skilled tourism labour pool. The last component was geography (2.5135, explaining 6.279% of variance) Indicating that geography plays a less significant role for tourism businesses in Swakopmund.

Both collaboration and co-operative behaviour had more than two components allowing for Cronbach's alpha to determine consistency. Both components collaboration (0.777) and co-operative behaviour (0.614) are above the 0.6 threshold indicating acceptable consistency in the factors.

6.5.3 Descriptive results of the survey

This section breaks down questionnaire responses into the three constructs; geographic proximity, labour pooling and interdependencies. Questions are labelled Q*x* in accordance with corresponding questionnaire numbers. Likert scales are based on a 5-point rating.

6.5.3.1 Geographic proximity

The results of supply sources for business needs in Q9 indicate good local support in terms of using local supply firms. A mean Likert scale score of 3.63 (N= 148, median= 4, mode= 5, SD= 1.68) this is supported by Q18 (N=146, mean= 3.48, mode= 4, SD= 1.223) looking into preference to buying in Swakopmund over Walvis Bay where 52.6% either agreed or strongly agreed. Referencing motivational responses Q18b (N=124), this can be attributed to a mixture of preference to support local (37.9%), ample local supply (12.1%), time savings (6.5%) and preference purely dependent on price, product quality and service (31.5%). The latter was frequently attributed to disagree and neither agree nor disagree (40.4%) but it could also support the existence of good product quality, prices and service in Swakopmund. The questionnaire did not probe this specific issue and, in hindsight, the motivation for price, quality and services in Q18b did not distinguish between the comment supporting either Swakopmund or Walvis Bay.

Two factors identified in the factor analysis as having considerable contribution to variance were Q17 (0.811) looking into purchasing preferences in town zones and Q22 (0.773)

preferences to suppliers being long-term residents of Swakopmund. Respondents moderately rated staying within their respective town zones for suppliers (N= 147, mean= 3.054, mode=2, SD= 1.26). The overwhelming response that was not probed in the questionnaire but that was experienced by the interviewer was that the distances in Swakopmund do not deter out of zone purchasing. Looking at respondents' preferences to suppliers being long-term Swakopmund resident indicates low values with a mean score of 1.93 (N=145, mode= 1, SD= 1.295). Frequencies of Q22 show 58.6% rated this variable not at all important and the interviews specified price, quality and service prevail when choosing suppliers.

6.5.3.2 Labour pooling

Experience in the field and years worked in the tourism industry were surveyed to identify respondent expertise and comprehension of the focuses of the questionnaire as suggested by Farsari (2018). Mean years worked in the tourism industry are 18.073 (N=150, SD=9.213) with a minimum experience of 1 year and a maximum of 42 years in the industry. Employees receiving additional training at their respective establishments was 58% (N=150, mean= 0.42, Mode=0, SD= 0.494). This can be an indication of a variety of issues with two being mentioned in the interviews. Respondents, with experience in the field averaging over ten years, did not require training. This supports the assumptions of cluster theories on skilled workforces existing in agglomerated industries.

A breakdown of business employment shows a total of 1 552 (N=152) full time employees and 253 part-time workers and freelance guides. Mean number of employees is 10.6, and the standard deviation is 12.983. Table 6.12 provides descriptive data of skill levels of local employment alongside workers' previous experience in the tourism industry.

Table 6.12 Skill level descriptive statistics

	N	Minimum	Maximum	Mean	Standard deviation
How many skill level 1 are employed	133 (581)**	0	60	4.3684	8.0618

How many skill level 2 are employed	138 (650)**	0	40	4.7101	6.9421
How many skill level 3 are employed	138 (319)**	0	27	2.3116	3.9519
How many employees have had previous expr in tourism	134	0	30	3.2612	5.5113

* employment figures are estimated at pre-pandemic quantities
** total quantity of workers in the respective skillset categories

The greatest number of workers were recorded in skill level 2, which is an indication that a local tourism labour pool exists and is supported by Q12 and Q16 looking into opportunities created by the local tourism industry. Responses to whether or not the local tourism industry creates opportunities for workers on all levels, 82.9% either agreed or strongly agreed. The overwhelming response was the wide variety of skillsets required in the tourism industry (55.4%). In-house training was the second most common motivation for good opportunity levels that can be factored towards building a local labour pool. Businesses rating their establishments' levels of opportunities stand at 75.7% approval ratings (N=144, Mean=4.028, SD=1.020) on workers having opportunity to shift from level 1 to level 2 employees.

When asked if finding skilled tourism labour was better accomplished outside of the Erongo Region, 49.6% (N=141, mean=2.617, SD=1.076) did not agree with a cumulative reading of 78.7% when adding a neutral standpoint response. Primary motivations were; a good local labour pool (28.4%) and supporting local (16.7%). On an opposing viewpoint, supported by respondent motivations for Q12 and Q13, the tourism industry provides less opportunity for higher skilled workers (6.6%) primarily due to lack of funding to pay for skilled labour (11.6%). Although this might influence in-house training supported by Q12 motivation responses (16.5%) and Q16 addressing opportunities at respondents' businesses, the local tourism labour force showed above average reactions in Q14 to finding skill level 2 (N=142, Mean=3.113, SD=1.062). This suggests an ample supply of tour guides, restaurant staff and hotel management skills. This factor rated the highest variance correlation in the factor analysis with a value of 0.883.

Expert level 3 labour rates lower with 52.1% finding level 3 employees difficult in Swakopmund. Only 22.9% agreed with the ease of locating experts locally and 3.5% strongly agreed. A suggested reason for these responses was repeatedly discussed in casual conversation in that the local industry and town is not large enough to support a significant pool of expert labour. Another consideration presented by Riley (2004, p137) is that tourism employment is considered a secondary market dominated by lower skill levels. Moreover, those with expert skills were reported to be well situated in their job positions or too costly to hire. In consideration of tourism labour skill levels, having an adequate level 2 labour force supports agglomeration theories of local labour pools increasing in clusters. Concurrently, looking at the labour pooling results of skill levels, employment training and opportunities, the results point to the existence of a tourism labour pool in Swakopmund.

6.5.3.3 Interdependencies

Measuring latent variables such as interdependencies presents difficulties. These being intangible benefits lacking clearly defined measurement scales to decide economic impacts (Martin and Sunley, 2002; Miller et al., 2008) as is the case with the five interdependency constraints represented in the questionnaire. Trust issues and their importance demonstrated strong agreement with Q19 probing into trust with suppliers being strong scored the second highest factor reading (8.73) and an overall 87.3% (45.8% strongly agreed; N=142, mean=4.282, SD=0.868). This supports a significant level of trust existing in business relationships. Moreover, respondent perceptions of building business relationships founded on trust versus price are rated highly where 49.3% strongly agreed and a cumulative 79% agreed (N=148, Mean=4.223, SD=0.929). Although the questionnaire did not require a motivational response, interviewees frequently mentioned that with strong trust often comes good pricing. Only 4.7% found trust-based relationships slightly or not at all important. The results concerning business relationships founded in trust fall in line with the literature reviewed in Chapter 2.

Collaboration: Collaborative perceptions were well represented in the factor analysis with 5 items loading onto the factor. Respondent perceptions of a municipal tourism organisation to market Swakopmund were strong with 83.7% agreeing (N=147, Mean=4.191, Mode=5, SD=1.052). A comparable mind set is reported by Jackson and Murphy (2006, p47) where the tourism community in Victoria, B.C., Canada realised positive results by developing a more "united business approach" via increased participation by firms in Tourism Victoria, a municipally driven tourism organisation. Increased sharing of ideas and problem solving between firms has 78.1% of responses approving (N=146, Mean=4.055, Mode=5, SD=1.039) which is in line with Czernek (2013, p97) who found cooperation was easier in this case as long as collaboration did not entail costs. Consulting outside experts, with a factor analysis result of 8.52 showed 68.1% agreed with respondents against the idea frequently emphasised the value of local knowledge when it comes to marketing. However, a majority (Mean=3.727, Mode=4, SD=1.130) point out the importance of obtaining innovative ideas and marketing plans from source markets. In line with this motivation, Hilal (2008) reports a greater number of large local companies have a positive effect of global networking. Considering increased collaborative efforts between different tourism agencies, respondents supported the notion with 80.7% either strongly agreeing or agreeing. The highest overall mean score of 4.541 was in support of a well-run all-encompassing national tourism organisation with 91.8% approving. Conversely, when respondents were queried about no interference in the local tourism industry, it was overwhelmingly reported as being not at all important (75.9%). The 5 components illustrate the perceptions of respondents towards collaborative concepts uncovered in the literature reviewed. An additional consideration is that the capacity of these measurements does not determine the rate of collaboration within the local tourism industry. Instead, the results provide insight into the effectiveness of existing tourism organisations and that a cognizance exists recognising the value of collaboration.

Measuring respondents' perceptions if a high level of collaborative behaviour exists in Swakopmund scored lower in terms of Likert ratings (Mean=3.081) where 39.8% were

concurring and 35.6% conflicted. The most compelling motivation reaction with lower ratings was that tourism businesses tend to be out for themselves (20.2%) and, although not substantially rated in Q19 (1.8%), final interview comments frequently mentioned (Q20 3.2%) the destructive nature of runaway commission rates. Averages have risen to 20% and rise as high as 40%, which is assumed in local tourism circles to greatly erode collaborative behaviour and the benefits of coopetition. The eroding effects of aggressive commissions will be discussed further in the conclusion Chapter 7.

Q19b motivation responses shed light on positive outlooks and viewpoints of a solid level of collaboration in the industry. The hotel sector consistently mentioned good local referencing systems passing clients to neighbouring establishments (only if there is a good level of quality) but usually in smaller networks. To specify whether or not there are adequate levels of collaboration in the local tourism industry to satisfy clustering expectations, the results show that it does exist in significant levels in smaller networks and in the foundations of respondents' business ideologies and through tourism agencies such as the Hotel Association of Namibia. However, there is a substantial line of reasoning signifying that collaboration levels need to improve in the business community. Strong results from the factor analysis provide an additional argument to reach an agreement that collaboration levels are acceptable. More analysis of local business networks is required to establish this result to be on par with scientifically acceptable standards.

Support from local businesses: The construct is covered by Q8 illustrated in Table 6.12 covering percentages of local business versus external or tourists in combination with Q20 probing into respondents' perceptions of support they receive from local businesses. A moderate level of local support is displayed by percentages (50% agreed) and Likert scale mean (3.331) but a standout motivation for agreeing was in the accommodation sector highlighting a strong referral system exists (34.7%) amongst local firms.

Table 6.13 Customer sources

	N	% Local	% External/ tourism	bookings made
Activity/tour operator	50	28.2	71.8	
Restaurant	21	60.24	39.76	
Accommodation	45			100
Shops and supplies	42	64.26	35.74	

Considering the various tourism business sectors, revenue derived from tourism or external sources is greatest in activity operators and particularly with tour operators who predominantly sell wholesale tours to overseas agents or receive direct online bookings. Restaurants, shops and supplies showed a strong local support which may be the most significant determinant of degrees of local support as accommodation and tour operators rarely sell their products to locals. Two limitations of this specific measurement tool were identified during the questionnaire interviews. The primary issue is that this data was often not recorded by businesses and, in cases where it was on record, it could not be verified by the researcher. More research into this part of the study could provide valuable insight into marketing directions and business planning to local tourism firms. The results in Table 6.12 are a mixture of figures obtained from respondents' records and estimates. Secondly, there were respondents who were unclear as to exactly what are the guidelines determining who are tourists and who are locals. Taking the suggested errors at hand, the figures suggest a good level of local support for products with local demand. Local support can also be a function of direct marketing and aggressive pricing catering to the local market, which is out of the scope of this study. Finally, the results show tourisms' dependence on various parts of local industries.

Coopetition: Coopetition was covered in section 6.5.2 in the factor analysis, Q11 looking into perceptions of the Swakopmund tourism industry being globally competitive was not discussed. 73.9% of respondents agreed with the local industry being globally competitive with good value and standards alongside a wide variety of products being primary supporting

motivations. In a specific interview with a well-travelled tourism expert, a strong point was raised that many local people do not have a clear picture with regards to park pricing and hotel standards across Africa. According to him, the whole of Namibia still ranks high in terms of quality, pricing and variety of products. Alternatively, high prices (9.0%) and sub-standard service related issues (11.5%) were observed as negative aspects impacting the industry's competitiveness.

In section 6.5.2, two items loaded onto the factor; (Q27) addressing the impact of competition on product quality and (Q28) looking at the impact of the entire local tourism industry on business success. Both recorded positive outcomes supporting coopetition and, in the case of respondents disregarding the impacts of competition, 24.8% of total motivation responses stated that the businesses operated in a unique niche in the tourism market and set their own standards. From the response data collected, a strong argument is made for the existence of coopetition and the positive externalities generated. This is an area that could significantly benefit policy makers to gain a better understanding of both the concept and more precise data measuring the benefits of healthy competition.

Co-operative behaviour: Three components rated as significantly explaining variance in co-operative behaviour measurement. Despite the strong factor loadings, all three rated only moderately with undocumented a posteriori comments frequently addressing a room for improvement issue. Degrees of communication and information sharing had a mean score of 3.007 (N=146, SD=0.969) Conflict resolution (Mean=2.963, SD=0.926) and adjusting to change (Mean=2.778, SD=0.946) reflected similar responses being 'Fair'. Further research to compare the differences between these components within small business networks and the entire local tourism industry could be a deciding factor in determining more accurate levels of co-operative behaviour.

6.5.4 Differences between business sectors

The results of the factor analysis illuminate the relevance of variables but do not identify the relationship of the variables between businesses. Therefore, the next step involved performing

an ANOVA test to understand the differences of the factors between business sectors. Business categories were changed to three sectors being Pure Tourism, Tourism dependent and Suppliers. Pure tourism businesses are tourism operators, activity providers, accommodation establishments and booking agents. Tourism dependent businesses receive significant revenue from tourism but also cater for local demands such as restaurants, car rentals and tourism related shops. Suppliers include all shops, services and suppliers that cater to local demands but receive revenue from tourism.

Table 6.14 ANOVA results

		Sum of Squares	df	Mean Square	F	Sig.
Collaboration	Between Groups	0.403	2	0.202	0.195	0.823
	Within Groups	100.222	97	1.033		
	Total	100.625	99			
Co-operative behaviour	Between Groups	7.267	2	3.634	3.696	**0.028**
	Within Groups	95.363	97	0.983		
	Total	102.63	99			
Geography	Between Groups	1.912	2	0.956	0.936	0.396
	Within Groups	99.067	97	1.021		
	Total	100.979	99			
Labour	Between Groups	1.454	2	0.727	0.727	0.486
	Within Groups	96.969	97	1		
	Total	98.422	99			
Trust	Between Groups	1.578	2	0.789	0.782	0.46
	Within Groups	97.861	97	1.009		
	Total	99.439	99			
Co-opetition	Between Groups	4.498	2	2.249	2.45	**0.092**
	Within Groups	89.054	97	0.918		
	Total	93.552	99			

*factor scores calculated according to the Anderson-Rubin method

Results of the one-way ANOVA test revealed that there was a statistically significant difference with Co-operative behavior (F=3.696, p=0.028) and Coopetition (F=2.45, p=0.092). These results reveal significant relationships between variables but do not identify between which groups these exist. Therefore, Bonferroni and Tamhane tests were used to determine pairwise differences where the ANOVA identified significant differences in means. The results of the

ANOVA test are illustrated in Table 6.14 and Table 6.15 presents the Bonferroni and Tamhane results.

Table 6.15 Co-operative behavior Bonferroni and Tamhane results

Co-operative behaviour

	(I) Classification	(J) Classification	Mean Difference (I-J)	Std. Error	Sig.
Bonferroni	Pure tourism	Tourism dependent	-.58536055*	.23788904	**.047**
		Supplier	-.62606291	.42154522	.422
	Tourism dependent	Pure tourism	.58536055*	.23788904	**.047**
		Supplier	-.04070237	.45453053	1.000
	Supplier	Pure tourism	.62606291	.42154522	.422
		Tourism dependent	.04070237	.45453053	1.000
Tamhane	Pure tourism	Tourism dependent	-.58536055*	.22417810	**.037**
		Supplier	-.62606291	.44393175	.506
	Tourism dependent	Pure tourism	.58536055*	.22417810	**.037**
		Supplier	-.04070237	.46739049	1.000
	Supplier	Pure tourism	.62606291	.44393175	.506
		Tourism dependent	.04070237	.46739049	1.000

Table 6.16 Coopetition Bonferroni and Tamhane results

Co-opetition

Bonferroni	Pure tourism	Tourism dependent	.48669466	.22988571	**.110**
		Supplier	.37968581	.40736312	1.000
	Tourism dependent	Pure tourism	-.48669466	.22988571	**.110**
		Supplier	-.10700885	.43923870	1.000
	Supplier	Pure tourism	-.37968581	.40736312	1.000
		Tourism dependent	.10700885	.43923870	1.000
Tamhane	Pure tourism	Tourism dependent	.48669466	.25607738	.187

	Supplier	.37968581	.46987150	.836
Tourism dependent	Pure tourism	-.48669466	.25607738	.187
	Supplier	-.10700885	.51394590	.996
Supplier	Pure tourism	-.37968581	.46987150	.836
	Tourism dependent	.10700885	.51394590	.996

The results of Co-operative behavior identify a significant difference between pure tourism and tourism dependent businesses with both the Bonferroni (p=0.047) and Tamhane (p=0.037) test significant at a 5% level of significance. As for which business displays higher ratings, pure tourism businesses rate Co-opetition (mean-3.786) significantly more important than tourism dependent businesses (mean=2.856).

Co-opetition only showed a moderate significant differences between the two type of businesses, with the Bonferroni test (p=0.110) just above the 0.10 acceptance level. Tourism dependent businesses view co-operative behaviour (mean=3.015) as more important than pure tourism businesses (mean=2.856).

6.5.6 Do tourism firms in Swakopmund exhibit cluster behaviour?

This final section in Chapter 6 summarises the answers to the research question proposed in Chapter 1. The second objective was to investigate the effects of agglomeration by measuring firm interdependence, cooperative practices and sharing of a labour pool between businesses in Swakopmund. The end result aims to clarify the existence of a tourism cluster on the central coast of Namibia. Measurement results are discussed in the order presented in this chapter.

The results looking into the history of tourism in Swakopmund suggest the existence of cluster characteristics since the mid-1990s. In fact, a tourism cluster may have existed decades before. However, this study focuses on more current industrial make-up. This study uncovered strong bonds between local tourism actors building alongside a global growth in adventure tourism. The local tourism industry experienced increased rates of start-ups and innovation to

accommodate for changing markets. Interviews with key players revealed a strong sense of co-operative behaviour, business relationships established on trust, healthy coopetition, and mostly located within close proximity of the town centre. Hjalager (1999), Jackson and Murphy (2006, p43) and Capone (2004, p9) include a community feel founded in strong cultural identifications as a key characteristic of tourism clusters. Swakopmund still retains a strong Germanic influence fused with an ever growing African flare. This, combined with over 100 years of tourism history, assists in suggesting that, from a historical standpoint, a tourism cluster has existed in Swakopmund for more than two decades.

Although the LQ did not provide a strong argument for employment concentration to be excessive, all three LQ scores surpassed the threshold of 1.00 with two exceeding 1.25. Spatial agglomeration of tourism firms in Swakopmund are highly concentrated within the suggested distances in related agglomeration research. In this case, there are few alternatives that exist beyond 7 kilometres without being in Walvis Bay. Most towns in Namibia do not have bordering towns within 50 kilometres.

Questionnaire results confirmed clustering characteristics in all aspects investigated by this study. The factor analysis ranked collaboration with strong significance followed by co-operative behaviour. The results revealed considerable belief in collaborative behaviour and ethics supporting local businesses. This includes local labour where significant levels of loyalty exist in the competence and adequate supply of skilled tourism labour. Furthermore, the local tourism industry is viewed as creating opportunities, being globally competitive, supporting local businesses and overall benefiting the local economy.

There are improvements to be made, especially in the areas of tourism organisations running more efficiently and increasing collaborative behaviour. The industry itself could significantly increase collaboration between businesses, but this study does not provide quantitative answers to these questions. Chapter 7 will further discuss these matters and present recommendations based on the findings of this study.

Chapter 7: Conclusion

7.1 Introduction

The tourism industry on the coast of Swakopmund has undergone significant growth during the past 25 years with policy planning largely performed on an ad hoc basis in reaction to commercial issues raised by business owners and conservationists in combination with pressing budgetary requirements. Very little, if any, consideration by policymakers has been allocated to the benefits received to the local and national economies by the existence of firms' agglomeration in spatial proximity and exhibiting industrial cluster characteristics. This research aimed to elucidate positive externalities generated by the existence of a tourism cluster through three objectives being:

> **Objective 1 –** To analyse literature on tourism cluster and agglomeration theories, development, characteristics and methodologies to delaminate linkages within the suspected tourism cluster.
>
> **Objective 2 –** To investigate the effects of agglomeration from a Porterian competitive standpoint by measuring firm interdependence, cooperative practices and sharing of a labour pool.
>
> **Objective 3 –** To measure the extent of clustering in tourism firms in Swakopmund using a mixture of quantitative and qualitative methods to extract results from local tourism industry owners and managers.
>
> **Objective 4 -** To draw conclusions about the effects of tourism firm agglomeration and make policy recommendations pertaining to the tourism cluster and surrounding industries.

In the course of uncovering the benefits of industrial cluster research into tourism, an additional ambition of this study, falling in line with complimentary exploratory studies, is to provide an example for future research to follow and further expand on methodological procedures. It is possible to harness the successes of the local tourism industry in Swakopmund for the benefit of tourism development in alternative locations throughout the nation and SADC region.

This study examined the tourism industry in Swakopmund applying an exploratory mixed-method, 3-phase study design to investigate the effects introduced into the local tourism industry from the existence of a tourism cluster. The preliminary step began with an analysis of industrial cluster literature performed in chronological order to acquire a comprehensive theoretical viewpoint to identify clustering traits of the local tourism industry in Swakopmund. Included in this phase was sorting through the history of the SADC regional and local tourism industry distinguishing occurrences that contributed towards the current industrial composition of the local tourism industry. A spatial analysis of employment concentrations using a location quotient was combined with informal interviews during a business count and measured against related cluster literature. The final stage of this study was to explore inter-industry latent clustering characteristics of the effects of spatial proximity, labour pooling and levels of interdependent business relationships. This study is one of the first attempts to incorporate classic industrial cluster concepts to the tourism sector in Namibia.

This chapter summarises key findings and presents theoretical, methodological and practical inferences of the research with regard to future research and policy decisions. The limitations of the research will be discussed before making recommendations for future research, policy gains and pathways for using the results of this study to benefit businesses in the local industries.

7.2 Summary of the key findings and conclusions

This section summarises key findings in the order of representation in Chapter 6, beginning with the first objective to analyse tourism cluster and agglomeration literature to delineate linkages within the suspected Swakopmund tourism cluster.

The systematic literature review of 182 works identified principal clustering components used to identify cluster characteristics in the historical review, business count and questionnaire survey. These consisted of geographic proximity, labour pooling activity and interdependencies encompassing collaborative behaviour, coopetition, co-operative behaviour and business relationships founded in trust. Adjusting these concepts to the

tourism industry, Hjalager (1999) appended the importance of a community culture within tourism clusters to connect business networks and secure long-term relationships. These cluster characteristics were the principal variables investigated in this study. Agglomeration and industrial cluster methodological processes were reviewed in 239 works that were used to meet the second and third study objectives to measure clustering levels and assess the importance to local industries. From investigating the past industrial and social components of the local tourism industry, key findings that confirm the existence of a tourism cluster in Swakopmund are:

- Personal interviews with tourism industry experts revealed the tourism build-up during the mid-1990s was assisted by a pre-existing tourism infrastructure that began in the early 1900s and a technically skilled labour pool crossing over from the mining and commercial fishing sectors.
- Spatial proximity of tourism firms is confirmed as, throughout the town history; tourism businesses have been based within 7 kilometres of each other with tourism business owners predominantly residing in Swakopmund.
- Clustering characteristics of co-operative behaviour, trust, collaboration and coopetition were uncovered in personal interviews alongside increased entrepreneurial activity, knowledge sharing and increased innovation.
- Porterian viewpoints of increased innovation and coopetition driving local industries to operate at globally competitive levels were revealed in similar growth patterns of Namibia's tourism growth and global adventure tourism growth rates. The literature identified the comparative advantages of Swakopmund, suggesting local tourism firms reacted to global adventure tourism demand increases by using their natural endowments.
- The competitiveness of the activity tourism sector gained Swakopmund the title of Namibia's 'adrenaline oasis'.

- Given the findings of the historical review, the local tourism industry in Swakopmund exhibits clustering characteristics and can be assumed a tourism cluster. Tourism businesses have developed within geographic proximity to each other, competing with each other in a co-operative manner, and sustaining long-term relationships founded in trust. A similar historical conclusion was found by Nordin (2003) in Sweden's ski regions.

The following sections summarise the findings and conclusions of the second and third objectives; to measure the effects and extent of the tourism cluster in Swakopmund. The fourth objective, to make policy recommendations is addressed in the recommendations section in this chapter.

7.2.1 Geographic Proximity

- The mapping results revealed that 94% of businesses counted were located within the 12 kilometre distance threshold set by Feser and Bergman (1999) and well as being within the recommendation by Rogerson and Visser (2004, p3) to source local supplies within a 50 kilometre radius. Looking into tourism firm location in Swakopmund indicates a significant level of firms agglomerating in spatial proximity.
- The business count uncovered 84% of firms, excluding exclusive mining supply and service industry, received income from tourism-related sources. This can be interpreted that, within the 7 kilometre radius, there is a significant flow of tourism revenue. Furthermore, 70% of tourism firms are locally-owned, which identifies a considerable level of entrepreneurial activity occurring, especially in the period from 1998 to 2006, with a secondary rise in 2016 to 2019.
- All three sub-sectors associated with tourism had LQs greater than 1.0, the cut-off point for determining employment clustering (Feser and Bergman, 1999). The highest LQ was arts, entertainment and recreation, which scored 1.551. Second was other service activities at 1.270 and the lowest score was accommodation and food services at 1.107. Two reasons for moderate LQ scores are, most likely, the offset of mining and

fisheries/port employment combined with regional data not focused directly on Swakopmund.

- In view of the findings above, this study concludes that, in terms of geography, the tourism industry in Swakopmund exhibits coherent characteristics of a tourism cluster. The regional LQ scores just above cut-off levels are not sufficiently substantial to offset the confirmed proximity of local tourism businesses.

7.2.2 Labour Pooling

- The average time that respondents worked at their respective businesses was 10.9 years, with an average of experience working in the tourism industry of 18.1 years. With regards to position at the businesses in focus, 59.2% of the respondents were business owners and the remaining 40.1% were managers. Sampled businesses had a mean start-up year of 2002 implicating a high degree of experience which falls in line with Richardson et al., (2010) finding a positive relationship with the age of a tourism business and performance.
- The local labour pool was found to be sufficient in terms of finding labour without searching outside of the Erongo region. An exception to the ease of finding labour was at expert levels, but this may be attributed to high level employees being either too expensive or secure in their respective employment positions. In-house training from basic skills into higher levels also showed substantial opportunities created by the local tourism industry and half of the surveyed businesses employed skill levels 2 and 3, which was a key finding by Choy (1996) looking into tourism employment in Hawaii.
- Personal interviews with tourism industry experts revealed the tourism build-up during the mid-1990s was assisted by a pre-existing tourism infrastructure that began in the early 1900s and a technically skilled labour pool crossing over from the mining and commercial fishing sectors.
- In addition, it was found that tourism opportunity had a ceiling where opportunities faded for higher level employment. The high percentage of SME owner-operated firms

and budgetary restrictions were, most likely, the reasons for these perceptions. In the end, the local tourism industry was highly rated in providing opportunities due to the wide-ranging skillsets required in the industry.

- Based on this, this study concludes that labour pooling in line with tourism cluster literature exists at lower to middle skill levels. There is a high degree of agreement among respondents' perceptions of opportunities created by businesses for intra-firm skill level advancement.

7.2.3 Supporting local businesses

- A substantial level of local support was recorded with an average of 50 to 70% of supplies purchased by firms being sourced locally. When probed for preferences of Swakopmund suppliers over Walvis Bay suppliers, 52.6% either agreed or strongly agreed with primary reasons being to support local suppliers. However, preferences to use suppliers who were long-term residents of Swakopmund where not so highly rated.
- Strong local support between businesses was determined at 50%, indicating that, although there is room for improvement, there is a strong dependence of the tourism firms on the local services and suppliers in Swakopmund. It is vital, in this respect, to recognise that a preponderance of bookings made to accommodation establishments and tour operators were reported to be made externally as they are not products aimed at locals. Activity operators focused on the demands of overseas adventure travellers, so their ratings were also lower than expected. Alternatively, a strong referral system between accommodation establishments situated in close proximity to each other (37%) was significant.
- A high level of trust in the business community was exhibited, with an overall 87.3% agreeing on importance with buyer-supplier trust levels and 79% placed a higher value on trust compared to price.
- Therefore, in terms of local support, this study concludes that a strong level of local support exists in the tourism industry in Swakopmund. An underlying factor is the

importance of service and quality in consumer choices and how respondents acknowledged how relationships built on trust foster better pricing.

7.2.4 Collaboration and co-operative behaviour

- Collaboration was identified as an important factor in the local tourism industry, with the factor analysis identifying 5 items that coherently measure this construct. There was strong support for a municipal tourism co-ordinating organisation, increased levels of collaboration between tourism organisations and a high value placed on an all-encompassing, well-run national tourism organisation. A substantial level of importance was placed on tourism firms meeting informally to solve problems and promote new ideas.
- A network of referrals and bookings exists between accommodation establishments, restaurants, activity operators, service providers and suppliers where tourism revenue was observed to be a primary source of revenue. Inter-industry referrals were observed to be most significant in the accommodation sector, with restaurant and activity bookings occurring in 100% of businesses surveyed. Similar to observations made by Schott (2007) in the New Zealand adventure travel industry, personal interviews also revealed a strong word of mouth marketing system that propelled the activity and restaurant sectors in the late 1990s.
- Conversely, only a moderate viewpoint was recorded with regards to collaborative behaviour existing in the local tourism industry. Collaboration existed at the Hotel Association of Namibia and either in close geographic proximity or in tight-knit networks. An explanation for this outcome is reported to be that businesses are out for themselves only and commission issues drive unhealthy competition. This is one area the local tourism industry can improve.
- Co-operative behaviour scored well on the factor analysis, but it is one area where respondents disputed high levels due to social patterns, trust issues and commissions. There are, however, significant levels of co-operative behaviour existing in small

networks. To find out in which businesses or where the interdependencies exist, ANOVA results revealed that there are significant differences in co-operative behaviour between tourism firms and tourism dependent firms. This connects with perceptions of more collaborative efforts from tourism organisations to meet local goals as a remedy for these differences. The local tourism industry could benefit from local organisations pooling together small networks to collectively reach common goals and increase business revenues.

- As a result of these findings, this study concludes the existence of a tourism cluster with regards to co-operative behaviour. However, destructive commission practices and intellectual property theft are viewed as degrading cooperation within the local tourism industry. Although questionnaire scores were sufficient to confirm a tourism cluster, this is another clustering area that can be improved.

7.2.5 Coopetition

- Coopetition was registered in the interviews where firms realised that a critical common goal for the local industry was the visitors' overall positive experience in Swakopmund. Through the achievements of cooperative competition, the tourism activity industry (with the help of supporting hotels, bars and restaurants) established Swakopmund as the adrenaline capital of Namibia. In less than a decade, the extent of business networks within the hotel and activity sectors of Swakopmund reached destinations from Cape Town to Nairobi and the UK.
- Coopetition was measured by looking at the competitiveness of the tourism industry and the impact of competitors and the industry on individual businesses. The results showed that 73.9% agreed that the local tourism industry in Swakopmund is globally competitive but sufficient responses were documented concerning high prices, lack of service and low levels of innovation. This shows that there is an understanding in the local tourism industry that competition is healthy by keeping business owners and managers alert to prices, quality and global standards.

- This study concludes that, given the long history of coopetition in Swakopmund and a firm understanding of the benefits competition provides for an industry, a healthy degree of coopetition exists in the local tourism industry.

Based on this, it is clear that the tourism industry in Swakopmund can be classified as a tourism cluster. The tourism industry exists in geographic proximity and benefits from the presence of a skilled labour pool. Questionnaire responses and personal interviews elucidated strong inter-industry tourism skill training. Clustering interdependencies were confirmed in all of these categories. However, strong motivations addressing destructive business behaviours such as aggressive commission strategies and product replication were uncovered. Knowing this, there are clear implications that are addressed in the next section.

An overall viewpoint of extent the Swakopmund tourism industry exhibit cluster characteristics is displayed in Figure 7.1 showing the factor analysis scores.

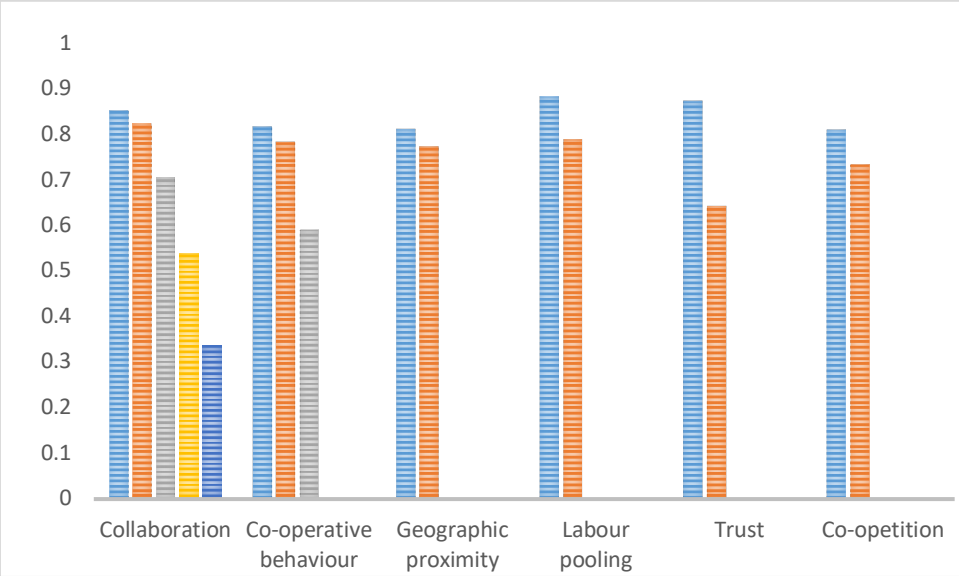

Figure 7.1 Factor analysis scores

Source: Author's own compilation

7.3 Significance and implications

This research is targeted towards a gap in agglomeration and tourism cluster research in developing regions using a mixed methods design to capture the effects of tourism clusters. The aim of this study, in this respect, is to contribute to future tourism studies in providing a system to understand and measure the tourism industry's importance to local economies. To fulfil the data and observational requirements necessary to confirm a destination's clustering attributes and to determine the effects of a tourism cluster, a series of research steps were selected and segmented into three phases. The steps originated from theoretical studies, existing methods employed in assessing tourism clusters and advice from my advisor. The steps and their contributions are discussed below.

7.4.1 The research process to overcome lack of data and research gaps

This sub-section highlights the framework and processes of this study that offer a new approach, not only for Namibian tourism studies, but also for other developing countries, that face similar data restrictions.

The first step in Phase 1 of this study involved acquiring a comprehensive understanding of the field of industrial cluster research. The choice of tracing back the evolution and presenting agglomeration theories in a chronological order assisted in picking up key contributions as they occurred in earlier economic circumstances. This train of thought aimed to find observations made in less complex economies (in comparison to their current economies), for example Marshall (1890) observing agglomeration effects that occurred during the industrial revolution in the UK, to expose correlations with the Swakopmund tourism industry and agglomeration study milestones of the past. Nearly a century later, Scott (1988), Porter (1990, 1998), Krugman (1991) Saxenian (1994), and Rosenfeld (1997) catapulted industrial cluster theories into the economic limelight. Shortly thereafter, Hjalager (1999), followed by Jackson and Murphy (2002), applied industrial cluster theories into tourism. Porterian cluster dynamics and his diamond model of competitiveness were applied by Crouch and Ritchie (1999) and Dwyer and Kim (2003) as a core foundation of

destination competitiveness. Seminal tourism cluster works of Nordin (2003), Capone (2004) and Jackson and Murphy (2006) used the same concepts to structure their assessments of clustering tourism locations. The library of research stemming from these works stipulated the guidelines, parameters for agglomeration and tourism cluster research literature reviews implemented in this study, while outlining methodological pathways used for the research design. The approach employed in this study consolidates a multitude of works in a variety of disciplines (step 3 discusses this variety) and provides a usable example for future studies in developing regions. According to Kim (2019), given the widespread clustering of tourism industries, available literature on tourism clusters is limited.

The second step was to fill the gap in missing municipal data by conducting a business count of tourism firms in Swakopmund to understand the industrial structure of the entire business community. This is a universal challenge to outlying regions in developing nations (Page, 1999). To adjust the study to these shortcomings, a series of informal interviews took place during the count to identify tourism networks and revenue flows. The interviews simultaneously provided information about the people involved in the local business community stemming from Richardson et al., (2010, p955) who suggests, “it is important to note that, in explaining enterprise growth, it is not enough to look at individual characteristics but consideration should also be given to the characteristics of the business and the business environment”. This stage in the research offers an attainable option to overcome missing data and observe clustering traits that are undetectable by aggregate data. Nonetheless, given the time involved in executing this stage, it is best to work with municipalities or national statistics agencies before undertaking the onerous task of counting businesses.

The third step was to look into the tourism history of Swakopmund to identify past cluster characteristics and to understand the evolutionary processes undergone by the current business community to establish a tourism cluster. This perspective derived from Nordin

(2003) asking if the cluster occurs naturally and, if so, what were the key drivers of the cluster formation? The majority of agglomeration research reviewed seldom expands on local history to the degree of this study. It should be noted that assessing levels of historical review performed in related works without speaking directly to the researchers is difficult. However, scanning through the methods sections in the agglomeration research that was examined in the SLR does not reveal excessive efforts in this department. Understandably, it was not the focus of their respective studies but, in a scenario comparable to Swakopmund with a scarcity of tourism-related data, the historical investigation yielded considerable input used for the research design and uncovered cluster characteristics embedded for nearly three decades in the local tourism industry.

The fourth step in the research process (Phase 3) was to design a questionnaire and conduct a survey. This stage in the research benefited from related works on tourism clusters as questionnaires are widely used to extract latent variables and gather expert opinions from tourism firms. Although tourism research has been conducted by NACOMA (2005), Alberts and Barnes (2007, 2008), DECOSA (2016, 2019) and a handful of University of Namibia graduate students, this is the first study in Namibia to use multi-dimensional agglomeration theories founded in Porterian clustering effects on competition, historical works, tourism distribution and adventure tourism literature as a foundation for investigating agglomeration effects on a local economy. In this respect, this research pinpoints a variety of approaches to assessing and measuring clustering characteristics from a successful tourism destination in Namibia.

7.4.2 Theoretical implications

The primary theoretical implication of this research is the application of traditional industrial cluster theories (see Hjalager, 1999; Capone 2004; Jackson and Murphy, 2006) to assess the importance of the presence of a tourism cluster to the Swakopmund local economy. Existing tourism research in Namibia tends to approach tourism research from non-competitive angles such as the impact of tourism on the environment or community

development potential. Reflecting on previous studies examining Namibian coastal tourism shows that the majority focused on either shore angling revenues (Zeybrandt, 1999; Zeybrandt and Barnes, 2001; Barnes et al., 2010; Ngipunya, 2012), conservation and tourism spatial planning (Hattingh, 1996; NACOMA, 2005; Barnes et al., 2005; Mansfield, 2006; Alberts and Barnes, 2007, 2008; Heinz, 2009), or identifying challenges and solutions for previously disadvantaged tourism entrepreneurs (Shalken et al., 2001; Kavita et al., 2011). The most comprehensive work found addressing tourism in Swakopmund was DECOSA (2016; 2019) aimed at the tourism industry and potential opportunities. In fact, no studies were identified looking into the agglomeration effects or tourism clusters in Namibia and this is the first study to apply industrial cluster concepts to the tourism industry on the coast of Namibia.

The practice of agglomeration theories is not foreign to developing nations or isolated tourism locations similar to Swakopmund. The consultancy research of the Cluster Consortium (1999) undertook a series of studies and implemented tourism cluster strategies in South Africa (Nordin, 2003; Rogerson and Visser, 2004, p3). Jote et al. (2013). Underpinning the most significant cluster characteristic is geographic proximity with SME bamboo furniture clusters in Ethiopia. Craftwork clusters in Kenya were investigated by McCormick (1998). Tourism clusters are mentioned as a pathway to development by Christie et al. (2013, p82) and identified in the Zambian tourism regions by Lui and Mwanza (2013) but there has yet to be a widespread usage of agglomeration theories applied to tourism studies in Africa despite UNWTO (2013) recognition of clustering benefits. McCormick (2013, p45) calls for increased application of cluster theories to isolated business systems in Africa to compare successful methods and results. This study provides a pathway adapting industrial cluster theories to research design and application that are applicable to alternative tourism destinations in Africa. Furthermore, the combination of agglomeration literature and tourism disciplines employed to construct the research design can be expanded and customised to many industries in different locations.

7.4.3 Methodological implications

This study contributes to future research from a methodological standpoint by introducing a multitude of agglomeration concepts and methods to measure the agglomeration effects of a local tourism industry. The multi-disciplined approach used in this study provides a more robust view (see section 7.4.2) of the factors contributing to measuring the impacts of a tourism cluster by incorporating tourism distribution, which opened up a wide assortment of research closely related to the tourism industry in Swakopmund. For example, Weber (2001), Swartbrooke (2003), Peirce et al. (2004, 2005) and Buckley (2007, 2010) provided analogous tourism destination scenarios outside of Namibia clarifying the rise in Namibian tourism was strongly related to a global rise in adventure travel. These studies provided this research with methods to extract data from like-minded tourism actors along with analysis techniques.

An additional contribution of this study's methodological approach is combining local and regional tourism history to ascertain whether the contributions of local actors to the growth of the local tourism industry measured up to the influence global trends, regional competitiveness and external entities (e.g. Windhoek based tour operators). An example of an opposing contribution that can diminish the impact of tourism firms are second housing investments in Swakopmund which was examined by Hoogendoorn and Visser (2010), finding second home purchases in rural South Africa directly impact employment and house prices. This viewpoint also pertains to matching natural endowments, alternative local industries and proximity to significant tourism attractions (e.g. Etosha and Sossusvlei) against the inputs of local tourism actors. According to Crouch and Richie (1999), disregarding these comparative advantages can inflate the economic benefits stemming from a tourism cluster (see Rogerson, 2007; McKay, 2014, 2016).

Taking a broad perspective of localised tourism industries brings to light that although destinations share similar source market demands – whether adventure travel, cultural and historical or sand, sun and sea – there are unique qualities that differentiate individual

tourism locations. In the case of Swakopmund, the richness of its natural endowments, cultural heritage and tourism history required a mixture of methodological approaches to constructing a research design and capturing data. Incorporating tourism distribution studies further contributed to this study by imparting surveys and questionnaires applicable to this research due to comparable clientele to Swakopmund (see Peirce et al., 2005; Schott, 2007; Andrade and Smith, 2019). Concurrently, incorporating conservation and mining research revealed competitive and comparative advantages irrespective of tourism to consider the successes of the tourism industry as if it were significantly weighted on natural endowments and alternative industries. In this respect, this study considered multiple angles for assessing the importance of the tourism cluster to the local economy.

These theoretical and methodological implications provided results that were directly applied to the research design and, more specifically, the questionnaire content. The steps taken can be adjusted to fit a variety of situations in tourism cluster research. Awareness of principal competitive advantages from the demand perspective can significantly enhance the development of competitive advantages (Dwyer and Kim, 2003).

7.4.5 Practical implications

As this study progressed, and subsequent to collecting tourism literature focused on Namibia and attending several tourism meetings, it became apparent that this study's third objective was confirmed: policymakers neglect the industrial components of the local tourism industry. Instead, the emphasis is looking at tax revenue opportunities as opposed to fostering further growth in tourism clusters. The information gathered from this questionnaire not only assesses whether or not a tourism cluster exists, the results underpin the contributions to the local economy exerted by a tourism cluster. In doing so, a new perspective is put forth to recognise the significance of the tourism cluster in Swakopmund. Although this study does not uncover numerical values in comparison to the past works of Zeybrandt and Barnes (2001) or Alberts and Barnes (2008), the results confirm a variety of economic benefits to the local economy that warrant modifications on

governmental and private sector motivations for maintaining this cluster and fostering future growth. Increased knowledge of the benefits of clusters can improve policy issues such as park pricing, tourism board regulations and municipal investment planning. This can begin by placing a higher value on the existence of a pool of experts who maintain a globally competitive tourism product. As the historical chapter illustrated, the tourism industry in Swakopmund did not evolve overnight.

Motivations and final comments from industry experts revealed a few crucial points towards policymaking and overall tourism industry growth. The motivations derived from the topic of increased collaborative efforts between tourism organisations and viewpoints on the importance of an all-encompassing national tourism organisation. These suggestions are derived from the questionnaire and personal interviews and have significant practical implications.

a. In line with Christie and Compton (2001), policies and regulations should be carefully scrutinised by industry experts with regards to promoting tourism innovation and SME start-up capabilities.
b. It is imperative that the Namibian banking system restructure loan policies to tourism businesses.
c. Ministerial finance authorities should consider a modified taxation system for tourism businesses including incentives for informal tourism businesses to enter the tax grid.
d. The Namibian Tourism Board must increase collaborate efforts with other ministries and ministerial departments. It was suggested to begin with the Roads Authorities of Namibia.
e. Policymakers and municipalities can improve their knowledge of tourism products. A better understanding of tourism products can lead to more accurate and informed policy decisions.

Tourism organisations (national and local) can benefit from the results of this study as an indicator to increase collaborative efforts between other organisations to expedite policy adjustments and collectively achieve greater market penetrations. For example,

questionnaire motivation responses suggested Namibia can streamline a national overseas marketing campaign aimed at promoting the country as a destination in multiple target markets. Furthermore, to achieve this goal, tourism organisations can increase collaborative efforts to collect and process data. Questionnaire motivational responses uncovered a high degree of dissatisfaction with the ability of the current national organisations (excluding HAN) to implement marketing plans, collect and report data and misguided regulatory efforts. Although collaboration between multiple stakeholders does not guarantee immediate results, in the long run it is a sensible pathway to a better tourism system in Namibia. Moreover, this research strongly suggests from questionnaire results and interviews that the country is endowed with tremendous talent in our tourism industry.

Local tourism actors can benefit from the results of this study in several ways, beginning with realising the existence of a local tourism cluster and understanding the of impact clusters on economies, product competitiveness, opportunity creation and overall lifestyle entrepreneurship. This study validates the existence of a skilled local tourism labour pool and that the local tourism industry creates opportunities as well as firms strongly supporting and offering training that can transform unskilled workers into skilled tourism employees. Moreover, the local tourism industry significantly supports local suppliers. These results offer opportunities for potential suppliers to enter the market as the industry recovers from the global pandemic.

This study suggests that local tourism firms can benefit from competition as a way to improve each individual tourism product. Although there was an overall positive outlook on local contribution exerting positive externalities on the industry, motivation responses showed how some actors did not recognise competition as if they cater to their market in isolation. Pricing is always subject to scrutiny by regional and overseas visitors. This includes comparing local tourism products to international competition as Saayman and Saayman (2008) determined, that relative destination prices significantly influence arrivals (also see Ferreira and Perks, 2016). The motivation responses also revealed the existence

of destructive attitudes towards competition that were predominantly aimed at intellectual property theft and dysfunctional commission offerings. The way forward to gaining market share, according to Porter (1990) is via being better than one's competition. Secondly, although the results showed that a moderate to good level of collaborative behaviour in Swakopmund tourism industry was similar to the findings of Jackson and Murphy (2006, p1032) motivation responses exposed a need for improvement. Increased collaboration can benefit the entire industry

This research framework can assist policymakers and municipalities in employing agglomeration concepts and developing tourism cluster growth in alternative locations. The methods employed in this research are adaptable to a variety of circumstances and, by using this methodological framework, tourism clusters can grow in less developed regions with potential for tourism (Jackson and Murphy, 2006).

7.4 Limitations of this study

There are limitations to this study that are listed below. Included in the list are circumstantial obstacles, data limitations and methodological judgements made by the researcher that can be improved in future research.

- A shortage of usable national and municipal data. The location quotient was calculated on regional statistics instead of municipally focused data. This most likely lowered tourism firm concentration levels and lessened the impact of the LQ on this study. From the municipal perspective, a pre-existing business count would have saved time that could have resulted in including the entire population (e.g. the informal sector) into this study.
- The 2020-21 global pandemic caused global economic shocks in the tourism industry that significantly impeded this study. Five-month lockdown situations in Swakopmund and the local tourism industry inhibited personal contact and prevented onsite measurements. To accommodate these circumstances, questionnaire data was placed on 2019 perspectives that increases the potential for data inaccuracies. However,

using industry experts reduced the probabilities of error. There is also a possibility that industry perceptions changed as a result of the pandemic as the majority of respondents were greatly affected by the economic repercussions of pandemic policies. A severe Covid-19 outbreak in Swakopmund from June 2021 until the end of August 2021 significantly slowed down the interview process due to the ethics of arranging personal interviews.

- Obtaining questionnaire responses was difficult via email for three reasons. A general reluctance to participate was discovered during the process. Secondly, the questionnaire appeared too extensive for some respondents. Thirdly, this process was afflicted by spam mail issues where respondents repeatedly did not receive the researcher's emails.
- There is always a degree of subjectivity in questionnaire responses (Kim, 2019). This research could have gained from directly recording booking sources as they occurred but the circumstances surrounding the pandemic prevented this approach from being realised. Additionally, a reluctance to disclose private information would have impeded this method.
- This study disregarded the stage of clustering (ageing or new) as a factor of the results. In future studies, this is one aspect of determining the strength of a cluster that should be included in the analysis.
- The paucity of tourism cluster studies in sub-Saharan Africa imposed challenges to this research, making methodological examples to weigh up the results of this study.

7.5 Recommendations for future research

This study introduced the application of industrial cluster analysis into Namibia's premier coastal destination using mixed-method exploratory methods in attempt to determine the existence and benefits contributed to the local economy. Research in tourism clusters can

be expanded into alternative destinations in Namibia and the SADC region. The opportunity to elaborate on or modify the methods used in this study are listed below.

- The application of exploratory mixed-method tourism cluster analysis used in this study to related tourism destinations within the SADC region will increase clarity into the benefits of tourism clusters and identify existing tourism industries as clusters or potential agglomerations. This research provides a methodological outline, derived from industrial cluster research, for future tourism studies to expand on and modify with more in-depth econometric procedures and greater collective comparisons to regional research.
- Further research into tourism clusters can examine the multiplier effects of tourism clusters into informal sectors. The capacity and scope of this research was unable to thoroughly look into tourism expenditure, wages and range of opportunities deriving from tourism clusters. For example, building craft and gastronomic clusters in the nearby townships or modelling Indonesian furniture clusters that spill over into tourism centres. This area of research yields substantial potential to accelerate the impacts of tourism clusters on local and national economies.
- On this notion of crossover industries, tourism cluster research can reach further into complementary industries with clustering potential. The outcome of this direction heightens the role played by tourism clusters in regional economic expansion and presents an economy more resilient to off seasons, shifts in market demand and economic shocks.
- To enhance these suggestions, cross examinations of tourism clusters in adventure tourism hubs similar to Swakopmund will assist in the future development of new or rising clusters, provide maintenance protocols for existing clusters and reinvigorate ageing clusters. This suggestion is dependent on an increase in micro level cluster studies in suspected tourism regions. In-depth examinations of spillover industries in these tourism centres should be included to recognise the scope of agglomeration externalities (see Page, 1999, p5).

7.6 Concluding comments

Industry agglomeration and the benefits accrued to local and national economies has been documented for over a century (Belussi and Caldari, 2009; Bellandi and Di Propris, 2015). A general conclusion from the literature reviewed in this study is that industrial and tourism cluster studies show that clusters remain a natural economic phenomenon occurring in specific business environments (Porter, 1990; Martin and Sunley, 2002) driven by innovation and competition (Saxenian, 1994) where collaboration, trust and co-operative business behaviour amalgamate, establishing a business environment capable of reaching global competitiveness. In a fast-paced global economy where policymakers strive for a better balance between healthy GDP ratings and reduced income disparities (Rogerson, 2002), industrial clusters have established a pathway towards a better equilibrium. Concurrently, the tourism industry has risen to meet the economic challenges by providing opportunities in SME start-ups and low-skilled employment (Christie and Compton, 2001; Christie, et al., 2013). The infusion of Marshallian/Porterian industrial cluster concepts into tourism has prospered to a point of being recognised by the UNDP, UNWTO and policymakers worldwide to be a significant ingredient of economic development.

Core attributes of a functioning cluster are not universally natural and, in development scenarios, further research in conjunction with past agglomeration works will increase the effectiveness of transforming theoretical concepts into working clusters (Cunha and Cunha, 2005). The further research into the field of clustered economies travels, the more accurate implementation efforts will become. This research has taken a step forward in documenting the inner workings of a tourism cluster and pinpointing the cluster characteristics of a local economy that can be improved to increase the effectiveness of the cluster. In this process, one paradigm arising from an extended interview with a tourism industry expert comes to mind – collaboration is a learned skill. It can be that the future in cluster studies focuses on improving existing business traits and promoting inter-industry collaborative behaviour.

However, given the broad scope of existing clusters in our global economy, the expansion of future studies will most probably extend far beyond the latent variables considered in this study.

In connection with agglomeration studies, tourism is a dynamic industry with a seemingly infinite range of possibilities existing in nearly every environment feasibly reachable to commercial entities. The industry is highly innovative and constantly evolving to keep up with the desires of travellers, holidaymakers and any remaining category of people willing to step beyond their immediate surroundings. This, when combined with the concepts of industrial clusters, presents a field of interest with seemingly endless horizons to explore Beyond the functionalities of understanding the inner workings of a local industry and aggregated data analyses fit for policymakers and scholarly degrees, lies a fascinating example of what can be accomplished by skilled talent pooled together when driven by innovation and competition.

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Appendices

Appendix A: Activity operator survey

Operator	2021	2021 code	Description	Location	Location code	local	Office	Workshop	Contact	email
Desert Explorers	open	3	Quads Booking Sandboarding	town	2	1	x	town	64406096	info@namibiadesertexplorers.com
Alter-Action	open	3	Sandboarding	town	2	1	h		811282737	
Groundrush Adventures	open	3	Skydiving	town	2	1	x	airstrip	64402841	freefall@iafrica.com.na
Ocean Adventures	open	3	Dolphin Cruises Fishing	centre	1	1	x		64404281	dolphin@oceanadvnamibia.com
Laramon Tours	sold	2	Dolphin Cruises SW Harbour	centre	1	1	x		64402359	laramontours@iway.na
Aquanaut Tours	open	3	Fishing	town	2	1	h		64405969	info@aquanauttours.com
Loubser Tours	open	3	Fishing	town 2	3	1	h		64404828	
Turnstone Tours	open	3	SW Harbour	town 2	3	1	h		64403123	turn@iafrica.com.na
Charlie's Desert Tours	open	3	Liv.Des. MoonL.	centre	1	1	x	industrial 2		
Tommy's Tours	sold	2	Liv.Des. MoonL.	town	2	1	h		64461038	tommys@iway.na
Liv. Desert Chris	open	3	Liv.Des. MoonL.	town	2	1	h	industrial 2	64405070	nature@iafrica.com.na
Marias Dune Tours	closed	0	Liv.Des. MoonL.	town	2	1	h			
Batis Birding Safaris Namibia CC	open	3	Liv.Des. MoonL.	riverbed	8	1	h	industrial 2	64404908	info@batisbirdingsafaris.net
Swakop Tours	closed	0	Desert Tours	riverbed	8	1	h		64404088	proverb@mweb.com.na
Openspace Tours	closed	0	Skeleton Coast MoonL.	town	2	1	h		812735330	norcoast@yahoo.com
Fat Bikes	open	3	Fat Bike tours	centre	1	1	x		+264 811477954	info@swakopfatbiketours.com
Bush Bird Flights	sold	2	Scenic Flights	centre	1	1	x	airstrip	+264 812507171	bushbirds@sossusfly.com
Scenic Air	open	3	Scenic Flights	centre	1	1	x	airstrip		windhoek@scenic-air.com
Pleasure Flights	closed	0	Scenic Flights	centre	1	1	x	airstrip	64404500	redbaron@iafrica.com.na
Atlantic Aviation	open	3	Scenic Flights	centre	1	1	x	airstrip	64404500	info@flyinnamibia.com
Eagle Aviation	open	3	Scenic Flights	centre	1	1	x	airstrip	+264 64 463126	info@eagleeyeaviation.com.na
Swakopmund Skydiving	open	3	Skydiving	airport	5	1	x	airstrip	64405671	sscdive@mweb.com.na
Hata Angtu	open	3	Sandboarding Cultural Tours	mondessa	6	1	h		64461118	hata-angu@mail.na
Hafeni	open	3	Cultural Tours	centre	1	1	x		64400731	hafenictours@gmail.com
Ultimate Sandboarding	closed	0	Sandboarding Cultural Tours	centre	1	1	x			
Khoi-san tours	open	3	Sandboarding Cultural Tours	mondessa	6	1	h		812734936	ebensworld-09@yahoo.com
Beetle's tours	open	3	Cultural Tours	mondessa	6	1	h			
Manda tours	closed	0	Cultural Tours	mondessa	6	1	h			
Okakambe Tours	open	3	Horseriding	riverbed	8	1	x	riverbed	64402799	okakambe@iway.na
Kalisto Tours	open	3	Desert Tours	town	2	1	h		64402473	info@kallisto.com.na
Solar Switch Tours	closed	0	Liv.Des. MoonL.	town	2	1	x		+264 64 460101	bookings@desert-tracks.com
Sandwaves Tours	open	3	SW Harbour	centre	1	1	x			
Element Riders	open	3	Surfing	town	2	1	x		812066562	rainer.eimbeck@gmail.com
Elizabeth tours	closed	0	Tours	centre	1	1	x			
R & R Karting Namibia	sold	2	Go Carts	industrial 3	5	1	w	industrial 3	813502723	info@kartingnamibia.com
Camel Farm	closed	0	Camel Rides	riverbed	8	1	x	riverbed	64400363	
D-Tours	closed	0	Tours	town	2	1	h	riverbed		
Explorer Tours	owner died	2	Township, Tranfers	mondessa	6	1	h	mondessa		
Mondessa Cultural Tours	open	3	Township, Tranfers	mondessa	6	1	h		812734361	
Sandwich Adventure Tours	open	3	Sandwich Harbour	Town	2	1	h			
Ama Africa	open	3	Moon L., C.Cross	mondessa	6	1	h			
Bambo Tours	closed	0	Township, Tranfers, & SB.	mondessa	6	1	h			
Ranger Tours and Travels	open	3	Sandwich Harbour	town 2	3	1	h			
Bateleur Helicopter	open	3	Helicopter	centre	1	1	x	airstrip	64405891	info@bataleuraviation.com
Walter's Rock and Rope Adv.	closed	0	Rockclimbing			1	h			
Desert Friendly tours	closed	0	daredevils			1	h			
African Adventure Balloons	dormant	1	ballooning	town 2	3	1	h		64403455	
Sightseeing Tours	dormant	1	Desert Tours			1			64461647	
Real Cape Adventures Namibia	closed	0	Kayak			0			64405488	namyak@iway.na
Baron Tours & Swakopmund Paint Ball Centre	open	3	Everything			1			64403382	paintball@iway.na
Scarab Env. Geo. Enterprises CC	dormant	1				0			853286255	riana@scarab.com.na
Dolphin Tours Namibia	closed	0	dolphin tours			0			64406259	grobtpt@iway.na
Panoroma Cycle Tours CC	closed	0	cycle tours			0			812221667	
Renegrade Fishing Adventures Cc	dormant	1	fishing			0			+264 811 487700	
Hot Air Ballooning Namibia Cc	dormant	1	ballooning	town 2	3	0	h		+264 64 463252	info.balloning@gmail.com
Bruefin Fishing Tours CC	dormant	1	Fishing			1	h		+264 64 404076	aquafish@africaonline.com.na
See Namibia Tours CC	dormant	1	Tours			0	h		64462692	info@neefestates.com
Adventure Sport Support Unit CC	dormant	1	Tours			0			64405084	asu@mweb.com.na
Fish for Fun t/a Adventure in Namibia	dormant	1	Fishing			1	h		64462878	info@adventure-in-namibia.com
Namibia 1 on 1 .com	closed	0	Tours			1			64407140	irwin@iway.na
Swakop Balloning CC	dormant	1	ballooning			1	1		+264 81 2429481	flylo@iway.na
Namibia Nights Tented Camps	dormant	1	Overnight functions			0		industrial	64400977	namnight@iway.na
Ulis Services	dormant	1				0			61235357	ulis1@iway.na
Kandanga Holiday Inn Self Catering and Tours	closed	0				1			64405357	claudiakandanga@msn.com
N C S Namibia Chaffeur Transport	closed	0	Transport			0			64462720	chaufeur@iway.na
Kali Logistics CC t/a Kali Shuttle and Tours	closed	0	Shuttle and Tours	Mondessa	6	0	h		+264 64 462497	kalishuttle@gmail.com
Adozu Tours & Safaris CC	dormant	1	Tours			1			64402021	adozu@mweb.com.na
Austral Adventures CC	dormant	1	Tours	town	2	0	h		64463901	austral@iway.na
Terra Nova Tours & Incentives	closed	0	events & tours			0			64403893	simone@terra-nova.com.na
Stargazing Adventure Namibia	dormant	1	Stargazing	town 2	3	1	h		64404708	adventurenamibia@iway.na
Mondjila Adventures	open	3		town	2	1	h		64406395	info@mondjila.com
Desert Tours / F. Bester	dormant	1	Desert Tours			1	h		64404745	fjbester@iway.na
M Du Plessis t/a Sunset Tours	dormant	1				1	h		64404030	duplessismalinda@yahoo.com
Photographic Enterprises CC	closed	0	Desert Tours			0	h		64463980	mark@buschartersnamibia.com
Sandwaves Adventures	open	3	Sandwich Harbour	centre	1	1	x		+264 810453135	info@sanways.co
Zip Zap Tours	open	3	scooter tours	centre	1	1	x		081 354 3812	
Desert Tracks	open	3	Sandwich Harbour	town	2	1	x		081 716 1600	www.desert-tracks.com
Scenic Desert Tours	open	3	Dunes			1				
Sammy Tours	open	3	Moon Landscape			1				
Endless Horizons	open	3	sandwich harbour			1				
Afri Travels	open	3	local tours	mondessa	6	1	x		+264 81 255 4453	

Appendix B: Restaurant survey

Restaurant	contact	2021	2021 code		Description	Local?	Local code	Tourism	Location	Location code	Web rated
The Tug	x	open	3		Seafood and Steaks	Yes	1	x	centre	1	x
The Brauhaus	x	open	3		German Food	yes/F	1	x	centre	1	x
Kucki's Pub	x	open	3		Seafood and Steaks	yes	1	x	centre	1	x
The Western Saloon	x	open	3		German Food	Yes	1	x	centre	1	x
Western Saloon Pizza	x	open	3		Pizza	yes	1	x	centre	1	x
Altstadt		open	3		German Food	yes	1	x	centre	1	x
The Jetty	x	closed	0		Seafood	Yes	1	x	centre	1	x
The Butcher and Brewer		open	3		Upmarket Grill	no	0	x	centre	1	x
Ocean Cellar		open	3		Seafood	no	0	x	centre	1	x
Farmhouse Deli		open	3		Upmarket Random	no	0	x	centre	1	x
Café Mole		open	3		Coffee	yes	1		centre	1	x
Museum Café		open	3		Brek, Lunch and Cakes	yes	1		centre	1	
Lighthouse Rest.	x	open	3		Seafood and Steaks	yes	1	x	centre	1	x
Café Anton	x	open	3		Brek, Lunch and Cakes	Yes	1	x	centre	1	x
Slowtown	x	open	3		Coffee	Yes	1	x	centre	1	x
Tea Time	x	closed	0		Tea and Lunch	Yes/F	1	x	centre	1	x
Bojos		open	3		Brek, Lunch and Cakes	Yes/F	1	x	centre	1	x
Bits and Pizzas	x	sold	2		Steak and Pizza	Yes	1	x	centre	1	x
Royal Bull	x	sold	2		Steak and Burgers	Yes	1	x	centre	1	x
Hansa Hotel		open	3		Upmarket	Yes	1	x	centre	1	
Deutcheshaus-Namib res.	x	open	3		German Food	Yes/F	1	x	town	2	x
Village Café	x	open	3		Brek, Lunch and Cakes	yes	1	x	centre	1	x
Old Post coffee		open	3		Coffee	yes	1		centre	1	x
Die Muschel Café		open	3		Coffee	yes	1		centre	1	x
Café Tref	x	change	2		Brek, Lunch and Cakes	Yes/F	1	x	centre	1	
Napolitana	x	open	3		Steak and Pizza	Yes	1	x	centre	1	x
Raithe Bakery		open	3		Brek, Lunch and Cakes	no	0	x	centre	1	x
Hansa Bakerei		closed	0		breads	yes	1		centre	1	x
Welwitschia Rest.	x	closed	0		Portuguese food	yes	1	x	centre	1	x
Anchors Rest.	x	open	3		Seafood and Steaks	yes	1	x	centre	1	x
Old Steamer's	x	open	3		Buffet Dinners	Yes	1	x	town	2	x
Hotel Zum Kaiser	x	dormant	1		German Food	No	0	x	centre	1	x
The Secret Garden		closed	0		Pizza	Yes	1	x	centre	1	x
Gabriel's Pizzeria	x	open	3		Pizza	Yes/F	1	x	town	2	x
The Dome		closed	0		German Food	Yes	1	x	town 2	3	
Wurstbude		open	3		Pizza	Yes	1	x	town 2	3	x
The Wreck		open	3		Seafood and Steaks	Yes	1	x	town 2	3	
Bits and Pizzas Ocv.	x	sold	2		Steak and Pizza	Yes	1	x	town 2	3	
News Café	x	closed	0		Brek, Lunch and Cakes	no	0	x	town 2	3	x
Bluegrass	x	open	3		Cajun style food	Yes	1	x	town 2	3	x
Mug and Bean	x	open	3		Brek, Lunch and Cakes	no	0	x	town 2	3	x
Avery Café		closed	0		Brek, Lunch and Cakes	no	0		town 2	3	x
Seaview		closed	0		Seafood and Steaks	no	0		town 2	3	x
Seaside Hotel		open	3		Buffet Dinners	no	0		town 2	3	x
Hafeni Rest.		open	3		Traditional cuisine	Yes	1	x	mondessa	6	x
KFC	x	open	3		fast food	no	0	x	centre	1	
Garnish		open	3		Indian cuisine	no	0	x	centre	1	x
Spur		open	3		fast food	no	0	x	centre	1	x
Michael's Lucky Food		closed	0		Wraps	yes	1		centre	1	
Aladdin Take Away		moved	2		Wraps	Yes/F	1	x	centre	1	
Fork'n Nice		open	3		Mixed food	Yes	1	x	town	2	x
Platform 1		closed	0		Steak and Seafood	No	0	x	centre	1	x
Chez Wou		open	3		Chineese	No	0	x	centre	1	x
The Fish Deli		open	3		Seafood	Yes	1	x	centre	1	x
The Cosmopolitan	x	dormant	1		Mixed food	Yes/F	1	x	centre	1	x
Beryl's		open	3		Greasy Take away	yes	1	x	centre	1	x
Wild Rocket	x	sold	2		Breakfast	yes	1	x	centre	1	x
Europahof	x	dormant	1		German Food	yes	1	x	centre	1	
Kristian's Café	x	closed	0		café	yes	1	x	centre	1	x
Desert Tavern	x	dormant	1		Bar & Food	yes	1	x	town	2	x
Tiger Reef	x	dormant	1		beach bar	yes	1	x	town	2	x
Chai Thai	x	open	3		chineese food	yes	1	x	centre	1	x
La Marmite		sold	2		west African food	no	0		centre	1	
Bonus Markt Chicken	x	open	3		chicken	yes	1		centre	1	
Happy Me		closed	0		health food	no	0		centre	1	x
Cordes and co.	x	open	3		café	yes	1	x	centre	1	x
Let's Taco bout it		sold	2		mexican trailor	yes	1		town	2	x
Zest Café - Dome	x	open	2		café	yes	1		town 2	3	
Ocean Basket	x	open	3		seafood	no	0	x	centre	1	x
Ice and Spice	x	open	3		ice cream	yes	1	x	centre	1	x
Garden and Wood Café	x	closed	0		Lunches	yes	1		centre	1	x
Old Munic Café		open	3		Lunches				centre	1	
Build it café Rosso	x	open	0		Lunches	yes	1	x	industrial	4	x
The Aviary		closed	0		Breakfast	yes	1		town 2	3	x
De Wilde		closed	0		Namfood	yes	1		town 2	3	x
Victoria's		open	3		lunches	yes	1		town	2	x
Monkey Puzzle		open	3		Lunches	yes	1	x	town 2	3	x
Nick's Pizza		open	3		Pizza	yes	1	x	mondessa	6	x
Yambeke		closed	0		Lunches	yes	1		town 3	3	x
Hungry Lion		open	3		Fast food	no	0		town	2	x
Olapali		closed	0		Local food	yes	1		centre	1	
2 Beards and a Saint	x	open	5		café	yes	1	x	industrial2	5	

Appendix C: Accommodation survey

Type of Business	Name	Location	Location code	2021	2021 code	local code	locally managed	Airbnb	Booking.com
Hotel	Swakopmund Hotel	Centre	1	closed	0	0	1		x
	Strand Hotel	Centre	1	open	3	0	0		x
	Hotel Sweitzerhaus	Centre	1	open	3	1	1		x
	The Delight	Centre	1	open	3	0	0		x
	Beach Hotel	Town	2	open	3	1	1	x	x
	Plaza Hotel	Centre	1	open	3	1	1		x
	Hansa Hotel	Centre	1	open	3	1	1	x	x
	Prost Hotel	Centre	1	open	3	1	1	x	x
	Bon Hotel	Town	2	sold	2	0	1		x
	Swakop Sands Hotel	Town	2	open	3	1	1		x
	Hotel Zum Kaiser	Centre	1	open	3	0	1		x
	Hotel Eberwein	Town	2	dormant	1	1	1		x
	Hotel A La Mer	Centre	1	open	3	0	1		x
	Hotel Deutsches Haus	Town	2	open	3	1	1		x
	Hotel Europa Hof	Centre	1	closed	0	0	1		
	Hotel Prinzessin Rupprecht	Town	2	open	3	1	1		x
	Sea Side Hotel and Spa	Town 2	3	open	3	0	1		x
	Amanpuri Pension CC	Town 2	3	dormant	1	1	1	x	
	sample size	18							
Lodge	Desert Breeze	Town 3	3	open	3	1	1		x
	Stiltz	Town 2	3	open	3	1	1		x
	Swakop River Resort	Riverbed	8	open	3	1	1		
	The Dome Conference Centre	Town	2	open	3	1	1		
	Rossmund Lodge	Riverbed	8	open	3	0	1		x
	Beach Lodge	Town 2	3	open	3	1	1		x
	The Burning Shore	Langstrand	9	open	3	0	1		
	Adventure Village	Town 2	3	dormant	1	1			x
	sample size	9							
Pensions - B&Bs	Alternative Space B & B	Town	2	open	3	1	1		x
	Duneside Self Catering	Town 2	3	open	3	1			
	Seagull B & B	Town 2	3	closed	0		1		
	Tinas B&B	Mondessa	6	open	3	1	1		x
	Guesthouse Fischreiher	Town 2	3	open	3	0	1		x
	Showayapo B & B	town	2	open	3	1	1		
	Haus Veronika B&B CC	Town	2	dormant	1	0	1		x
	Vogelstrand B&B	Town 2	3	open	3	1	1		
	Dolls Guest House	Town	2	closed	0		1		
	Villa Margherita	Town	2	open	3	1	1		x
	Cornerstone Guesthouse	Centre	1	open	3	1	1		x
	LA CASETTA B & B	Town2	3	open	3	1	1		x
	Norina Twenty Investments CC								
	African View B&B	Town 2	3	open	3	1	1		
	Stay At Swakop Guesthouse	Town	2	open	3	1	1		
	Atlantic Guesthouse	Town 2	3	open	3	1	1		
	Amarachi Guesthouse	Town 2	3	open	3	1	1	x	x
	Grace B&B	town2	3	open	3	1	1	x	
	Villa Rosa B&B	town	2	open	3	1	1		
	Easy Sleep B&B			open	3	1	1		
	Comfort Gardens B&B CC			open	3	1	1		
	Mi - Jocy B & B			open	3	1	1	x	x
	Swakopscape B&B			open	3	1	1		
	Sandcastle Apartment B&B	Town	2	open	3	1	1		x
	Brigadoon Boutique B & B	Centre	1	sold	2	1	1		x
	The Secret Garden Guesthouse	Centre	1	open	3	1	1		x
	Drifters Inn Swakopmund	Town	2	sold	2	0	1		
	Intermezzo Guest House	Town	2	closed	0	1	1		x
	Charlottes Guest House	Town	2	closed	0	1	1		
	Meikes Guesthouse	Town	2	open	3	1	1		x
	Orange House Swakopmund	Town	2	open	3	1	1	x	x
	Marietjie's Guesthouse	Town	2	open	1	1	1		x
	Dunedin Star	Town	2	closed	0	1	1	x	x
	Atlantic Villa	Town 2	3	open	3	1	1		
	Meerkat Guesthouse	Centre	1	closed	0	1	1		x
	Villa Maji	Town2	3	open	3	1	1		
	Royal Benguela Guesthouse	Town 2	3			1	1		
	Anandi Ocean View Guesthouse	Town 2	3	open	3	1	1		x
	Namib Guesthouse	Town	2	open	3	1	1		
	Pebblestone House	Town	2	closed	0	1	0		
	Vogelstrand Guesthouse	Town 2	3	dormant	1	1	1		

	Organic Square Guesthouse	Town	2	dormant	1	1	1		x
	Desert Villa Guesthouse	Town	2	closed	0	1	1		x
	Swakopmund Luxury Apartments CC	Centre	1	open	3	1	1	x	x
	Shallow Water Inn Guesthouse						1		x
	Indulge Guesthouse CC	Town	2	sold	2	0	1		x
	Hotel Pension Rapmund	Centre	1	open	3	1	1		
	Haus Garnison	Centre	1	open	3	1	1		
	Sams Giardino	Town	2	sold	2	1	1		x
	Hotel Pension d'Avignon	Centre	1	open	3	1	1		
	Jetty Self Catering	Centre	1	open	3	0	1		x
	Strauss Holiday & Overnight Flats	Town	2	closed	0	0	1		
	A Home Away From Home	Town2	3				1		
	Sandcastle Apartments CC	Town	2			1	1		x
	Footprints	Town 2	3			1	1		x
	Bush Babies Inn	Town	2	open	3	1	1	x	x
	On The Beach B27	Town 2	3	closed	0	1	2		
	Alle le Mer 2	Town	2	open	3	1	2		
	Moringa Gardens	Town	2	open	3	0		x	x
	Atlantik Sicht No 3	Town 2	3	open	3		1		x
	Marina Guesthouse No 2	Town 2	3	open	3		1		
	The Timeless Way	Town 2	3	open	3	1	1	x	
	Swakopmund Lifestyle Apartments	Town	2	open	3	1	1	x	
	Be Still Accommodation Centre	Town	2	open	3	1	1		x
	Seabreeze Guesthouse	Town 2	3	open	3	1	1	x	x
	Chalakigi	Town	2	open	3	1	1	x	x
	Desert sands	Town	2	open	3	0	1		x
	Swakopmund Guesthouse	Town	2	open	3	1	1		x
	Driftwood Guesthouse	Town	2	open	3	1	1		x
	Kramersdorf Guesthouse	Town	2	open	3	1	1		x
	Sandfields	Town	2	changed	2	1	1		x
	Casa al Mare	Town	2	open	3	1	1		x
	Gecko Ridge Guesthouse	Riverbed	8	open	3	0	1		x
	Swakop Strand apts.	Town	2	open	3	1			
	Bibi's Place	Town	2	open	3	1	1		x
	sample size	74							
Backpackers	Desert Sky Backpackers Lodge	Centre	1	open	3	1	1	1	
% local refs	Villa Wiese Backpackers Lodge	town	2	changed	2	0	1	1	
	Seaview Backpackers	town	2	closed	0	0	1	1	x
	Swakopmund Backpackers	town	2	sold	2	1	1	1	x
	Mile 4	town 2	3	open	3	0	1	1	
	Swakopmund River Campsite CC	riverbed	8	dormant	1	0		1	
	El Jada Rest Camp	riverbed	8	dormant	1	1		1	
	Municipality Rest Camp	town	2	open	3	1	1	1	
	Sophia Dale BagCamp	riverbed	8	open	3	1	1	1	
	Goanikontes - Oasis	riverbed	8	sold	2	0	1	1	
	Shalom Accommodation	riverbed	8	dormant	1	1	1	1	x
	Restaurant Gut Richthofen	riverbed	8	closed	0	1	1	1	
	Salty Jackal	Centre	1	open	3	1	1	1	
	Skeleton Beach Backpackers	town	2	open	3	0	1	1	

Name	Location	Location code	2021	2021 code	local code	Locally managed	Airbnb	Bkg.com
Sea-Horse Guest Flats	Town 2	3	open	3				
Jorisa Accommodation			open	3				
Dahoa'M Self-Catering	Town 2	3	open	3	1	1	x	
Holiday Flat Schmo			open	3		2	2	
Duneside Self Catering	Town 2	3	open	3			x	x
Kolb Klause			open	3		1	x	
Hurib Selfcatering Apartments			open	3			x	
Gudde Accommodation			open	3		2	x	
Nitas Holiday Accommodation & Arrange			closed	0			x	
Erholungsheim Holiday Flats			open	3			x	
Maggie`s Self Catering	Town 2	3	open	3			x	x
Liebenhoff No. 2 B CC	Town 2	3	open	3		2	2	
Adris Cottage			open	3			x	
Huis So-By-So			open	3				
Flat No 6 An Der Waterkrant	Town 2	3						
Skipskop CC								
Pebble Beach 12	Town	2	open	3		2	x	
Dunenweg 19	Town	2	open	3		2		
Sand en See 29	Town 2	3	open	3			x	
C-View Samar Place						2		
Swakop Strand B & E	Town	2						
Vogelsicht 14	Town 2	3				2		
Noordstrand Park 9	Town	2	open	3		2		
Eenyanga Cottage			closed	0		2		
Daus Hausle								
Swakop Strand E	Town 2	2	open	3		2		
Tuareg B Owen - Smith	Town 2	2	open	3	1	2		
La-Ro Property Six CC (La Rochelle)			open	3		2		x
Wemalemu CC JB Boysen No 7			open	3		2		
Nordstrand Park No 1	Town	2	open	3		2		
Altstadthof No 8	Town	2	open	3		2		
An Der Mole No 16	Town	2	open	3		2		
Alstadhof No 13	Town	2	open	3		2		
Alstadthof No 8	Town	2	open	3		2		
Alstadthof No 7	Town	2	open	3		2		
Jetty House 12 Erf 3557	Centre	1	open	3	0	2		
Erf Four One Seven Four			open	3		2		
1st Avenue No 36			open	3		2		
Haus Am Meer No 11	Town	2	open	3		2		
Nordstrandpark 15	Town	2	open	3		2		
Nordstrandpark 13	Town	2	open	3		2		
Zu Suestrand Residennz No 2								
La Rochelle 5								
Rietdakkies 1A								
Sand and See No 22	Town	2	open	3		2	x	x
H J Rietdakkies 1B			open	3		2		
Schiefer Properties CC			open	3		2		
On the Beach No 22			open	3		2		
Schulte Flat								
Meeresruh No 10			open	3		2		
Alstadthof No 19	Town	2	open	3		2		x
On the Beach B19 Properties CC	Town	2	open	3		2		
Holiday Flat								
Sea Cottage Investment Three CC								
Potgieter Investment Trust One						0		
A Strauss Flats	Town	2						x
W Borg								
Bismarck No 13	Centre	1	open	3		2		
Morleen Park No 2	Town	2	open	3		2		
MDH Properties CC			open	3		2		
7 Morleen Park	Town	2	closed	0		2		x
Wilna Liebenberg								
On The Beach Apartment A7	Town 2	3	open	3		2		
Waterfront G7	Town 2	3	open	3		2		x
Kiewiets Nest			open	3				
Nordstrand Park No 8	Town	2	open	3		2		
Lalandi 8 Beachfront	Town 2	3	open	3		2		
ELCRN Erholungsheim								
Avocet Cottages CC	Town 2	3	closed	0		2		
Rubo								
Number 9 An Der Welle	Town	2	open	3	1	1		x
Ocean Walk Self Catering Holiday House	Town 2	3	open	3				
Holiday Flat Fischreier 88	Town 2	3						
P A Francis						2		
Waterfront Estate Fifteen CC	Town 2	3	closed	0		2	x	
Waterfront Estate Sixteen CC	Town 2	3	closed	0		2		x
Haus Rosemund 20			closed	0		2		
Astadthof Unit 1	Town	2	open	3				
Bellamente Street Properties No 10 CC			open	3				

On the Beach B33	Town 2	3	open	3		2		
Mr A Tredoux			closed	0				
Waterfront Estate 65 CC	Town 2	3					x	
On The Beach A11	Town 2	3	open	3		2		
Duenenblick Selfcatering Apartments	Town	2					x	x
WaterFront Estate 27 (PTY)Ltd	Town 2	3	open	3		2	x	
An der Waterkant 4	Town	2				2		
Allee der Mer Property Number One CC	Town 2	3	open	3		2	x	
Alle La Mer Property Number Twelve CC	Town 2	3	open	3		2	x	
Praia Da Lagosta D 4	Town 2	3	open			2		
Remettre Property CC			open	3		2		
Bellisima Investments 77 (Pty) Ltd			open	3		2		
Wasserfallhof No 4	Centre	1	open	3		2		
Dune 12 Self Catering	Town 2	3	open	3		2		
Bianca Selfcatering							x	
Standmitte Unit 16	Centre	1	open	3		2		
Central Park Unit 18 CC	Centre	1	open	3				
Swan la Mer 15				3		2		
Normey Court Unit 1			open	3		2	x	
Communard Hundred and Ten CC			changed	2		2		
On the Beach 20	Town 2	3	open	3		2		
Schapers Eck No 12								
Kandanga Holiday Inn Self Catering and Tours			closed	0				
Silver Dunes								
Lalandi 10			open	3		2		
Mac's Landing CC			open	3		2		
Frank's Property Holdings Hundred CC			closed	0		2		
Villa Sohrada			open	3				x
No 8 Molensicht Flats	Centre	1	open	3				x
On The Beach No43 CC								
Anot Self Catering Acc.								x
Glen's Selfcatering							x	
Kindart Yard							x	
Scenic Seafront Self-catering	Town 2	3	open	3			x	
Quaint Seaside Self-catering			open	3			x	
Diana's Self-catering								x
Waterfront Self-Catering Acc.	Town 2	3	open	3		1	x	x
Shimmering Shores			open	3			x	x
Capital Grow Number 27			open	3		2	x	
Molenweg No 14	Town	2	open	3		2		
Strand Street Unit 10	Town	2	open	3		2	x	
Pohle					0		x	
Welwitschia 2000							x	
Smaragd							x	
Allee la Me 6 + 10	Town 2	3						
On the Beach 47	Town 2	3	open	3		2	x	
Die Afrikaanse Taal en Kultuurbond Namibia							x	
Flat @ Swakop			open	3			x	
B V Investments 364 CC							x	
Dane 16 Serenity Properties						2	x	
Dane 01						2	x	
Exousia Accommodation			open	3		2		
Amazing Grace Beach Front Suite	Town 2	3	open	3		2	x	
An Der Waterkant Unit 5	Town 2	3	open	3		2	x	
An Der Waterkant No 9	Town 2	3	open	3		2	x	
at dunes							x	
Guinstigs BasicCamp							x	
Whaleback Self Catering							x	x
Bohemian							x	
Andi's Room							x	
Suzie's Cottage							x	
Blue House							x	
Cube unit 12							x	x
Haus Moselland							x	
Barefoot Central							x	
Lyn's SC							x	
La Mer							x	
Kali	town	2	open	3			x	x
Pianaforte			open	3			x	x
Diovilla							x	
Mila's Cottage							x	x
Albatross SC							x	
Atlantic Apartments							x	x
Meerblick im Stadtcentrum	Centre	1					x	
Mahdi Cottage			open	3			x	x
The Cube 9a							x	
Serenity Apt							x	
Happy Home							x	
Finnish School Ap. B	Town 2	3					x	
Turmalin Cottage	Town 2	3					x	x

Haven							x	
Richthoffen 19	Town	2	open	3			x	
Good Times	Town 2	3	open	3			x	x
Home @ Swakopmund							x	
Basecamp Namibia							x	
Sandpiper	Town	2					x	
Denhill	Town	2			1		x	
10 Heuschneider flats	Town	2	open	3			x	x
The Hawk holiday house							x	x
Rod and Sigi's flat	Town	2	dormant	1	1		x	
Rolf's Seaview ap.							x	
Japie's Yard SC	Town	2	open	3	1		x	x
5 Snapdragon							x	
Green Place							x	
Lapalanie B&B							x	
Casa de Muchako							x	
Blue Ocean acc.			open	3			x	x
Mi Cas es Tu Casa							x	
Villapreez							x	
Bella Vista							x	
Damara Tern SC							x	
Bossie's Place							x	
Seaboa's Guesthouse			open	3	1	1	x	
Salty Breeze			open	3			x	x
Sunbay Holiday acc							x	
Ahava Cottage							x	x
Boathouse Sea View apt.							x	
Sunbreeze SC							x	
Pete's Place						2	x	
Bismark 2	Centre	1	open	3			x	x
Josef SC			open	3			x	x
Oase House							x	
Reikert's			open	3	1		x	
Ady's							x	
Vista Mare							x	x
Desert Hidaway						2	x	x
Topaz SC							x	
Karwy Huis							x	
Aljo's nest SC							x	
Cape Point SC							x	
Maritim 18	Town	2	closed	0			x	
Van Schalkwyk Residence							x	
NP Townhouse							x	
Man Cave			open	3			x	x
Stevens guesthouse	Town	2	open	3	1			x
Beach Walk house&cottage	Town 2	3	open	3				x
Vogelstrand Hld house	Town 2	3	open	3			x	x
Swakopmund Lock up & go								x
Hoabeb Residence								x
Sand & Sea 25			open	3				x
Mole 15	Town	2	open	3				x
Napwu boathouse	Town 2	3	open	3	0			x
Keibitz 9	town	2	open	3	0			
Ris Hi								x
Dunescape exec apt.								x
Seeadler house	Town 2	3	open	3	1			x
RnB Seaside ap.			open	3				x
Starfish Ap.								x
Eclectic Space							x	x
Platz Am Meer	Town 2	3	open	3				x
Anton Lubowski 2	Town	2						x
14 on Woker	Town	2		3				x
13 Flamingos			open	3				x
Brockerhoff								x
Comfort Gardens			open	3				x
Biermann Residence	Centre	1						x
Hartz Flat			open	3				x
Zandberg Guesthouse	Town	2			1			x
Plover Farmhouse Studios								x
Aldico Self Catering								x
Destination Emporium								x
Tranquilo Guesthouse			open	3				x
Gracies Guesthouse								x
Lombard's Residence								x
Marula Cottage			open	3				x

Appendix D: Pure tourism businesses

Bus. Category	Name	Type of Business	2021	2021 code	Local code
Booking Agents	Swakop Info	Activity Bookings	open	3	1
& Tour operators	Namib i	Tourism Bookings	open	3	1
	Camelthorn Tours	Tour Operator	closed	2	1
	Far Out Booking Agents	Activity Bookings	closed	0	1
	Tok Tokkies Travel	Tourism Bookings	changed	2	1
	Kunene Tours and Safaris	Tour Operator	open	3	1
	Tracks and Trails	Tour Operator	open	3	1
	ATC Namibia	Tourism Bookings	open	3	1
	Travel Smart	Travel Agent	closed	0	1
	Rennie's Travel	Travel Agent	open	3	0
	Trip Travel	Travel Agent	open	3	0
	African Eagle	Tour Operator	dormant	3	0
	Damarana	Tour Operator	open	3	1
	Abenteuer Afrika Safari	Events and tour operator	open	3	1
	Sunshine Tours	Tour Operator	changed	2	0
	Jambwa Safaris	Tourism Bookings	open	3	1
	Jetty Visitor Center	Activity Bookings	closed	0	1
	Karen's Travel	Tourism Bookings	closed	0	1
	Air Namibia	Travel Agent	closed	0	0
	Opuwo Country Lodge	Lodge Agent	moved	2	0
	Travel Lounge	Travel Agent	open	3	0
	Safari Wise	Tour Operator	open	3	1
	Kalahari Safari and Tours	Tour Operator	moved	2	0
	R B Travel & Booking Agent	Travel Agent	dormant	1	0
	Namibia Holiday Sevices CC	Travel Agent	closed	0	1
	Namibian Places	Travel Agent	closed	0	1
	Ritz Travel	Travel Agent	open	3	0
	Southern Tourist Promotions	Activity Bookings	closed	0	0
	Destination Swakopmund	Local organisation	closed	0	1
	Kai - Koro Reservations		dormant	1	0
	Mondjila Travel Shop	Travel Agent	changed	2	0
	Namibia Booking Service	Activity Bookings	dormant	1	0
	Virtual Assistant Tourism Namibia	Activity Bookings	dormant	1	0
	Amazing Journey Travel Agenc	Travel Agent	dormant	1	0
	Lanalu Booking Agenc	Activity Bookings	closed	0	0
	Swakopmund Fat Bike Booking Office	Activity Bookings	open	3	1
	Kaliombo Safari Camp	Tour Operator	dormant	1	0
	Elephant Human Relations Aid (EHRA)	Voluntourism	open	3	1
	Africa Desk	Tour Bookings	open	3	1
	African Footprints	Tour Operator	open	3	1
	Arifu Tours	Tour Operator	dormant	1	0
	All Around Namibia	Tour Operator	closed	0	0
	Papadi Safaris CC	Tour Operator	closed	0	0
	Wild at Heart Safaris	Tour Operator	open	3	0
	Unique Tours and Safaris	Tour Operator	open	3	1
	Maoma Tours CC	Tour Operator	closed	0	0
	Time Out Travel Namibia	Travel Agent	closed	0	1
	Conservancy Safaris Namibia	Tour Operator	open	2	1
	Namibia Click & Travel	Tour Bookings	open	3	1

Rhema Tours & Travel CC	Tour Bookings	closed	0	0
My Namibia Holiday	Tour Bookings	open	3	1
Endombo Tour Consulting CC	Consulting	closed	0	0
Didimala Safaris	Tour Operator	closed	0	0
Namib Farm Tourism CC	Tour Operator	closed	0	0
Ongeyama Safaris Cc	Tour Operator	closed	0	0
Rossmund Tours & Car Hire CC	Tour Bookings	open	3	1
Conservancy Hunting Safari	Hunting Safaris	changed	2	0
Okomutati Safaris & Tours CC	Tour Operator	closed	0	0
Total African Safaris	Tour Operator	closed	0	0
Treuenfels Hunting Safaris	Hunting Safaris	dormant	1	0
Game Trackers Africa Safaris CC	Hunting Safaris	dormant	1	0
Cornie Coetzee Safaris CC	Tour Operator	dormant	1	0
WL Meyer t/a Eagle Hunting Safaris	Hunting Safaris	closed	0	0
Desert Adventure Safaris CC	Tour Operator	open	3	1
Oipuka Travel Consultancy	Travel Agent	open	3	1
Desert Magic Tour	Tour Operator	open	3	0
Safari 24	Tour Operator	open	3	1
Into Africa Hunting Adventures	Hunting Safaris	dormant	1	0
Namibia Tours and Safaris	Tour Operator	open	3	1
Wild Ways Safaris CC	Tour Operator	open	3	0
Ondjamba Safaris Namibia CC	Tour Operator	open	3	1
Taro Tours Guestfarm & Safaris CC	Tour Operator	changed	2	0
Nolte Adventure Safaris	Tour Operator	closed	0	0
Sunrise Tours & Safaris	Tour Operator	changed	2	0
Namib Enviro Tours CC	Tour Operator	open	3	1
Skeleton Tours	Tour Operator	open	3	1
Okomutati Safaris & Tours CC	Tour Operator	closed	0	0
African Bush Safaris	Tour Operator	open	3	0
Pride of Africa Safaris	Tour Operator	dormant	1	1
Piet Grous Wildlife Safaris	Tour Operator	dormant	1	0
Namibia Individual Travel	Travel Agent	open	3	0
Endeavour Safaris	Tour Operator	closed	0	1
Close Up Africa Safaris	Tour Operator	open	3	0
Toko - Hornbill Safaris CC	Tour Operator	changed	2	0
Travel Time	Tour Operator	open	3	1
Indiri Tours	Tour Operator	open	3	1
African Classics Tours & Safari CC	Tour Operator	changed	2	1
Tom Pree Landscaping and Safari Servic	Tour Operator	closed	0	1
Tour and Travel Biz	Tour Operator	closed	0	0
Magic Moments Tours	Tour Operator	sold	2	1
Mujame Tours and Safaris	Tour Operator	closed	0	0
Time Out Travel Namibia	Travel Agent	closed	0	1
Gecko Adventures CC	Tour Operator	changed	2	0
AM Rande Trading and Safaris cc		changed	2	0
Solar Switch Booking & Safaris CC	Tour Operator	closed	0	1
Golden Tours and Safaris	Tour Operator	closed	0	0
Bedouin Travel	Travel Agent	closed	0	0
West Coast Adventures	Tour Operator	open	3	1

Appendix E: Services

Type of Service	Service	Description	2021	2021 code	Local code	tourism	tourism code	Location
Promotioanal	Boost	signs	open	3	1	x	1	Town
	Printworks	signs	open	3	1	x	1	Town
	Namib Times	newspaper	open	3	0	x	1	Town
	Algemeine	newspaper	open	3	0	x	1	CBD
	Republikaan	newspaper	open	3	0	x	1	CBD
	Signworl	signs	open	3	1	x	1	Town
			local	3		tourism	6	
			nlocal	3		ntourism	0	
6								
Cleaning and Car	Engine Station	Car Wash	open	3	1	x	1	Town
	Puma Station Kram.	Petrol - Car Wash	open	3	1	x	1	Town 2
	Caltex	Petrol - Car Wash	change	2	1	x	1	Industrial
	Magic Car Wash	Car Wash	open	3	1	x	1	Town
	Sparwash	Car Wash	open	3	1	x	1	Town
	Grunies wash	Car Wash	closed	0	1	x	1	Town
	Bridgestone wash	Car Wash	open	3	1	x	1	Industrial 2
	Ula's Cleaning Service	Cleaning	open	3	1	x	1	Town
	Spring Clean	Cleaning	open	3	1	x	1	Industrial 2
	Mrs. Milne	Laundry	open	3	1	x	1	Town
	Gossow Cleaning	Laundry	open	3	1			Town
	Jojos Laundry	Laundry	open	3	1	x	1	Town
	Laundry and dry cl. Depot	Laundry	open	3	1			Town
	Emimar Laundry	Laundry	closed	0	1			Industrial 2
	World of Hygeine	industrial cleaning	closed	0	0			Industrial 2
	Industro Clean	industrial cleaning	open	3	0			Industrial 2
	Refuse Solutions	recycling	open	3	1			Industrial 2
	Namwash	industrial cleaning	open	3	1			Industrial
	Spawash OV	Car Wash	open	3	1	x	1	Town 2
	Shell wash	Car Wash	open	3	1			Town 2
	Caribbean Car Wash	Car Wash	open	3	1	x	1	Mondessa
	Strong bar wash	Car Wash	open	3	1	x	0	Mondessa
	sample size	21	mean	2.545455				
			open	18	0.86	tourism	13	
			closed	3	0.14	ntourism	1	
			change	1	0.05			
			local	20	0.95			
			nlocal	2				
24								
Shuttle	Welwitschia	shuttle service	open	3	1	x	1	Town
	Townhoppers	shuttle service	change	2	1	x	1	Town
	Carlos'	shuttle service	open	3	0	x	1	Walvis Bay
	Mc Clune's	shuttle service	open	3	0	x	1	Town
	Raiwin Shuttle Services		open	3	0	x	1	Walvis Bay
	Pedro's Shuttle & Transfers	shuttle service	closed	0	0			Walvis Bay
	NCS Namibia Chaffer	shuttle service	closed	0	0			Walvis Bay
	sample	7	mean	2				
			open	4	0.57	tourism	5	
			closed	2	0.28	ntourism	0	
7			change	1	0.14			
			local	2	0.29			
			nlocal	5				
Security	G4S	Security	open	3	0		1	Town
	Rubicon	Security	open	3	0		1	Town
	Eagle Security	Security	open	3	0		1	Industrial
	Southern Cross Security	Security	open	3	0		1	Industrial 2
Phone / internet	MTC	cell/internet	open	3	0	x	1	Town
	Telcom	cell/internet	open	3	0	x	1	Town
2								
Finance / Legal	FCS	accountants	open	3	0	x	1	Town
	Kinghorn	Legal	open	3	1	x	1	Centre
	Malherbe	Legal	open	3	1			Centre
	Van Riensberg	Legal	open	3	1	x	1	Centre
	Ahrens	Legal	open	3	1	x	1	Centre

	Lorenz Angula	Legal	open	3	1			Centre
	Roberts Legal	Legal	open	3	1			Town
	Masiza Law	Legal	open	3	1			Town
	Ellis Attornies	Legal	open	3	1			Centre
	Capital Finacial Services	Finance	open	3	0	x	0	Centre
	Samlam	Finance	open	3	0	x	1	Centre
	Advocate Herman Heil	Legal	open	3	1			Town
	Bank Windhoek	bank	open	3	0	x	1	Centre
	Standard Bank	bank	open	3	0	x	1	Centre
	Nedbank	bank	open	3	0	x	1	Centre
	FNB	bank	open	3	0	x	1	Centre
	Magic loans	loans	open	3				Town
	Crystal loans		open	3				Town
	casa de cambio (SwkLux)	currency exchange	open	3	0	x	1	Centre
	casa de cambio	currency exchange	open	3	0	x	1	Centre
	Marsh	auto insurance	open	3	0	x	1	Centre
	NHP	health	open	3	0	x	1	Town
	Omentum Insurance	insurance	open	3	1		1	Town
	Samlam	insurance	open	3	0			Centre
	sample	23	mean	3				
			open	23	1			
			closed	0				
			local	10	0.44			
			nlocal	13				
Medical	Cottage Hospital	Hospital	open	3	0	x	1	Town 2
	Mediclinic	medical care	open	3	1			Town
	Dirk	medical care	open	3	1			Town 2
	Bismark medical	medical care	open	3	1	x	1	Centre
	Cottage medical	medical care	open	3	1	x	1	Town 2
	Bismark dentists	dental care	change	2	1	x	1	Centre
	Suardi	dental care	closed	0	1			Centre
	Dupree	dental care	open	3	1			Town
	OV dentist	dental care	open	3	1			Town 2
	Swakopmund Apoteke	pharmacy	open	3	1	x	1	Centre
	Adler Apoteke	pharmacy	open	3	1	x	1	Centre
	Cottage pharmacy	pharmacy	open	3	1	x	1	Town 2
	Dischem	pharmacy	open	3	0	do not know		Town 2
	Dolphin Pharmacy	pharmacy	closed	0	1	x	1	Town
	Molensigt Pharmacy	pharmacy	open	3	1			Centre
	Medixx		open	3				Town
14	Rohloff Optiker	optitian	open	3	1			Centre
	sample	17	mean	2.588235				
			open	14	0.82			
			closed	2	0.12			
			change	1	0.06			
			local	14	0.82			
			nlocal	2				
Beauty / Health	Zeppelin's	Hair Salon	change	2	1	x	1	Centre
	Rhianna's	Hair Salon	closed	0	1	x	1	Town 2
	Dome Serenity Spa	Massage	open	3	1	x	1	Town 2
	Dome Health & Wellness cntr.	Gym	open	3		x	1	Town 2
	Bismark hair	Hair Salon	change	2	1			Centre
	Ilana's hair	Hair Salon	open	1	1	x	1	Centre
	Sovern pers. Stylist (Thomas)	Hair Salon	change	2	1			Centre
	Health and Aroma	Massage	change	2	1	x	1	Centre
	Cath	Massage	open	3	1	x	1	Centre
	Spa	Massage	open	3	0	x	1	Town 2
	Bismark massage	Massage	open	3	1			Centre
	Charlene	Massage	open	3	1			Centre
	Strand Hotel	Massage	open	3	1	x	1	Centre
	Europahof	Massage	closed	0	1	x	1	Centre
	Ray	Massage	open	3	1	x	1	Town 2
	Salon Leandra	Hair Salon	open	3	1			Town
	Lureda Hair Salon	Hair Salon	open	3	1			Town
	Holtz Hair Salon	Hair Salon	open	3	1			Town
	Zen Spa and Beauty	Massage	open	3	1	x	1	Centre

	Powerzone Gym	Gym	closed	0	1			Centre
	Salt Retreat	Salt therapy	open	3	1	x	1	Centre
	Aquarius Health and Fitness	Gym	closed	0	1			Town
	Chiana wellnes Spa	Massage	closed	0	1			Centre
	Sample	22	mean	2.086957				
			open	13	0.57			
			closed	5	0.22			
			change	4	0.18			
			local	21	0.91			
			nlocal	1	0.09			
Estate Agents	Nel's Estates	Estate Agents		3	1	x	1	town
	Ushi and Dianne	Estate Agents		3	1	x	1	Centre
	Hendrick Estates	Estate Agents		3	1	x	1	Centre
	Capricorn Estates	Estate Agents		3	1	x	1	Centre
	Kroger Estates	Estate Agents		3	1			Centre
	Ludwig Shroder	Estate Agents		3	1			Centre
	Susan Curtis	Estate Agents		3	1			Centre
	Pam Golding	Estate Agents		3	0			Centre
	Welwitschia Estates	Estate Agents		3	1			Centre
	Ramos Realators	Estate Agents		3	1			Town
	Coastal estates	Estate Agents		3	1	x	1	Town
	4U Properties	Estate Agents		3	1	x	1	Centre
	Daphine Swan Realators	Estate Agents		3	1			Centre
	CFS Properties and Investment CC	Estate Agents		3	0			Centre
	Hans Kreiss	propert		3	1	x	1	Centre
	Dunes tourism and Property Concepts	Estate Agents		3	1			Centre
	Linda Crawford real estate	Estate Agents		3	1	x	1	Town
	Neef Estates	Estate Agents		3	0			Town
	Live it	Estate Agents		0	1			Town

Courier/Shipping	Coastal Couriers	Courier	open	3	1	x	1	Industrial 2
	Formula Courier Services	Courier	open	3	0	x	1	Industrial 2
	Namlog Logistics	Courier	open	3	0	x	1	Industrial 2
	Hardap Frieght Services	Shipping	open	3	0		0	Industrial 2
	Trans Namib	nothing	open	3	0	x	1	Industrial
	DHL	Courier	open	3		x	1	Centre
	Cowboys	storage	open	3	1	x	1	Industrial

Auto and Truck repair	Albi	Mechanic	change	2	1	x	1	Industrial
	Deisel Electric	Auto electrician	open	3	0	x	1	Town
	Marc's Auto Electric	Auto electrician	open	3	1	x	1	Industrial 2
	West Auto Electric	Auto electrician	open	3	1	x	1	Industrial
	Jurgens Auto Electric	Auto electrician	open	3	1	x	1	Industrial
	Namib Auto Electric	Auto electrician	open	3	1	x	1	Industrial
	Spillies Auto Electric	Auto electrician	open	3	1	x	1	Industrial 2
	Protech Alarms	Auto electrician	open	3	1			Industrial
	Alfons Motors	Mechanic	open	3	1	x	1	Industrial
	Quick Fitment Center	Mechanic	open	3	1	x	1	Industrial
	Steckel's Toyota	Dealer-Mechanic	open	3	1	x	1	Industrial 2
	Autohaus	Dealer-Mechanic	open	3	0	x	1	Centre
	Chevy	Dealer-Mechanic	open	3	1			Town
	M+Z Mercedes	Dealer-Mechanic	open	3	1	x	1	Industrial 3
	Pupkewitz Motors	Dealer-Mechanic	closed	3	0	x	1	Industrial 2
	Autoworld Suzuki	Dealer-Mechanic	closed	3	0			Industrial 2
	Eric	Mechanic	open	3	1	x	1	Industrial
	RW Motors	Mechanic	open	3	1	x	1	Centre
	ILM Motors	Mechanic	open	3	1	x	1	Industrial
	Bergerman Body Works	Body repair	open	3	1	x	1	Town
	Swakop Body Works	Body repair	open	3	1	x	1	Town
	Cilliers Body Works	Body repair	change	2	1	x	1	Town
	Steenbras	Mechanic	open	3	1	x	1	Industrial
	Harry's Garage	Mechanic	open	3	1			Industrial
	I&M Truck Repair	Mechanic	open	3	1	x	1	Industrial
	Namib Auto Repairs	Mechanic	open	3	1	x	1	Industrial

	Reeders Garage	Mechanic	open	3	1			Industrial 2
	F&F Performance	Mechanic	open	3	1			Industrial 2
	C&S Auto repair	Mechanic	open	3	1	x	1	Industrial 2
	Art in motion	Mechanic	open	3	1	x	0	Industrial 2
	Auto Doctor	Mechanic	open	3	1	x	0	Industrial 2
	Willies Coastal Vehicle services	Mechanic	open	3	1	x	1	Industrial 2
	Coastal Radiators	Mechanic	open	3	1	x	1	Industrial
	Midvaal deisel and Turbo	Mechanic	open	3	1			Industrial 3
	Swakop Mechanical Serices	Mechanic	open	3	1			Industrial
	Propshaft Master	Mechanic	open	3	0			Industrial
	JC Repairs	Mechanic	open	3	1			Industrial
	Higger Coach and car	Mechanic	closed	0	0			Industrial 2
	Auto perfect	Body repair	open	3	1	x	1	Industrial 2
	Ultimate Auto Shop	Body repair	open	3	1	x	1	Industrial
	Crazy Gecko fitment	Mechanic	open	3	1	x	1	Industrial
	Van der Walt	Mechanic	open	3	1			Industrial 2
	Coastal Body Repair	Body repair	open	3	1	x	1	Industrial 3
	WP Panelbeating	Body repair		3	1			Industrial
	Hammer Bike repairs	Motorbike Repair		3	1	x	0	Industrial
	Erwin's repair shop	Motorbike Repair	closed	0	1	x	0	Industrial 3

Upholstry/fitment	Namib Upolstry	Upolstry	open	3	1	x	1	Industrial 2
	Moorlanspan	Upolstry	open	3	1	x	1	Industrial 2
	Honey Upolstry	Upolstry	closed	0	1	x	1	Town
	Swakopmund Sewing	Upolstry	change	2	1	x	1	Town
	Upolstry nr FV	Upolstry	closed	0	1			Town
	Excellent Styling Uposlstry	Upolstry	closed	0	1			Town
	Canopy Center	Upolstry	open	3	1	x	1	Industrial 2
	Oryx Aluminium Canopies	Canopy	open	3	1	x	1	Industrial 2
	Opposite Luck	4x4 suppliers	open	3	1	x	1	Industrial 2
56	West Coast 4x4 fitment	4x4 suppliers	open	3	1	x	1	Industrial 2

Appendix F: Supplier Survey

Type of Supplier	Supplier	Description	2021	2021 code	Local	Local code	Tourism	Tourism code	Location
Food and Beverage	Spar	Super Market	open	3	yes	1	x	1	Centre
	Woermann and Brock	Super Market	open	3	yes	1	x	1	Centre
	Pick & Pay	Super Market	open	3	no	1	x	1	Centre
	Fruit and Veg	Super Market	open	3	yes	1	x	1	Town
	Chunky's	Market	open	3	yes	1	x	1	Town
	Shoprite	Super Market	open	3	no	0	x	1	Town
	Spar OV	Super Market	open	3	yes	1	x	1	Town 2
	Checkers	Super Market	open	3	no	0	x	1	Town 2
	Woermann and Brock V	Super Market	open	3	yes	1	x	1	Town 2
	WB Bottle Shop V	Bottle store	open	3	yes	1	x	1	Town 2
	Spar Tops	Bottle store	open	3	Yes	1	x	1	Centre
	Spar Tops OV	Bottle store	open	3	yes	1			Town 2
	Pick & Pay Bottle Shop	Bottle store	open	3	yes	1	x	1	Centre
	WB Bottle Shop	Bottle store	open	3	yes	1	x	1	Centre
	Shoprite Bottle shop	Bottle store	open	3	no	0	x	1	Town
	Metro	Wholesale Supplier	open	3	no	0	x	1	Industrial
	Mega Save	Wholesale Supplier	open	3	yes	1	x	1	Industrial
	Harbrovsky Bottle Store	Bottle store	open	3	yes	1	x	1	Centre
	Swk Winekelders	Bottle store	closed	0	yes	1	x	1	Centre
	Shutze Bottle Store	Bottle store	closed	0	yes	1			Centre
	Fruit and Veg bottle shop	Bottle store	change	2	yes	1	x	1	Town
	United Liquor Agencies	Wholesale Supplier	closed	0	no	0	x	1	Industrial
	Fresh Market	Wholesale Supplier	open	3	yes	1	x	1	Industrial
	Prima	Butchery	open	3	yes	1	x	1	Town
	Namaqua	Butchery	open	3	yes	1	x	1	Centre
	Ocean View Butchery	Butchery	change	2	yes	1	x	1	Town 2
	Erongo Meats	Butchery	open	3	yes	1	x	1	Town 2
	Benguela Butchery	Butchery	open	3	yes	1			Town 2
	Brakwater Abattior	Wholesale Supplier	open	3	no	0			Industrial
	Closwa Biltong	biltong	closed	0	no	0	x	1	Centre
	Dorsland Biltong	biltong	change	2	yes	1	x	1	Town
	Jumpa's Biltong	biltong	closed	0	yes	1			Town
	Biltong arcade	biltong	open	3	yes	1	x	1	Town 2
	Hansa Bakery	Bakery	closed	0	yes	1	x	1	Centre
	Water Shop - Klaus	h20	open	3	yes	1			Town
	h20 shop	h20	open	3	yes	1	x	1	Town
	Ocean Adventures Fish shop	fish	open	3	yes	1			Town
	Absolutly Water	h20	open	3	yes	1			Town
	Go fresh Foods	Wholesale Supplier	open	3	no	0	x	1	Industrial
	Namilk	Wholesale Supplier	open	3	no	0	x	1	Industrial

Automobile Parts	Cymot	Car parts	open	3	no	0	x	1	Centre
	Auto Ecke	Car parts	open	3	yes	1	x	0	Industrial 2
	Greg's Auto Spares	Car parts	open	3	no	0	x	1	Industrial 2
	Autohaus	Dealer	open	3	no	0	x	1	Centre
	M+Z Motors	Dealer	open	3	no	0	x	1	Industrial 2
	Steckyle's Toyota	Dealer	open	3	yes	1	x	1	Industrial 2
	Aus Motors	Dealer	open	3	no	0	x	1	Town
	Mitsubishi	Dealer	open	3	no	0	x	1	Town
	LR Parts	Car parts	open	3	yes	1	x	1	Industrial 2
	KP Windscreens	Car parts	open	3	yes	1	x	1	Industrial
	Gecko Glass	Car parts	open	3	yes	1	x	1	Town
	PG Glass	Car parts	open	3	yes	1	x	1	Industrial
	Autozone	Car parts	open	3	no	0	x	0	Town
	AJ Spares	Car parts	open	3	no	0			Industrial
	Continental tyre center	tyre sales and repair	open	3	no	0	x	0	Industrial 2
	Dunlop	tyre sales and repair	open	3	no	0	x	1	Town
	Tren Tyres	tyre sales and repair	open	3	no	0	x	1	Town
	Rhino Batteries	Car parts	open	3	no	0			Industrail 2
	Hemco Paints	Paint	open	3	no	0	x	0	Industrial 2
	Cycles 4 u	bicycle shop	open	3	yes	1	x	0	Industrial 2
	Mannie's Bike Mecca	bicycle shop	open	3	no	0	x	0	Town
	Leisure World	Motorcycle	open	3	yes	1	x	0	Industrial 2
	Duneworx	Motorcycle	open	3	yes	1	x	0	Centre

Clothing	Oscar and Olive	open	3	Trendy clothing	yes	1	x	1	Centre
% tourism	Cottonfields	closed	0	Trendy clothing	no	0			Centre
	Bodelicious Clothing	closed	0	Trendy clothing	yes	1	x	1	Centre
	Due South	closed	0	Active wear	no	0	x	1	Centre
	Sports Scene	closed	0	Active wear	no	0	x	1	Centre
	NK Designs	open	3	Surfwear	yes	1	x	1	Centre
	Waga Waga	open	3	Surfwear	no	0	x	1	Centre
	OTB Sports	open	3	Active wear	no	0	x	1	Centre
	Speedy Sports	closed	0	Active wear	yes	1	x	1	Centre
	Hans Lohmaier	open	3	Casual wear	yes	1	x	1	Centre
	Lorna Fashion	closed	0	Trendy clothing	yes	1	x	1	Town
	Izanzi Sportswear	open	3	Clothing Supplier	no	0	x	0	Industrial
	Baby Co	open	3	childeren	no	0	x	0	Industrial
	Safewear	open	3	Clothing Supplier	no	0	x	1	Industrial 2
	Perfect Shoes	open	3	shoes	no	0	x	0	Centre
	Cape Union Mart	open	3	Clothing Supplier	no	0	x	1	Town 2
	BD's Clothing	open	3	Clothing Supplier	yes	1	x	0	Town 2
	Monsieur Clothing	open	3	Clothing Supplier	yes	1	x	0	Town 2
	Woolworths	open	3	Clothing Supplier	no	0	x	0	Town 2
	Jet	open	3	Clothing Supplier	no	0	x	0	Centre
	Ackermann's	open	3	Clothing Supplier	no	0	x	0	Centre
	Edgar's	open	3	Clothing Supplier	no	0	x	0	Centre
	The Red Shelf Vintage	closed	0	vintage clothing	yes	1			Centre

Home Products	Plastilon	open	3	est. & Home plastic	no	0	x	0	Industrial
% tourism	Otto Gunther	open	3	home acc.	yes	1	domestic	1	Centre
	Ricci Interior	open	3	Up.Materials	yes	1	x	1	Town
	Summer Salt home décc	open	3	décor	yes	1	x	1	Centre
	Kornblum	open	3	furniture	yes	1	x	1	Centre
	Plain & Pearl					1	x	1	Centre
	Habitat	open	3	décor	yes	1	x	1	Industrial 2
	Nolte Designs			décor		1	x	0	Industrial 2
	Die Tinnefabrik Pottery	open	3	décor		1			Industrial 2
	Bears	open	3	furniture	no	0	x	0	Centre
	Lewis	open	3	furniture	no	0	x	0	Centre
	Nictus	open	3	furniture	no	0	x	0	Town
	OK Furniture	open	3	furniture	no	0	x	0	Town
	Home Corp	open	3	furniture	no	0	x	0	Town
	Broth. Matress	open	3	furniture	no	0	x	1	Town
	The Lamp Shop	closed	0	décor	yes	1	x locals	0	Town
	Wildflowers Nursery	closed	0	nursery	yes	1	x domestic	1	Town
	Little Foot	open	3	nursery	yes	1	x	0	Town 2
	Little Tackle Shop	open	3	horse	yes	1	x	0	Town
	Chunky pet store	open	3	pets	yes	1	x	0	Town
	Swakop Vets	open	3	pets	yes	1	x	0	Centre
	OW Vets	open	3	pets	yes	1	x	0	Town 2
	General Tack Shop	open	3	horse	yes	1	x	0	Industrial
	Pep Home	open	3	est. & Home plastic	no	0	x	0	Town 2

Other	Supatronix	open	3	electronics	no	0	x	1	Centre
	Cellular World	open	3	cell phones	no	0	x	1	Centre
	Cell-u-link	open	3	cell phones	no	0	x	1	Centre
	YoungOnes	open	3	electronics	yes	1	x	1	Centre
	Swakop Optiks	open	3	glasses	yes	1	x	1	Centre
	Dolphin optiks	closed	0	glasses	yes	1	x	1	Centre
	The Fun Shop	open	3	toys	yes	1	xdomest	1	Centre
	ToyBox	open	3	toys	yes	1			Centre
	Office Maxima	open	3	office		0	x	0	Centre
	Norbert's Office Machine	closed	0	office	yes	1	x	0	Centre
	Vineta copy	open	3	office	yes	1	x	0	town2

Building Supply	WB Hardware	Building Supplies	yes	1	3	1	Industrial
	Build It	Building Supplies	no	0	3	1	Industrial
	E Hard build	Building Supplies	no	0	3	1	Industrial 2
	Pupkewitz Hardware	Building Supplies	no	0	3	1	Industrial
	Axel's paints	Paints	yes	1	3	1	Town
	Perelin Paints	Paints	yes	1	3	1	Town
	Alpro Aluminium	doors and windows	yes	1	3	1	Town
	CTM tiles	floor	no	0	3	1	Town
	Klimas Glass	glass	yes	1	3	1	Industrial
	Electric NS	electrical supplies	yes	1	3	1	Industrial
	Swakop Tiles	floor	yes	1	3	1	Industrial
	Strauss Bricks	Building Supplies	yes	1	3	1	Industrial
	Cottage electric	electrical supplies	yes	1	3		town 2

Mining Supplies	Burges Eq.	Industrial supplies	no	0	3	0	Industrial 2
	BMG	Industrial supplies	no	0	3	0	Industrial 2
	DB Mining Supply	Industrial supplies	no	0	3	0	Industrial 2
	Electralink	electrical	no	0	3	0	Industrial 2
	WR Stainless Steele	Industrial supplies	yes	1	3	0	Industrial 2
	Euro tech eco valves	Industrial supplies	no	0	3	0	Industrial 2

Appendix G: Questionnaire

Tourism cluster questionnaire

Business name :	**Contact :**
Business classification (see figure B at the end)**:**	
Business established in year :	**# of employees:**
# of freelance guides or part time employees:	
Town section (see figure A at the end of the questionnaire) :	
Your position in the company :	

1) How many years have you worked for this firm? _____
2) How many years have you worked in the tourism industry? _____
3) Did you receive initial or further training at this establishment?

_Yes / No_____

4) Did the owner also start the business? _____
5) How many years have you worked in the local industry? _____
6) Total number of employees according to skill level. See figure C at the end of this questionnaire.

Level 3 _____
Level 2 _____
Level 1 _____

7) Number of employees who were hired with previous experience in tourism? _____

The following question (8a, 8b, 8c and 8d) asks the percentage of business that is derived from local or external sources. Local sources include bookings made by hotel staff, local booking offices and local tour operators. *8a* is for activity and tour operators; *8b* is for restaurants; *8c* is for accommodation businesses; and 8d is for retail shops in conjunction with the service and supply industries. External booking

sources include internet bookings from your website, tour operators based outside of Swakopmund and overseas tour companies.

8a) *Activity and Tour operators:* Can you calculate in a good month, the percentage of bookings received from a local source versus external? No / Yes

if yes: _____% local _____% external

8b) *Restaurants:* Can you calculate in a busy month, the percentage of bookings made by local hotels and local tour operators compared to external sources? No / Yes

if yes: _____% local _____% external

8c) *Hotels:* Does your business facilitate restaurant and activity bookings for your clients?

Yes / No

8d) *Shops, services and suppliers:* Does your (circle one) shop / service / supply outlet receive business from the local tourism industry? Yes / No

If yes, can a percentage of tourism income be compared to non-tourism income be estimated? Yes / No

If yes: _____% tourism _____% non-tourism

9) Looking into your primary suppliers and services such as petrol, tour food items, cleaning and maintenance; what percentage are based in Swakopmund?

1. 0 – 20%
2. 21 – 40%
3. 41- 60%
4. 61 – 80%
5. 81 – 100%

10) Has the establishment gained knowledge or acquired new techniques from hiring skilled employees?

1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

Questions 11-23 ask that you choose one of several options that describes the tourism industry in Swakopmund in your opinion:

1. Strongly Disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

11a) The tourism industry in Swakopmund is competitive (quality, variety and pricewise) on a global scale or to a popular destination you are familiar with. (Choose one)

1	2	3	4	5
Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

b) What are the main reason(s) for your rating?

_____

_____

12 a) To what degree do you agree with the following statement: The local tourism industry creates opportunities for workers on all skill levels (see Figure C)

1	2	3	4	5
Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

b) What are the main reasons for your rating?

_____

_____

13a) It is better to find employees with skill levels 2 and 3 from outside of the Erongo region. (See Figure B)

1	2	3	4	5
Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

b) what are the main reasons for your rating?

_____

14) Finding level 2 employees locally in Swakopmund is unproblematic (See Figure B)

1 Strongly Disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree

15) Finding level 3 employees locally in Swakopmund is unproblematic (See Figure B)

1 Strongly Disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree

16) My business offers training opportunities to level 1 employees that would allow them to become level 2 employees

1 Strongly Disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree

17) I prefer to use services and suppliers within the town zone of my business. (See Figure A at the end of this questionnaire)

1 Strongly Disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree

18) To what degree do you agree with the following statement: I would rather use, considering preference and loyalty, Swakopmund suppliers over Walvis Bay suppliers assuming zero transportation costs and product quality being equal

1 Strongly Disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree

b) What is the motivation for your response?

_____

19) To what degree do you agree with the following statement: A high level of collaborative behaviour exists in the Swakopmund tourism business community?

1 Strongly Disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree

b) What is the motivation for your response?

_____

20) To what degree do you agree with the following statement: I receive a strong support from local businesses.

1	2	3	4	5
Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

b) What is the motivation for your response?

_____

_____

_____

21) To what degree do you agree with the following statement: The trust built up with your primary or most important agent/buyer is strong

1	2	3	4	5
Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

22) Rate the importance you attach to a supplier being a long-time resident of Swakopmund is important to being a supplier of my business.

a) Not at all important
b) slightly important
c) moderately important
d) very important
e) extremely important

23) How important is it to establish business relationships built on long-term trust compared to price.

a) Not at all important
b) slightly important
c) moderately important
d) very important
e) extremely important

For the following three questions, choose the option that rates the quality of cooperative behaviour in the Swakopmund tourism industry in your opinion best according to the following scale.

1. Excellent
2. Good
3. Fair
4. Poor
5. Very poor

24) The levels of communication and information sharing between firms are:

1	2	3	4	5
Excellent	Good	Fair	Poor	Very poor

25) The level of conflict resolution or the ability to mitigate conflict within your local business network is:

1	2	3	4	5
Excellent	Good	Fair	Poor	Very poor

26) The industry's flexibility in adjusting and ability alongside compliance to deal with changes is:

1	2	3	4	5
Excellent	Good	Fair	Poor	Very poor

The next two questions concern the state of competition between local tourism firms. Choose the option that, in your opinion, describes the Swakopmund tourism industry best.

27) Rate the impact that competing firms has had on your product quality

1. Not at all important
2. Slightly important
3. Moderately important
4. Very important
5. Extremely important

b) What is the motivation for your response?

_____

_____

_____

28) Rate the impact the quality of the tourism industry as a whole has had on the success of

your business.

1. Not at all important
2. Slightly important
3. Moderately important
4. Very important
5. Extremely important

Questions 29 – 34 ask you to rate the importance of the six items below in terms of significance to the growth of Swakopmund's tourism industry on the following scale:

1. Not at all important
2. Slightly important
3. Moderately important
4. Very important
5. Extremely important

29) A municipal tourism organisation to increase both competitive and comparative advantages of the region.

1	2	3	4	5
Not important at all	Slightly important	Moderately important	Very important	Extremely important

30) Individual tourism firms meeting informally to solve problems and promote new ideas.

1	2	3	4	5
Not important at all	Slightly important	Moderately important	Very important	Extremely important

31) Consult outside (foreign or national) experts with regards to marketing and innovation

1	2	3	4	5
Not important at all	Slightly important	Moderately important	Very important	Extremely important

32) Increased collaboration efforts (such as TASA and CTAN, destination marketing or dune belt organisations) aimed at underpinning joint goals in the local tourism industry

1	2	3	4	5
Not important at all	Slightly important	Moderately important	Very important	Extremely important

33) An all encompassed, well run national tourism organisation to better represent the industry as a whole.

1	2	3	4	5
Not important at all	Slightly important	Moderately important	Very important	Extremely important

34) No effort or interference, leave the industry to function at its own devices.

1	2	3	4	5
Not important at all	Slightly important	Moderately important	Very important	Extremely important

Any other comments