More than Smiles – Employee Empowerment Facilitating High-Quality, Consistent Services – The Wakaya Club, Fiji

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Abstract

Tourism and Hospitality service organisations are increasingly searching for suitable management strategies that enable the delivery of consistent-quality services, and enhanced customer satisfaction and loyalty. An approach that has gained much support in academic discourse is employee empowerment. However, questions have also been raised as to the applicability of Western-designed management concepts to multi-ethnic workforces within such developing countries as Fiji. More realistic implementation of Western management strategies is likely to be more successful if they were adapted to consider cross-cultural management and the different characteristics of national cultures. Organisations in Fiji are constantly plagued with problems related to the delivery of quality-consistent services. This study revealed that employee empowerment evolved at The Wakaya Club as an inherent part of the high-quality, luxury tourism services they offered, and was not specifically implemented. Through careful research and planning, together with a clear guest orientation and understanding of their needs and expectations, consistent, enhanced service quality was maintained at the resort. Within their planning and operational procedures and policies, cultural characteristics of their multi-ethnic employees were considered. The Wakaya Club (TWC) practices have the potential to create significant improvements if transferred to other service organisations in tourism, hospitality, and Fiji generally.

Keywords: cross-cultural management; cultural dimensions; employee empowerment; Fiji; tourism services

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Introduction

Many contemporary service organisations are facing the challenges created by competitive global markets, advances in technology, and the need to provide quality products for consumers with continuously changing needs and expectations. Attracting and retaining these customers has become increasingly difficult, as companies compete to meet or exceed customer expectations. These organisations now recognise the vital role front-line employee (those who have most contact with guests) service delivery plays in differentiating their products from the competition (Lin & Mattila, 2010; Ro & Chen, 2011). Expert opinion and research contend that the delivery of quality service products can result in a "delighted", more loyal customer (Hales & Klidas, 1998; Lashley, 1995, 1999; Yin, Wang & Lu, 2019). Thus it is argued that empowerment in hospitality organisations can increase job satisfaction and performance, and be an effective management strategy for increased profitability and leverage of human resources for competitive advantage (Meng & Han, 2014; Yin et al., 2019). This longitudinal study examined the concept of employee empowerment at The Wakaya Club (TWC), Fiji, and how it was used to deliver high-quality, consistent service.

Literature Review

Past research on employee empowerment has focused on manufacturing industries, with limited research on service industries (Honold, 1999). However, advocates of empowerment claim that, given the interactive nature of service encounters, it has the potential to provide notable benefits for tourism and hospitality (Lashley, 2001). From the organisation’s viewpoint, benefits relate to improved customer responsiveness. For the employees, empowerment allows them increased power and control over decision-making during service delivery, and potentially increased employee satisfaction (Lashley, 1995). Since the 1990s, employee empowerment is a strategy frequently mentioned throughout management literature (Honold, 1997), advocating that empowered employees are necessary for achieving competitive advantage (Conger & Kanungo, 1988; Lashley, 1999). Prior to this, the concept was discussed in relation to such terms as “participative management, total quality control, individual development, quality circles and strategic planning” (Honold, 1999, p. 19).

Advocates claim that empowerment has many significant benefits to offer tourism and hospitality-related businesses, as employees empowered through participatory decision making and autonomy (Jia, Shaw, Tsui & Park, 2014) are more responsive to customer needs during front-line service encounters (Lashley, 1995). They are able
to respond more effectively to customer complaints, resulting in successful service
recovery, and in some cases substantive loyalty (Boshoff & Allen, 2000). However,
recent studies show that an employee’s impact on service recovery is strongly related
to their level of seniority within a hotel/resort, with senior staff exercising more
authority in decision making, which is especially found in a high power/distance
culture (Hewagama, Boxall, Cheung & Hutchison, 2019; Hofstede, 1995) such as
Fiji or Sri Lanka. During this process, employees “develop a sense of ownership
taking personal pride in ensuring that service encounters are a success” (Lashley,
1996, p. 333). Organisations can create a serving culture (Nowak, 2019), within
which employees are encouraged to take ownership, and be empowered to fulfil
different customer needs and improve service quality (Lashley, 1999). Management
and employee strategies that encourage empowerment are influential in shaping
organisational procedures and policies on recruitment and selection, induction,
training, rewards, and employee appraisals (Lashley, 1999; Ro & Chen, 2011).

Research has shown that empowerment can refer to a variety of dimensions, which
include “control of one’s own work, autonomy on the job, variations of teamwork,
and pay systems that link pay with performance” (Honold, 1997 p. 202). These
dimensions are dependent on individual employee’s abilities and desire for
empowerment. Other dimensions consist of management techniques that facilitate
empowerment, but where individual employees are able to choose to be empowered
or not. Honold (1997, p. 202) claimed that “leaders create an environment where
individuals are able to make that choice”. Consequently, it is argued that
empowerment is a concept that, even when accepted by management, needs to be
adopted voluntarily, with employees having “some intrinsic motivation to make a
contribution” (Colemen, 1996, p. 35). Furthermore, recent studies of empowerment
have considered the role of psychological empowerment, self-improvement, and
personal growth (Guerrero, Chenevert, Vandenbreghe, Tremblay & Ayed, 2018;
Matsuo, 2019). Such psychological empowerment is influenced by individual
characteristics, such as causal orientation, aspiration and personal goals, and the
social/work environment, such as supportive managerial behaviour and job
characteristics (Deci, Olafsen, & Ryan, 2017). As senior managers are responsible
for assigning workloads, it is important that they too are trained in job assignment,
the creation of workplace developmental tasks, and the promotion of psychological
empowerment (Matsuo, 2019).

Critics today challenge theoretical analysis of Western-centric human resource
management theories that ignore cultural influences (Baum, 2015). Similarly,
meanings for leadership differ across cultures (Dickson, Castano, Magomaeva & Den
Hartog, 2012). Hence, Cheung, Baum, and Wong (2012) argued the need to examine
management theories in a cultural context and, in an empirical study undertaken in China, questioned the applicability of Western-centric literature and such theories as employee empowerment. Other studies of employee empowerment in the Middle East and Asia supported, “localised interpretation of management theory so that organisations need to explore the transferability” across cultures (Baum, 2015, p. 209), especially when examining the effectiveness of multinational companies’ management of global employees. Furthermore, some authors have identified the fragmentation in leadership research and suggested better integration of theories and a more holistic view that combines visionary (providing a future goal and persuading others to contribute to its realisation) and empowering (granting autonomy and shifting power from the leader to followers) leadership (Kearney, Shemla, van Knippenberg & Scholz, 2019).

Both critics and advocates of empowerment agree that the concept is complex and exists in many forms. However, whatever the form, critics of the literature show that successful implementation requires a holistic approach with the support of both management and employees (Quinn & Spreitzer, 1997; Siegall et al., 2000). Management support is necessary in the form of training, education, and technical support, together with the existence of employees who fully understand their roles and are willing to adopt the concept and take responsibility for the part they play in service encounters. Successful implementation, therefore, requires significant elements of knowledge and trust on the part of management and employees (Wilkinson, 1998). Lack of commitment to, and ownership of, these elements by management and employees alike invariably results in empowerment failing to deliver its intended benefits (Honold, 1999).

Whilst the value of empowerment may be recognised, it is not an easy option. Empowerment must be aligned to organisational values, and involves a long-term commitment on the part of the organisation and employees. For most organisations, this requires changes in internal culture, and these are only effective when the people concerned “feel a large measure of ownership” (Smith, 1997, p. 122). Organisations choosing to implement empowerment successfully must consider all these factors, adapt and define the concept for themselves (Honold, 1999). This is even more significant in Fiji, where the successful implementation of management strategies are likely to be influenced by cultural diversity, and where the workforce may choose not to be empowered due to the existence of high power distance.

Despite this increased interest, there is little agreement on a specific definition for empowerment. In many instances the words “employee empowerment” are used interchangeably with such terms as job enrichment, employee participation,
employee commitment, job satisfaction, and stock ownership. However, these terms reflect not only the individual aspect, but how organisations provide an environment that facilitated employees who chose to be empowered (Duvall, 1999). Organisations exhibiting a "people" approach to success can elect to “foster interactions among individuals that are directed at intentionally creating successful outcomes” (Duvall, 1999, p. 206). Throughout these encounters, employees are encouraged to take responsibility for their actions. For example, intrinsic motivation can be viewed as a significant characteristic of job satisfaction. Such initiatives encourage the improvement of employee satisfaction through more meaningful work, limited control in decision-making, and feedback on work performance. Empowerment as it exists today is a concept that needs analysis within specific organisational and political contexts in order to understand the different levels of control, commitment and participation that exist (Lashley, 1996).

Leadership approaches that empower employees, as a means of achieving competitive advantage are essential dimensions of empowerment, where management delegates power to employees and provides a serving culture (Nowak, 2019) that is conducive and facilitates empowerment. This exists where organisations have fewer hierarchies and managers play the roles of coaches (Honold, 1999). Management supervises and empowers its employees, who in turn respond by increased performance and satisfaction (Lashley, 2001). How delegation is defined is important, and managerial intentions for empowerment can be represented by the choice of language and words used to refer to employees. For example, such words as "subordinate", and "superior" tend to reflect intentions that are concerned with increasing tasks and responsibility, with little commitment to empowerment by employees (Honold, 1999). In contrast, leadership that promotes employee empowerment through self-efficacy, increased latitude and participation in decision-making, is more likely to be supported by employees.

Leaders can provide supportive environments through the development of boundaries and procedures that outline both managerial and employee responsibilities. These can include, “designing and communicating a shared vision; managerial support; teamwork; continuous environmental scanning; job redesign and enrichment; role modelling; coaching and mentoring, reward schemes, and the recognition and communication of common goals” (Honold, 1999, pp. 26-27). However, providing a supportive environment within which employees can be empowered is insufficient on its own. Successful implementation requires that employees must choose to be empowered, as it is the people within organisations who are empowered, not the actual organisations per se (Lashley, 2001).
At an individual level, empowerment does not exist unless the "empowered" assume responsibility for their actions. Interactive empowerment involves working with people, whereas self-empowerment refers to an individual’s capacity to control and influence his/her own behaviour (Vogt & Murrell, 1990, cited in Honold, 1999). Another individual aspect of empowerment involves task-level empowerment, where employees have the latitude to make decisions that relate to their own work. At this level, individuals are able to make on-the-spot decisions in front-line service encounters. This discretion leads to increased customer satisfaction, especially in service encounters that produce unexpected outcomes, and where anticipation and standardisation is difficult. However, with this decision-making authority also comes accountability and responsibility (Lashley, 2001).

Similarly, in the case of teams, groups of employees are given increased latitude and discretion in decision-making, with accountability being held collectively by the group. These empowered groups are given a variety of labels, such as autonomous work groups, self-directed teams, and semi-autonomous teams (Lashley, 2001). These "soft" forms of HRM strategies have been influenced by the success of Japanese management techniques, and the competitive advantage to be gained from increased production and quality (Lashley, 2001). Where changes in processes and systems are seen as necessary for successful empowerment, this is often related to the implementation of Total Quality Management (TQM) strategies. These changes are thought necessary in order that organisational goals are achieved through effective systems, and understanding of their delivery by both management and employees (Honold, 1999).

Research into employee empowerment in the Pacific is negligible, with this being the only study to my knowledge of empowerment in tourism and hospitality, findings of which serve to fill the knowledge gap in this area. Furthermore, this study is significant as it also considers cultural implications, implementation, and the willingness of Fijian employees to adopt empowerment.

**Research Methods**

This study investigated the concept of empowerment, how, and the extent to which, it could be used in tourism and hospitality services in Fiji in order to increase competitive advantage by improved service quality. Employee empowerment was explored as a strategy that local organisations could use to motivate their employees to undertake greater responsibility for service encounters culminating in a more "delighted" guest.
An in-depth case study of TWC resort was conducted to collect primary data for comparison with existing literature and research findings over a five-year period from 2002-2007. Due to the lack of research on this subject in the Fiji context, the researcher decided to publish this study as she considered the data relevant despite its age and the absence of previous studies. Wakaya is an example of a world-renowned, luxury boutique resort that has had success in implementing its own version of empowerment, which considers both their own organisational culture and objectives, together with the challenges of motivating employees within the context of traditional Fijian culture. TWC has recently come under new management, and whilst these findings are still relevant within a Fijian context, resort management styles are reflective of an individual manager’s culture and personality, and with new management this could have changed.

TWC was chosen for the study because not only is it a local example of an internationally recognised resort that has won numerous international awards\(^1\), and consistently delivered high-quality service with a 100% local workforce, but the researcher was offered unlimited access to both front and backstage areas of the resort, management and employees, together with any relevant information found within the company records by the then owner and general manager.

A variety of research methods were used, which included historical research (documents from the Wakaya museum, magazine articles, internet resources, summaries of the in-house guest survey and relevant literature); participant observation; in depth and focus group interviews of management personnel, front-line employees and where possible, guests; and, \textit{talanoa}\(^2\) sessions. The first-hand study of the day-to-day management of the resort, together with guest and employee activities and behaviour in different situations, was undertaken using the method of observation, through social interaction with the participants, namely the management

\(^{1}\) 2002 - Tatler Travel Award for "Best Island Retreat"
2002 - Elite Traveller "Pure Decadence" Award
2002 - "Fiji Excellence in Tourism Award" for "Boutique Accommodation"
2002 - Island Destinations Travel Agent Choice Award "Most Romantic Destination of the Year"
2000 - Andrew Harper Hideaway Report "Best South Pacific Resort"
1999 - Tatler "The 101 Best Hotels"
1999, 2003 - "Fiji Excellence in Tourism Award" for "Boutique Accommodation"
\(^{2}\) Friendly conversation or story-telling, or, in the context of research, an extended group discussion, often around the kava bowl
and employees.

Data from the guests’ perspective were collected through observation and participant observation, as throughout the investigation the researcher was accommodated at the resort and provided with all the benefits of a full-paying guest. This enabled the researcher to experience the TWC’s services, and also observe and learn from the experiences of both guest and employee in front line, thus compensating for the limited direct access to guests, as explained below. Focus interviews were conducted with resort employees in the form of *talanoa* sessions (informal social gatherings) in the evening at the staff village. In the Fijian cultural context, *talanoa* refers to the social process where “people converse, share ideas and stories, and where dynamic communication and dialogue are established between two or more parties” (Gibson, Pratt & Movono, 2018, p. 455). Whilst a *talanoa* is similar to an in-depth interview "in context", it is comparable to semi-structured interviews "in practice" (Nabobo-Baba, 2008). These were conducted around the "grog" or *yaqona* bowl in the meeting hall at the staff village, in the expectation that this form of data collection would be more culturally acceptable to the employees who were predominantly indigenous Fijians (Gibson, Pratt & Movono, 2012). It was also assumed that richer more detailed data would be collected from the more relaxed, informal setting, as the interviews would take the form of conversations rather than formal interviews.

The questionnaire consisted of 24 statements based on the Cycle of Capability by Heskett, Sasser & Schlesinger (1997). The underlying assumption of the Cycle of Capability was that front-line employees should be given the support and latitude to perform their jobs in a manner consistent with organisational policies. These statements were used to measure employee’s perceptions on different dimensions of empowerment. The results of the review of employee empowerment literature provided the data for the main dimensions of empowerment covered in previous research (Heskett et al., 1997; Hewagama et al., 2019; Honold, 1997; Lashley, 1995). The respondents were asked to rate these statements from one through five, using both an Importance and an Agreement Likert scale. The questionnaire also included open-ended questions on decision-making, feedback, training and skill provision, supportive work environment, and latitude to make on-the-spot decisions regarding customer satisfaction.

**Case Study and Sample**

The Wakaya Club is a luxury boutique resort located on the 2,200 acre private island of Wakaya, in the Lomaiviti group, Fiji. The sample was drawn from the entire population of the resort, and included the owners, managers, and employees of the Wakaya Club Resort.
At that time, TWC had 60 full-time employees, of whom 34 were front-line employees who provide tangible services to guests through direct interaction, and are fundamental elements of service quality and customer satisfaction (Kim, Lee, & Jang, 2017; Yeh, 2013). A convenience sampling method was used where the middle management, supervisors, and front-line employees at the Wakaya Club were handed questionnaires over a period of five visits. There were a total of 60 employees, but this study focused on the 34 front-line employees from whom 28 completed questionnaires were returned, representing a response rate of over 82%.

**Results**

Overall, results from the case study and survey (n = 28) showed that TWC practised a multi-dimensional form of empowerment through strong leadership (Honold, 1997), supportive work environment (Lashley, 1999), selective recruitment policies based on personality and interpersonal skills training and skill provision (Lashley, 1999; Ro & Chen, 2011), clear operating policies and procedures, clear limits and boundaries on and expectations of employees (Magnini, Hyun, Kim, & Uysal et al., 2013), a commitment to enhanced customer service (Patiar & Mia, 2009), rewards and recognition systems based on both traditional management and local cultural practices (Hofstede, 1984; Nabalarua, 1999; Klidas, 2002), teamwork (Honold, 1997, p. 202), internal and external communication (Garavan, 1997), and the frequent monitoring of guest satisfaction. These are discussed below.

**Employee Questionnaire Results**

Results from the employee questionnaire established that employees agreed and felt it very important that teams were productive based on clear plans (76%), employees knew what was expected of them (90%), operating policies and procedures were clearly understood (62%), and good work was recognised and praised (62%). 52% felt confident expressing their feelings and opinions in the workplace. Although 70% claimed they were provided with the training and skills to perform their job well, only 55% agreed TWC had a formal training and development plan for employees; this was not expected in an empowered work environment, but is likely to be evidence of the high power distance that exists in a Fijian workplace, and displayed evidence of the need for improved communication between supervisors and junior employees. Furthermore, service quality and guest satisfaction are highly valued at TWC, and employees were encouraged to go beyond expectations, with 97% stating in-house findings from guest feedback surveys revealed guests were very satisfied with employee services. However, only 58% felt they had the freedom to make decisions in front-line service encounters. Such uncertainty is likely to be cultural, and a reflection of high power distance and uncertainty avoidance (Hofstede, 1995), which contradicts statements from management confirming employees were able to do this. However, employees were well aware of the need for accountability, with 90% agreeing that front-line decisions regarding guests were reported to the relevant supervisor or manager. Employees also perceived other dimensions equally important. These included having in
place clear plans (86%), knowledge of responsibilities and priorities (97%), team expectations (94%), understanding of operating procedures and policies (85%), recognition and praise for good work (90%), and a system of constructive feedback (79%). Furthermore, they agreed that the following dimensions were important: value and respect of colleagues (83%), feeling comfortable to express feelings and opinions (87%), free flow of ideas between team members (76%), decision making is delegated to the right employee (76%), work goals are challenging (86%), employees strive to do their best work (100%), supportive work environment (90%), provision of suitable training and skills (86%), and TWC has a training and development plan (77%). Finally, the employees highlighted the importance of a customer service training programme (83%), customer service goals (93%), the need to value service quality and customer satisfaction (100%), and showing a genuine care about guest needs and the willingness to fulfil them (97%). The employees agreed that all these factors cultivated an empowering workplace environment. In terms of accountability, the majority of employees (86%) stated they were accountable to report their actions and decisions to their relevant supervisors or managers.

**Discussion**

Based on the results presented above, it is evident that TWC practises the elements of empowerment and empowering leadership stated in the literature review. This suggested that employees at TWC experience a high level of satisfaction, which is reflected in the quality of service they provide and guest satisfaction. Data also suggested that employees received support from TWC in the form of training and skill provision, and in many cases multi-skilling, promotion from within, monetary and non-monetary rewards, recognition, and empowerment. Further evidence of employee satisfaction was supported by the low turnover rate (> 2%), and length of employment, with the longest term being 17 years. The high return rate of guests over the years (40%) influences employee satisfaction, as not only is this evidence that they are providing a high-quality, consistent service, but friendships have developed over time, and this more personal relationship with guests is important to many of the employees and guests. Furthermore, employees receive monetary rewards in the form of a six-monthly bonus of around FJD$1,000, and incentives that include rent-free accommodation and amenities, a return flight to the island for them and their families, and free education from primary to tertiary level for all their children.

**The Influence of Culture on Managerial Approaches – The Fiji Context**

Saffu (2003) has suggested that for organisations in developing countries problems with service quality and customer satisfaction are likely to be more complex than with their Western counterparts, given the need to motivate a multi-ethnic workforce, whose behaviour is influenced by cultural traditions and expectations. In international tourism, the influence of national cultures (See Hofstede, 1995) on employee behaviour and motivation is an important consideration, especially in developing countries, given the dominance of expatriate management of tourism (Page, Brunt, Busby & Connell, 2014), and the existence
of mainly expatriate management who may lack the skills to manage cultural differences. In the context of Fiji, management approaches are predominantly "top-down", and senior management make decisions with little or no consultation with employees, i.e. bosses "tell", and employees "do" (Nabalarua, 1999; Reddy, 2001), thus limiting opportunities for empowerment as a solution to delivering consistent, high-quality services.

Despite the influence of globalisation on businesses, “the vast majority of published literature on empowerment maintains an Anglo-Saxon cultural perspective” (Klidas, 2002, p. 2), with limited literature on the implications of applying empowerment within a cross-cultural or international context. Consequently, Western management criteria for success may be “inappropriate in an international setting and may indeed be determinants of failure rather than the key to success” (Harris & Kumra, 2000, p. 602). Thus, the successful implementation of this concept may require that empowerment strategies be redesigned with an understanding of traditional indigenous and Indo-Fijian cultures, and how best to use this management technique to motivate a local Fiji workforce (Gibson, 2013).

In Fiji, the two main ethnic cultures mostly reflect a large power distance (Hofstede, 1995), which is characterised by the recognition and acceptance of different levels of power in society. For example, employees at TWC, in a high power distance culture such as Fiji, accepted that power was unequally distributed and exhibited lower levels of desire for empowerment (Saffu, 2003). These levels of difference between the powerful and powerless are noticeable when addressing such factors as social class, education, and occupation (Hofstede, 1984). The employment of empowerment as a management strategy can be more complicated in formal organisational cultures where the power distance between management and employees is greater, as in the case of TWC (Baum, 2006).

Teams

Managers and members of culturally diverse teams often face the challenge of identifying and maximising individual team members’ strengths, and minimising conflicts that arise from communication problems, language differences, different work styles, and other misunderstandings (Behfar, Kern & Brett, 2006). Research, and knowledge of effectively managing culturally diverse workplaces is limited (Behfar et al., 2006). Those from individualistic, and low-context cultures prefer direct confrontation, while those from collectivist and high-context cultures, such as indigenous Fijians, prefer indirect confrontation. Kirkman and Shapiro (2001) argued that multicultural team members who had stronger collectivist values were likely to be more cooperative, productive, and empowered, with teams who valued hierarchy preferring a strong leader, whilst those with more egalitarian values preferring participatory team leadership. This was not necessarily the case at TWC, where indigenous Fijians preferred to speak to management through a leader.

Empowering Leadership

Managers with empowering leadership styles allow their employees the power and freedom
to make decisions within a supportive environment devoid of bureaucratic constraints (Huertas-Valdivia, Gallego-Burinb & Llorens-Montes, 2019; Kundu, Kumar & Gahlawat, 2019). Such management with leadership, motivated by a shared vision and focused on the success of the organisation, is needed for the successful implementation of high-quality service (Campos, Mendes, Silva & Oom do Valle, 2014). As with TWC, strategies for the implementation of empowerment must be carefully developed in order that employees fully understand the concept and the level of support that they will receive from management (Lashley, 1996). Employees agreed they understood the importance and were committed to TWC’s vision:

- To provide our guests with the most complete resort experience imaginable, fulfilling their every desire.
- To be known for our friendly, unobtrusive service in every way.
- To be renowned as a bastion of ecological sanity.
- To make a difference in Fiji through responsible world class tourism and building better lives for Fiji’s children.

(The Wakaya Club, 2007).

Many differences arise when comparisons are made of management approaches in societies, with these due to the existence of diverse cultural values (Cheung et al., 2012; Kim et al., 2017; Saffu, 2003). Some of the main differences that exist between Western and South Pacific management approaches, “can be explained in terms of the paternalistic value of orientation” (Evans, Hau & Sculli, 1995, p. 130) in the South Pacific. Respect and obedience accorded Chiefs, elders, and parents are transferred to the workplace in the form of employee obedience to superiors (Gibson, 2013; Nabalarua, 1999). Control and communication between managers and employees, in many South Pacific companies, are similar to those within the family. Furthermore, characteristics such as independence, self-confidence, and the ability to take responsibility for decision-making, are “determined by the values of the society” (Saffu, 2003, p. 63) to which an individual belongs. In many organisations in the South Pacific, including TWC, the manager plays the role of the benevolent autocrat/benefactor, similar to the "father" figure within traditional families (Evans et al., 1995; Gibson, 2013; Hofstede, 1995; Nabalarua, 1999; Reddy, 2001), thus generating feelings of trust and loyalty within the workplace.

**Relevance of Hofstede’s Cultural Dimensions to Fiji**

Fiji is a multi-racial society with the two main ethnic groups being indigenous Fijians and Indo-Fijians. Both these racial groups display different degrees of Hofstede’s (1980; 1984; 1995) cultural dimensions, thus making the management and motivation of a multi-racial workforce extremely challenging. Indigenous Fijians, like many South Pacific Island cultures, belong to a predominantly masculine, collectivist, hierarchical culture (Niukula, 1995) that accepts high power distance, and uncertainty avoidance (Saffu, 2003). Indo-Fijians, in contrast, belong to a predominantly masculine, individualistic culture (Niukula,
1995), but display characteristics of lower power distance and uncertainty avoidance. The extent to which these different groups respond to similar management practices, or such strategies as employee empowerment, must be adapted to motivate these groups as was analysed using Hofstede’s (1995) five dimensions and relevant literature.

Implementing employee empowerment within a Pacific Island context could present challenges based on employees’ traditional cultural behavioural norms relating to power distance, respect for authority, and ultimately their willingness to be accountable and take responsibility for their actions (Reddy, 2001). The extent to which a local workforce has adopted psychological empowerment is arguable even within a supportive environment as TWC (Deci et al., 2017). Human relationships that involve trust, commitment, and teamwork are complex. For Pacific Islanders, these are further compounded by cultural backgrounds, and traditional communal obligations, thus requiring assumptions of differing motivational factors (Reddy, 2001). Apart from using established management literature to analyse this study, the Fiji context needs to examine potential cultural differences that may exist due to differences in national cultures from Western-dominated management theory.

**Empowering Work Environment**

A Western management style does not create an environment that is conducive to the implementation of employee empowerment in the Fijian context, and requires managers to act as leaders and coaches. Given the high levels of power distance and uncertainty avoidance that exist within traditional indigenous Fijian and Indo-Fijian, male-dominated societies that accept disparate degrees of power both within organisations and society (Saffu, 2003), local employees are unlikely to choose to be empowered without a supportive environment. Empowering management, such as at TWC, promoted autonomy and encouraged employees to take responsibility for, and actively participate in, decision-making within front-line service encounters, thus developing previously untapped human resources, and supposedly enabling increased service quality and consistency (Huertas-Valdivia et al., 2019; Lashley, 2001).

Individualistic cultures, such as Indo-Fijians, are predominantly self-interested and concerned with their nuclear family, whereas collectivist cultures, such as indigenous Fijians, are related by birth to one or more in-groups that include extended families, clans/tribes or an organisation (Qalo, 1997). These in-groups provide security and protection for their members, in exchange for everlasting loyalty and commitment (Hofstede, 1984). The collectivist nature of many South Pacific Island societies means that individual behaviour is influenced by deep-rooted, traditional, customary obligations and relationships. These influences have resulted in the need for organisations to recognise and develop motivational strategies and rewards that are more culture specific. Traditional rewards and recognition that are based on salaries and monetary incentives may be insufficient. HRM initiatives, and management principles that are currently applied universally need to be adapted to suit individual local contexts, as successful HRM strategies and practices are culture specific
For example, data from in-depth interviews with the General Manager (GM) revealed that monetary rewards and incentives, similar to those of their Western counterparts, were more successful at motivating Indo-Fijian employees, whereas non-monetary, culture-specific rewards, such as a deer or wild boar, which because of their rarity and influence on personal status within traditional societies could be used in traditional presentations (*sevu sevu*), or a combination of both, were more successful at motivating indigenous Fijian, Rotuman or *kailoma* (mixed race) employees. Employees were disciplined using the removal of cultural rewards, which brought them shame within their local communities and families within a cultural context - e.g. no traditional presentation of deer or boar at a family celebration or funeral. Such incentives motivated employees to raise their performance levels and conform to company policies and expectations.

For management in Fiji, empowerment requires a paradigm shift in both management and leadership style, and removal of the existing autocratic directive management in favour of leadership that is more participatory and democratic (Kundu et al., 2019; Lashley, 2001).

The data suggested the GM of TWC at the time practised the characteristics of empowering leadership discussed earlier in this paper, and provided the supportive work environment for employees to adopt empowerment (Kundu et al., 2019; Lashley, 2001; Patiar & Mia, 2009). This is consistent with Patiar and Mia’s (2009) findings that suggested employees who felt their roles involved decision-making and organisational matters were more likely to deliver high-quality customer services than those who did not. Furthermore, empowering leadership was an important factor in motivating subordinates to deliver high levels of job commitment.

Lack of a supportive work environment could negatively impact service delivery and quality, as Fijian employees may be reluctant to accept the responsibility and accountability that comes with empowerment, due to high levels of uncertainty avoidance (Hofstede, 1995).

The manager at TWC operated an open-door system where all employees have access to each other and relevant supervisors and management via mobile phone and internal telephone connections. However, the extent to which employees felt comfortable approaching him directly with their problems, even during staff meetings, is questionable given the high level of power distance that exists within Fijian cultures (Hofstede, 1984). For example, the Food and Beverage Department was run by self-managing teams divided into Kitchen, Waitressing, and Bartending with no formal supervisor. Focus interviews indicated that employees expressed a preference for a supervisor to assume the formal managerial role and responsibility for the department. This they felt would make them more comfortable with reporting problems and incidents that occurred at work. They preferred to have some form of authority to report to between them and top level management. A possible explanation for
this could be that, culturally, indigenous Fijians have a *matanivanua* or intermediary who speaks for them when dealing with higher levels of authority or chiefs. Since our cultural backgrounds are an innate part of our work behaviour, this may be a desire for the continuation of an existing cultural practice to exist in the workplace. Another dimension could be uncertainty avoidance, the desire to please, and a tendency that Fijian employees have to say what they think others want to hear rather than the truth, which prevents them from conveying unfavourable information or problems.

**Culture and Employee Empowerment in Fiji**

In Fiji, the two major ethnic cultures in the main display a large power distance (Hofstede 1984), and the existence of “unequal distribution of power within [South Pacific] institutions and society is generally accepted” (Saffu, 2003, p. 64). Therefore, it might be assumed that the existence of employee empowerment within local organisations in Fiji is negligible, given the nature of existing organisational cultures. Reddy (2001) confirmed that senior management in many developing world countries such as Fiji “make decisions on their own and do not expect to be questioned on the method [as consultation with employees of lower rank was] below their status” (2001, p. 77). Additionally, unlike Western management practices that encourage precision, efficiency, punctuality, and documentation, Fijians lack of attention to detail within a business framework is a reflection of a subsistence mindset, which still exists within indigenous Fijian lifestyles (Qalo, 1997) (See Hofstede’s Time dimension, 1995).

Lack of understanding of empowerment, given the cultural context of Fijian employees, could lead to their reluctance towards acceptance of the concept, thus posing further challenges to maintaining competitive advantage through high quality, consistent service. Magnini et al. (2013) stated that, despite the existing research on culture, individualism and collectivism, there is little empirical evidence that states that collectivism influences the comfort level of workers to be empowered decision makers. However, since luxury resorts require high levels of customer service, something associated with empowered employees, collectivist workers should be encouraged to take responsibility and authority for decision-making within culturally negotiated limits and boundaries agreed on with management.

Although Fiji is classified as being part of Melanesia, in many instances cultural norms are more akin to Polynesia. Melanesian societies are relatively egalitarian in structure with status being attributed to individual success, and respect shown to the "big man" (Sahlins, 1963). However, in Polynesia, as with Fiji, “social class and hierarchical systems of chieftainships, are still central to social organisation, and many societies are characterised by ascribed status” (Berno & Douglas, 1998, p. 67). Contemporary Fijian culture has three main influences: the church, the *iTaukei* community or *vanua*, and the government (Niukula, 1995). Fijian culture is hierarchical and led by a hereditary chiefly system. Chiefs and elders

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3 *Matanivanua* - Chief’s spokesman and official herald of the village who is in charge of ceremonial functions
are respected, recognised community leaders who possess ultimate authority and power (Niukula, 1995). Where there is strong leadership, respect is mutual between chiefs and their people. Within the chiefly system, the people have responsibilities and are also “served and given leadership” by their chiefs (Niukula, 1995, p. 24). This benevolent autocratic or paternal relationship is accepted within Fijian culture, and found within many organisations in Fiji (Nabalarua, 1999). The Fijian language has special words that are used to show respect and deference to different community members and chiefs and these are also used in the business context when addressing managers and supervisors, as is the case at TWC.

**Challenges/Problems of Services in Fiji**

The results of the case study on TWC indicated that top management at the resort have close relationships with their employees that are reminiscent of the benevolent/benefactor managerial style of a bygone colonial era (Nabalarua, 1999), an approach that is culturally acceptable within the context of Fiji (see Hofstede, 1995, power distance dimension). In an interview with the GM’s wife, who was in charge of landscaping and employees’ health and well-being, she stated that “when you help one of the Wakaya family give birth and hand her their child, you have their loyalty and trust for life”. The GM at that time was a firm believer in management by example and "walking the talk". His leadership, strong work ethic, and passion and vision for Wakaya made him an excellent role model for his employees who respected and followed his example. His leadership style was empowering, but he maintained a comfortable distance between himself and employees and granted autonomy to employees whilst retaining control over important decisions (Huertas-Valdivia et al., 2019) and inspiring his team to put TWC first and deliver exceptional service.

**Organisational Work Culture**

Through the development and communication of a clear vision, careful planning, role playing, training and skill provision, anticipation of critical incidents, attention to detail, a profound understanding of the tourism and hospitality industry and their specific elite travel market, and a deep understanding of the traditional cultural backgrounds of their predominantly indigenous Fijian and their smaller Indo-Fijian workforce, TWC has developed an organisational work culture that covered all dimensions required by the different empowerment models. The GM stated that the creation of an environment that was conducive to employee empowerment was inadvertent. The intention was always to develop ways that TWC could deliver consistent, high-quality, luxury services to their guests, whilst maintaining a commitment to employing a 100% local workforce. Empowerment, to him, was a necessary element of delivering the levels of service quality that they expected of their employees, and that their guests expected of the resort. It was highly unlikely that they could maintain as high a level of customer satisfaction and service quality, as evidenced by guest survey results, especially in such departments as Activities and Food and Beverage, if employees did not accept empowerment as a strategy to meet guest expectations.
One participant in a key human resources role with TWC believed that, whilst the systems and procedures at the resort could provide a quality service without his leadership, the ability of TWC to consistently exceed guest expectations and maintain its place as one of the top boutique resorts in the world is a reflection of the GM’s leadership and management approach. She stated that for both expatriate and local managers to be successful in leading and coaching their employees to provide consistent quality services in Fiji, extensive local cultural knowledge was needed. Expatriate managers, without the knowledge or consideration of the local cultural contexts that exist in Fiji, were less likely to inspire their employees to perform the consistent quality services necessary.

Indigenous Fijian culture has all the prerequisites for providing their people with the ability to work well within an empowered organisation. Its collectivist nature, and complex social relationships give employees a deep, innate understanding of working in groups, which could potentially translate positively to teamwork in the workplace. Their peoples possess excellent interpersonal skills and have the friendly personalities that are easily transferable to tourism and hospitality-related work. Moreover, employee selection approaches are emphasising interpersonal skills, personality, and empathy over more traditional management skills that can be trained. As the GM of TWC stated, “we hire personalities, the technical skills we need can be provided by in-house training”. TWC is a prime example that empowering employees to deliver quality, consistent service with a 100% local workforce is possible, so if similar, culturally appropriate policies and procedures were implemented in local service organisations, this may go a long way to solving the problem of consistent quality service. However, this may not be so for local employees where empowerment is not promoted and employees may choose not to be empowered.

Conclusions and Implications

This study of employee empowerment at TWC discovered that management used cultural incentives to motivate staff whilst providing them with the training and supportive environment where they felt able to adopt empowerment as a tool that delivered consistent quality service, high levels of guest satisfaction, and provided a competitive advantage over similar luxury boutique resorts. Furthermore, strong empowering leadership by example (Bass, 1985) motivated an engaged workforce that was empowered to make front-line decisions and enabled the delivery of exceptional service experiences at TWC (Huertas-Valdivia et al., 2019).

Results from the study indicated that employees knew what was expected of them and teams had clear plans, operating policies, and procedures that were clearly understood. Recognition of their work was important, as was the free-flow of communication and a supportive work environment that provided them with the relevant customer service training and skills to perform their jobs well. Better communication between supervisors and junior employees was needed to convey instructions from the GM, and is representative of high levels of power distance and uncertainty avoidance (Hofstede, 1995). Results showed TWC had developed
a high serving culture, where employees were expected to deliver exceptional services to
guests, had a clear understanding of the value and importance of TWC vision of service
quality and guest satisfaction, and to this end endeavoured to produce their best work. Whilst
management stated that employees were empowered, some employees expressed feelings of
uncertainty (42%). However, these were mainly employed in such backstage areas as
landscaping, housekeeping, kitchens and engineering, where their tasks were specifically
defined, scripted and monitored by checklists. Empowerment as it exists at TWC has been
adapted to suit a local workforce, with clearly defined limits and boundaries, where
employees are provided a supportive environment, suitable training and skills, and are
accountable for their actions.

The ultimate success of tourism and hospitality organisations, due to the prominent role that
front-line employees play in service delivery and ultimate guest satisfaction, is predicated on
its people or employees (Kim et al., 2016; Yeh, 2013). Service providers in Fiji must
recognise that, for their customers to be satisfied, they need satisfied employees (Baum,
2015; Heskett et al., 1997), and satisfied employees, empowered or otherwise, are more
likely to exist, if the dimensions for providing a supportive environment for empowering
organisations were applied to throughout Fijian organisations (See Heskett et al., 1997;
Hewagama et al., 2019; Honold, 1997; Lashley, 1995). Cultural considerations, within the
local context, are very important; however, if local organisations do not develop the
knowledge-based cultural environments of many of their international competitors, they will
not have the basic service management foundation on which to build a sustainable culture of
cross-cultural management, empowerment and quality consistent service. Furthermore,
without a strong customer-oriented serving culture (Nowak, 2019; Ro & Chen, 2011),
creating an environment that would foster employee empowerment, is highly unlikely.
Employee empowerment in the Pacific is an area that warrants further research, as there is
little evidence of previous studies even within the context of HRM. Furthermore, studies
could consider comparisons across different types and scales of hospitality organisations,
e.g. hotels, restaurants, resorts, bars, lodges, and geographic locations, as well as comparing
CEO opinions of empowerment with those of employees.

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Do high renewable energy targets hinder donor-funded rural electrification in Pacific island countries?

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Abstract

High renewable energy targets and rural electrification are not necessarily complementary in Pacific island countries (PICs). While PICs need to tackle both high renewable energy targets for climate change and rural electrification for further development, investment in renewable energy in urban areas is a more cost-effective means of achieving renewable energy targets than rural electrification with renewables. In the energy sector in PICs, foreign aid is the single most important source of investment. Thus, this research will investigate donor-funding for energy projects, assess the extent to which the funding is focused on rural electrification, and examine whether the situation has changed over time in this region. A large share of the information about foreign aid for energy projects between 2013 and 2015 are extracted from a database of a think tank. All the energy projects are sorted into four categories: urban power supply, rural electrification, others, and unspecified projects. The results show that PICs are not only improving urban power supply but also enhancing rural electrification currently, and foreign aid for rural electrification has increased over time. This research also suggests policy recommendations for the donor and recipient governments, including data collection and analysis on electricity demand and energy consumption.

Keywords: development; foreign aid; Pacific island countries; renewable energy; rural electrification

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Introduction

Are high renewable energy targets and rural electrification always complementary in Pacific island countries (PICs)? The answer is “not necessarily”. All PICs have high renewable energy targets aimed at shifting away from fossil fuels and to renewable energy. At the same time, PICs face a range of development challenges, including the provision of reliable electricity to un-electrified households — an issue of particular significance in rural areas. A risk associated with a focus on high renewable energy targets is that rural electrification needs may not be addressed, owing to the fact that urban investment in renewable energy is a more cost-effective means for governments to achieve those targets. High renewable energy targets and rural electrification are therefore not necessarily complementary.

In the energy sector in PICs, foreign aid is the single most important source of investment. Thus, this research will investigate donor-funding for energy projects, assess the extent to which the funding is focused on rural electrification, and examine whether the situation has changed over time in this region (see Figure 1). This study will be used to assess whether high renewable energy targets of PICs have hindered donor-funded rural electrification.

This paper is structured as follows. Section two presents context and literature review. Section three describes methodology and data. Sections four and five explore results, and offer discussion (respectively) on how rural electrification is proceeding. The final section concludes.

Figure 1. Map of the Pacific island countries.

Source: Dornan, 2015b
Literature Review

**High renewable energy targets and its drivers**

PICs are the countries most at risk in the world from climate change (Barnett & Campbell, 2010). Several PICs will probably lose a considerable percentage of their land due to sea-level rise (Kelman & West, 2009). Floods, droughts, heat waves, and tropical cyclones have occurred more frequently and intensely, and these have more negative effects on households, industries such as agriculture and fishery, and the environment (Mertz, Halsnæs, Olesen, & Rasmussen, 2009).

Considering these severe climate change situations, PICs have decided to significantly reduce their emissions of greenhouse gases (GHGs) such as carbon dioxide (CO$_2$). The Cook Islands, Papua New Guinea (PNG), Samoa, Tuvalu, and Vanuatu aim to achieve 100 percent of renewable energy sourced electricity supply (see Table 1). The other PICs also have high renewable energy national targets (see Table 1).

Foreign aid is crucial if PICs are to achieve these targets. PICs depend on foreign aid not only for climate change and rural electrification investment but also for other infrastructure investment (Dornan & Shah, 2016). ODA as a proportion of GNI is quite high in all PICs (see Table 1).

Foreign aid for energy projects is especially significant when compared to domestic expenditure in PICs (Keeley, 2017). Private investment in energy projects is limited mainly due to the small size of electricity markets and poor regulatory frameworks (Dornan & Shah, 2016). As a result, most energy projects have been implemented by foreign aid in the energy sector in PICs.

In addition to their own efforts to reduce GHGs, PICs urge many other countries around the world to have much higher targets and take actions to reduce GHGs at the international climate change negotiation table (Dornan & Shah, 2016). High renewable energy targets at home are useful in this regard. Through such targets, PICs aim both to reduce GHGs domestically and to encourage countries outside of the region to do the same.

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1 The intentions of PICs to reduce GHGs are seen in their commitments to an international climate change framework, the Intended Nationally Determined Contribution (INDC), which determines a country’s contribution to climate change in the framework of the Paris Agreement (see Table 1). Most of the PICs have committed to implementing energy transition from fossil fuels to renewable energy, at least in the power sector.
PICs also have economic reasons for expanding renewable energy generation. One important objective is to escape from oil dependence. PICs’ economies are vulnerable to international oil price volatility because they rely heavily on oil imports such as diesel, heavy oil, and kerosene (Weisser, 2004; Dornan, 2015b; Dornan & Shah, 2016). Consequently, oil imports have caused major difficulties for their economies due to international oil price vulnerability (Yu & Taplin, 1997).

Table 1. GDP per capita, renewable sourced energy use targets, electrification rates, and net ODA received (% of GNI).

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP per capita (in 2016, USD)</th>
<th>Renewable sourced energy use targets (including conditional targets)</th>
<th>Electrification rates (in 2014)</th>
<th>Net ODA received % of GNI (in 2016)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cook Islands</td>
<td>24,614.5</td>
<td>50% RE electricity by 2015 ;100% RE electricity by 2020</td>
<td>(b)99%</td>
<td>n.a.</td>
</tr>
<tr>
<td>Fiji</td>
<td>5,357.5</td>
<td>99% RE electricity by 2030 ;CO₂ reduction by 30% by 2030</td>
<td>100%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Kiribati</td>
<td>1,546.9</td>
<td>CO₂ reduction by 48.8% by 2025 ;CO₂ reduction by 60% by 2030</td>
<td>48%</td>
<td>24.1%</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td>3,591.6</td>
<td>GHGs reduction by 32% by 2025 ;GHGs reduction by 45% by 2030</td>
<td>90%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Micronesia, Fed. Sts.</td>
<td>3,157.5</td>
<td>CO₂ reduction by 35% by 2025</td>
<td>72%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Nauru</td>
<td>7,823.6</td>
<td>Lowest total emissions in the world by 2030</td>
<td>99%</td>
<td>18.3%</td>
</tr>
<tr>
<td>Niue</td>
<td>12,945.0</td>
<td>38% RE electricity by 2020 ;80% RE electricity by 2025</td>
<td>(b)99%</td>
<td>n.a.</td>
</tr>
<tr>
<td>Palau</td>
<td>17,175.5</td>
<td>GHGs reduction by 22% by 2025</td>
<td>99%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>2,588.9</td>
<td>100% RE electricity by 2030</td>
<td>20%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Samoa</td>
<td>4,024.5</td>
<td>100% RE electricity by 2017 ;100% RE electricity by 2025</td>
<td>98%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>2,053.2</td>
<td>CO₂ reduction by 45% by 2030</td>
<td>35%</td>
<td>15.7%</td>
</tr>
<tr>
<td>Tonga</td>
<td>3,956.8</td>
<td>50% RE electricity by 2020 ;70% RE electricity by 2030</td>
<td>95%</td>
<td>19.7%</td>
</tr>
<tr>
<td>Tuvalu</td>
<td>3,375.5</td>
<td>100% RE electricity by 2025 ;GHGs reduction by 60% by 2025</td>
<td>98%</td>
<td>60.7%</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>2,937.9</td>
<td>CO₂ reduction by 30% by 2030</td>
<td>34%</td>
<td>(c)12.3%</td>
</tr>
</tbody>
</table>

Notes: (a) Data taken from 2012; (b) Sourced from New Zealand Ministry of Foreign Affairs and Trade (2016); (c) Data taken from 2014.
Sources: Department of Foreign Affairs and Trade, Australian Government, 2018a-n; United Nations Framework Convention on Climate Change, n.d.; World Bank, 2018a; World Bank, 2018c

PICs also stand to benefit from high renewable energy targets insofar as they attract foreign aid assistance for renewable energy projects (Dornan & Shah, 2016). For PICs to deploy renewable energy, “donor funding is a significantly important source
of finance” (Keeley, 2017, p. 36). PICs need to draw the attention of existing and potential donors to receive more foreign aid in this area, and ambitious renewable energy targets can serve this purpose.

**Role of electricity in development**

In addition to climate change, PICs also face a range of development challenges. The World Bank (2017) states that 5 countries out of 14 countries belong to lower-middle-income economies, 6 countries are upper-middle-income economies, and 3 countries have high-income economies. Most of the PICs have been struggling to achieve high rates of economic growth when compared to other Asian countries.

One of the major obstacles to economic development in the region is the absence of electricity supply. Seventy percent of Pacific Islanders are without electricity supply (Dornan, 2014), with the highest figure in PNG, where 80 percent are without electricity (see Table 1). Electricity is important for a range of reasons. Shyu (2014) states, “electricity serves as the basis for satisfying fundamental human needs, such as food production, clean water, sanitation, education services, health care, and social services” (p. 30). Payne (2010) adds, “electricity plays a vital role in both the production and consumption of goods and services within an economy” (p. 723).

Although there is ongoing debate regarding the causality between electrification and economic growth (Stern, Burke, & Bruns, 2017), it is widely accepted that reliable electricity supply is important for a range of economic activity, thus contributing to economic development.

Some PICs have high electrification rates (see Table 1), but this does not necessarily guarantee that the communities have sufficient electricity supply to improve their economies. Oil-fired generators could be idle for quite a long time during a day because of their high costs (Dornan & Jotzo, 2015). In particular, diesel generators in the rural areas usually operate for just a few hours a day due to fuel costs and inadequate maintenance (Betzold, 2016).

In the countries with lower electrification rates, no access to electricity in rural areas is disruptive to socio-economic development (Yu & Taplin, 1997). Jimenez (2017), for example, in a global study finds that rural electrification “leads to increases of around 7 percent in school enrolment, 25 percent in employment, and 30 percent in incomes” (p. 1) on average at the household level. He continues “that improvements in electricity access and reliability have a positive influence on productivity” (p. 12) at the firm level. Electrification is therefore important for economic development in PICs.
Central argument

PICs need to tackle both their high renewable energy targets for climate change and rural electrification for development. Although rural electrification with renewable energy looks like an optimal solution for PICs, this does not adequately address renewable energy targets (typically a percentage of total generation in a country), which require investment in urban power grids. Investment in renewable energy generation in urban areas is a more cost-effective means of achieving renewable energy targets than rural electrification, owing to the fact that electricity demand in rural areas is low, even when these are connected to the grid. However, this focus can come at the expense of investment in rural electrification.

In this regard, Betzold (2016) states, “PICs are likely to focus attention on urban areas to meet their ambitious renewable energy goals” (p. 316). Dornan and Shah (2016) also argue that high renewable energy targets create incentives for investment in existing electricity grids, which ignore the problem of limited access to modern energy services in PICs. The recent literature suggests that in deploying renewable energy, they might be ignoring rural electrification.

Thus, this research will seek to address the question: do high renewable energy targets hinder donor-funded rural electrification in PICs?

Methodology

This section will firstly clarify the scope of the term “rural electrification” in this research, suggest a theoretical framework to analyse the situation of rural electrification over time, and explain the database choice, the energy project categories, and the category judgement methods.

Scope of “rural electrification”

The term “rural electrification” does not define whether and how communities or households in rural areas have sufficient electricity capacity. As described above, rural electrification can mean any type of electricity supply. Even if a household has one-hour electricity supply a day, the household is electrified. In this sense, the levels of electricity capacity are basically out of the scope of this research. However, since electricity capacity is strongly related to the quality of life of people in rural areas, policy recommendations will involve this issue.

On the other hand, the literature is sometimes divided on the scope of rural electrification. Mandelli, Barbieri, Mereu, and Colombo (2016) focus only on off-grid generation in their study of rural electrification. In contrast, Dornan (2015a)
includes both off-grid generation and grid extension in his analysis of rural electrification in PICs. In the context of PICs, grid extension should be included in rural electrification as long as grid extension to outer islands is distinguishable from grid maintenance in main islands. Both off-grid generation and grid extension are therefore included in the scope of this research.

**Theoretical framework to analyse the rural electrification situation**

To analyse the situation of rural electrification in PICs, this research will apply a microeconomic concept: the income and substitution effects of foreign aid spending on energy projects that results from high renewable energy targets (see Figure 2).

In terms of the income effect, high renewable energy targets can be expected to lead to an increase in foreign aid for all the energy projects. This is because high renewable energy targets increase the priority that energy projects have relative to other projects. As a result, foreign aid spending on renewable energy projects for both urban power supply and rural electrification can be expected to increase.

In terms of the substitution effect, given a fixed amount of foreign aid for all the energy projects, high renewable energy targets encourage spending on renewable energy projects for urban power supply but discourage spending for rural electrification. This is because meeting renewable energy targets — which are focused on renewable energy generation as a percentage of total electricity generation — requires investment in power supply for urban areas, where the vast bulk of electricity in PICs is consumed. Improving urban power supply with renewable energy is also a more cost-effective means of meeting renewable energy targets, given the fact that electricity demand in rural areas is low volume and dispersed. What this means is that high renewable energy targets can have a substitution effect, whereby they encourage foreign aid spending on urban power supply and discourage spending on rural power supply.
Briefly, the income effect and the substitution effect have opposite impacts on rural electrification.

**Database, project categories, and category judgement methods**

This research utilises the database of the Lowy Institute Pacific Aid Map. This database is an amalgamation of multiple sources of information, such as the OECD (Organisation for Economic Co-operation and Development), the IATI (International Aid Transparency Initiative), and direct reporting from donors (Lowy Institute for International Policy [Lowy], 2018).

It covers a large share of the information about foreign aid, including ODA (Official Development Assistance) and OOF (Other Official Flows), from donors to recipients in this region (Lowy, 2018). In addition, the database includes detailed descriptions of each project (Lowy, 2018). When there are no descriptions, the donor websites on each project are also useful (Lowy, 2018). This database is more detailed than other databases to analyse foreign aid for energy projects in PICs.

The foreign aid is measured by nominal US dollar (USD) based on the OECD exchange rates for each donor (Lowy, 2018).

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2 Since the data includes not only ODA but also OOF, the term “foreign aid” should be “total official flows” to be accurate. However, this paper uses the term “foreign aid” instead of “total official flows” as a matter of convenience.
Although the dataset is detailed, only three years of comprehensive information is available. This research will use the three years as one period because there may be year-to-year volatility of foreign aid for energy projects.

The data on energy projects used for this analysis are extracted from the database above. The energy projects are sorted into four categories by the author. The four categories are urban power supply projects, rural electrification projects, other projects, and unspecified projects. Urban power supply projects consist of on-grid renewable energy (RE) generation, on-grid non-RE generation, and transmission and distribution maintenance projects. Rural electrification projects are comprised of off-grid RE generation, off-grid non-RE generation, and transmission and distribution extension projects. Other projects are categorised as energy policy and administrative management and capacity building.

Most of the energy project categories are determined by the author on the basis of information in the dataset such as project descriptions and project titles and sectors. In addition, the categories of some projects are judged by the information on donors’ websites for each project. When a project belongs to multiple categories, the category of the project is judged by the focus of the project.

**Results**

By using the dataset from the Lowy Institute Pacific Aid Map, the data of foreign aid for energy projects in PICs between 2013 and 2015 are collected and analysed as follows.

*Overview of energy projects in PICs*

The total amount of foreign aid for all the energy projects and rural electrification projects is considered to gauge the current focus on rural electrification and to examine whether that focus has changed over time.

Firstly, analysis of foreign aid for all the energy projects in PICs points to three main features (see Figure 3). The first feature is that the total amount of foreign aid for energy projects was USD 232 million between 2013 and 2015. In 2015, the total amount of foreign aid for energy projects was equal to 0.3 percent of the nominal GDP of PICs. By comparison, the military expenditure of GDP in PNG was between 0.3 and 0.5 percent in recent years (World Bank, 2018b).

The second feature of foreign aid for all the energy projects is that the biggest spending category was on improving urban power supply. The total foreign aid for
urban power supply projects was USD 115 million, and its share was 50 percent of the total foreign aid for all the energy projects.

The third feature is that foreign aid for rural electrification projects was also significant. The total foreign aid for rural electrification projects over the three-year period was USD 48 million, or 21 percent of the total foreign aid for all the energy projects.

How do the figures presented above compare to foreign aid for all the energy projects in the past? Exact comparisons are not possible, as detailed datasets have not previously existed. However, Betzold (2016) investigates on-grid RE generation, off-grid RE generation, and both on-grid and off-grid RE generation projects between 1990 and 2012 using the OECD CRS (Common Reporting Standard) database, which is not as detailed as the database used in this research. Her analysis shows that over a 23-year period (1990-2012), foreign aid for on-grid RE generation projects measured USD 273 million, aid for off-grid RE generation projects measured USD 29 million, and aid for both on-grid and off-grid RE generation measured USD 11 million for the 23 years. Foreign aid for off-grid RE generation as a percentage of aid for on-grid RE generation was 11 percent during the period.

Figure 3. Foreign aid for energy projects between 2013 and 2015.

Analysis of the more recent data from the Lowy Institute suggests that foreign aid for rural electrification projects as a percentage of aid for urban power supply projects measured 42 percent (USD 48 million / USD 115 million). In other words, results
suggest that the emphasis on foreign aid for rural electrification projects has become more significant, not less significant, over time.

Secondly, of the total foreign aid for rural electrification projects, aid for off-grid RE generation projects was the largest sub-category, amounting to USD 40 million (see Figure 4). The remainder of USD 8 million was spent on grid extension projects. There was no aid for off-grid non-RE generation projects over the period.

Betzold (2016) finds that, between 1990 and 2012, foreign aid for off-grid RE generation projects measured USD 29 million, and aid for both grid and off-grid RE generation project measured USD 11 million (the caveat being that the databases are not exactly comparable). The sum of projects related to off-grid RE generation was therefore USD 40 million over this 23-year period, which was the same amount spent on off-grid RE generation projects between 2013 and 2015: a three-year period. It is apparent that foreign aid for rural electrification projects with renewable energy has increased remarkably relative to earlier periods.

Figure 4. Foreign aid for rural electrification projects between 2013 and 2015.

Rural electrification by donor and by recipient

This section will analyse foreign aid for rural electrification projects from the viewpoints of donors and recipients.
First, this paper analyses rural electrification projects by donor. Major donors for rural electrification in this region are four countries and institutions: New Zealand, Japan, EU institutions (EU), and the United Arab Emirates (UAE) (see Figure 5). New Zealand, Japan, the EU, and the UAE were the largest providers of energy-related aid funding to the region, granting USD 23 million, USD 13 million, USD 8 million, USD 4 million respectively over the three years. These four donors provided 99 percent of the total foreign aid for rural electrification projects in the region.

Second, this paper reviews rural electrification projects by recipients. Major recipients of foreign aid for rural electrification are eight countries (see Figure 6). Foreign aid for rural electrification projects as a percentage of the total foreign aid for all the energy projects in Kiribati, Tuvalu, and Fiji measured 82 percent, 77 percent, and 64 percent respectively between 2013 and 2015. Tonga, Vanuatu, PNG, Federated States of Micronesia, and the Solomon Islands also received 45 percent, 43 percent, 30 percent, 25 percent, and 5 percent respectively for rural electrification projects during the three years.
Many of PICs, on the demand side, attracted foreign aid in order to tackle not only urban power supply but also rural electrification for the three years.

**Rural electrification and electrification rates**

Betzold (2016), and Dornan and Shah (2016) raise concerns that countries with lower electrification rates might concentrate their efforts on achieving renewable energy targets and that this might come at the expense of rural electrification. To respond to these concerns, this section will analyse the foreign aid for energy projects by dividing the 14 countries into two groups that have higher and lower electrification rates. The four countries with lower electrification rates are Kiribati (where the electrification rate is 48 percent), PNG (20 percent), the Solomon Islands (35 percent), and Vanuatu (34 percent). The other ten PICs have much higher electrification rates (see Table 1).

In the case of the ten countries with higher electrification rates, investment in urban power supply projects is dominant, but investment in rural electrification is also significant (see Figure 7). Foreign aid for urban power supply projects between 2013 and 2015 was USD 90 million, and its share of the total aid for all the energy projects was 49 percent. In contrast, foreign aid for rural electrification projects for the three years was USD 32 million, and its share was 18 percent. All of the rural electrification projects were off-grid RE generation projects, which indicated that there were no aid-funded grid extension projects.
The progress of rural electrification in the countries with higher electrification rates means that rural electrification efforts involve replacement of diesel or petrol generators and kerosene lighting with renewable energy. For example, New Zealand granted USD 12.4 million to Tuvalu to support its government project, “which includes the installation of hybrid solar systems on the three outer islands of Nanumea, Nanumanga and Niutao” (Lowy, 2018, p. 2). These replaced existing diesel generators. In another instance, Japan gave USD 12.9 million to Tonga to introduce, “a micro-grid system with renewable energy along with the Tonga Energy Road Map” (Lowy, 2018, p. 2).

Thus, in the countries with higher electrification rates, rural electrification with renewable energy is significantly in progress, replacing oil-based generators with renewable ones.

In the case of the four countries with lower electrification rates, investment in urban power supply projects is dominant, but investment in rural electrification is also significant (see Figure 8). Foreign aid for urban power supply projects between 2013 and 2015 was USD 25 million, and its share of the total foreign aid for all the energy projects was 51 percent. Foreign aid for rural electrification projects for the three years was USD 16 million, and its share was 32 percent.
Figure 8. Foreign aid for energy projects in the four countries with lower electrification rates.

The shares of off-grid RE generation and grid extension were almost equal at about 50 percent (see Figure 9). An example of an off-grid RE generation project was the EU’s expenditure of USD 2.7 million in Kiribati to supply 2,188 Solar Home Kits, 120 teachers’ homes, 20 solar workshops, 100 small business systems, 30 community halls, 7 school systems, 1 village mini-grid, and 1 grid connected systems (Lowy, 2018). An instance of grid extension involved a grant of USD 6.5 million from New Zealand in PNG to help, “extend the power distribution grid to rural communities in Bougainville, West New Britain and Northern Province of PNG” (Lowy, 2018, p. 2).

Figure 9. Foreign aid for rural electrification projects in the four countries.

Source: Lowy, 2018
Thus, in the countries with lower electrification rates, investment in both urban power supply and rural electrification projects is significant. This means that they are trying to penetrate electricity supply in both urban and rural areas with renewable energy.

The data shows clearly that countries with lower electrification rates are focusing not only on improving urban power supply with renewable energy but also on rural electrification. Rural electrification has not been ignored in these countries.

**Discussion**

Currently, PICs are using foreign aid funds not only to improve urban power supply but also to enhance rural electrification. Many of the rural electrification projects are off-grid RE generation projects, but some are grid extension projects.

Major donors for rural electrification in this region are New Zealand, Japan, the EU, and the UAE. Their total share of foreign aid for rural electrification projects is 99 percent. Major recipients of these funds are Kiribati, Tuvalu, Fiji, Tonga, Vanuatu, PNG, Federated States of Micronesia, and the Solomon Islands.

In countries with higher electrification rates, rural electrification projects are also significant, with off-grid renewable energy generation technologies replacing diesel generators already installed in rural areas. In countries with lower electrification rates, rural electrification projects comprise an even higher proportion of the total foreign aid for energy projects, with off-grid renewable energy generation projects as well as grid extension projects in place.

It can be therefore concluded that foreign aid for energy projects in PICs has had a strong focus on rural electrification, notwithstanding also being used to assist PICs in meeting high renewable energy targets.

Subsequently, comparison of this analysis with previous studies also suggests that foreign aid for rural electrification projects has increased over time. According to Betzold (2016), the cumulative amount of foreign aid directed towards off-grid RE generation projects between 1990 and 2012 was USD 40 million (including both off-grid and on-grid RE generation projects). This research has shown that the amount of off-grid RE generation projects between 2013 and 2015 also equalled USD 40 million, despite a considerably shorter time period.

The same comparison shows that foreign aid for off-grid RE generation projects as a percentage of aid for on-grid RE generation projects is higher now than in the past. Betzold (2016) indicates that the USD 40 million of investment in off-grid RE generation projects (including both off-grid and on-grid RE generation projects) was
15 percent as a percentage of foreign aid for on-grid RE generation projects. In contrast, this research shows that foreign aid for off-grid RE generation projects was USD 40 million, which became 61 percent as a percentage of aid for on-grid RE generation projects, or USD 66 million.

The weight of rural electrification clearly becomes more significant for the period in this research than that in the prior research. Going back to the theoretical framework presented in Figure 2, the income effect of foreign aid spending on energy projects that results from high renewable energy targets has exceeded the substitution effect.

PICs have expanded rural electrification along with their high renewable energy targets over time. The results of this research strongly support another of Betzold’s (2016) conclusions that foreign aid for off-grid RE generation projects is increasing. Will this situation continue in the future? The current situation shows that PICs are pursuing both high renewable energy targets and rural electrification at the same time. However, as already discussed, more foreign aid does not guarantee more aid for rural electrification. If high renewable energy targets are a motivation for more foreign aid for energy projects, it is possible — at least in theory — that foreign aid for rural electrification projects declines in the future.

There is also the question of what happens as renewable energy targets are met in the future. Would foreign aid be diverted to rural electrification (away from on-grid RE generation projects)? Or would foreign aid for rural electrification decline along with overall aid levels?

**Conclusion and Recommendations**

In order to explore whether both high renewable energy targets and reliable rural electrification are being adequately pursued in PICs, this research investigates donor-funding for energy projects, assesses the extent to which the funding is focused on rural electrification, and examines whether the situation has changed over time.

By establishing ambitious renewable energy targets, PICs aim not only to reduce GHGs but also to decrease their dependence on oil imports and to attract more foreign aid to implement renewable energy projects. At the same time, many PICs need to electrify rural areas or enhance reliable electricity supply in rural areas to achieve their development priorities. To some extent, rural electrification can be accelerated using renewable energy technologies. However, there is a risk that high renewable energy targets result in PICs focusing only on urban renewable energy development, at the expense of rural areas not connected to the grid.
Currently, the focus of PICs on energy projects, including high renewable energy targets, has meant that more foreign aid is spent on rural electrification. Major donors for rural electrification are New Zealand, Japan, the EU, and the UAE. With their grants, most of PICs tackle rural electrification. Not only the countries with higher electrification rates, but also the countries with lower electrification rates enhance rural electrification with renewable energy. High renewable energy targets and rural electrification are being pursued at the same time.

In addition, foreign aid for rural electrification projects has increased remarkably over time. Compared to the prior research examining the period between 1990 and 2012, off-grid RE generation projects have drastically increased for the period between 2013 and 2015, on which this research focuses. The theoretical framework suggests that the income effect of foreign aid spending on rural electrification projects that results from high renewable energy targets has exceeded the substitution effect. Rural electrification with renewable energy has been enhanced.

However, there is uncertainty for future rural electrification, given the theoretical framework that suggests that more foreign aid does not guarantee more aid for rural electrification projects. Furthermore, what will happen to foreign aid for all the energy projects once the renewable energy targets of PICs are met? How will this affect foreign aid for rural electrification projects? These points are difficult to predict.

This study has identified and employed detailed data on foreign aid for energy projects from the donor side, or the supply side. Unfortunately, there is insufficient data on levels of electrification in rural areas in PICs, or in the demand side, to analyse changes in electrification over time. There are similar limitations with respect to analysis of energy consumption.

These data limitations are the primary focus of the policy recommendations. The first recommendation is that the donor and recipient governments collect and analyse data on basic or minimum demand for electricity and energy at the household level in rural areas in each country. The collected data should be used for estimating and introducing the minimum electricity and energy capacity for lighting and cooking in rural areas. Since the minimum levels of required electricity and energy supply is unlikely to be very different among different areas in a country, the data collection and analysis will be useful to decide the basic electricity and energy capacity nationwide.

Linked to this, the second recommendation is that the donor and recipient governments start collecting, accumulating, and analysing more detailed data about the productive use of energy. This would lead governments to collect and accumulate
the data of energy consumption not only for lighting and cooking but also for using machines and improving mobility at the household, firm, and industry levels in rural communities (Sovacool et al., 2012). The data on energy demand will be different among different communities due to their locations, population density, existing and potential industries, etc. This is strongly related to improving the quality of life and creating commerce and industries in rural communities.

Lastly, the third recommendation is that the governments in PICs allocate more resources to rural electrification, including the resources needed for the first and second recommendations. Currently, most of the spending for rural electrification comes from foreign aid (Dornan & Shah, 2016). In the future, even if foreign aid is reduced due to donors’ intentions, the governments should keep the spending for rural electrification. Rural electrification is the foundation to pursue both climate and development goals.

At the moment, PICs are successfully pursuing both high renewable energy targets and rural electrification at the same time, meaning that high renewable energy targets do not hinder donor-funded rural electrification. However, there is no guarantee this will be the case in the future. PICs need to ensure that both foreign aid and government expenditure on rural electrification projects in the future are directed towards helping their people realise further development.

References


Tourism Development in the South Pacific: The Cases of Nauru and Tuvalu

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Abstract

Tuvalu and Nauru are isolated developing island nations located in the South Pacific Ocean. In contrast to the established larger Pacific destinations such as Fiji and Tahiti, the tourism industries on both Tuvalu and Nauru are in their infancy. Tourism development in these remote island nations faces a myriad of challenges which include a lack of infrastructure, environmental susceptibility, economic vulnerability, difficulties with access and considerable distances from major tourist markets. This paper reviews tourism on Tuvalu and Nauru and evaluates their current situation regarding potential tourism development through workshops with relevant stakeholders, surveys and subsequent SWOT analysis. The results of the paper outlined a large number of challenges faced by Tuvalu and Nauru due to their geographic location but also highlighted that both Islands possess fascinating and unique features that have the potential to attract niche tourism markets. A key finding of this paper is that the tourism stimulus or potential attraction can also be the chief threat to the islands’ economic survival hence the two edges of the sword. Further research is required to assess the effect of the withdrawal of the Refugee Processing Centre on Nauru’s economy and to evaluate the impact of climate change on Tuvalu’s society and potential adaption strategies.

Keywords: Climate change; Nauru; SWOT analysis; tourism; Tuvalu

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Introduction

Sustainable Tourism Development

The United Nations World Tourism Organisation defines Sustainable Tourism Development as “Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities” (2005, p. 11-12). The principle idea is that the tourism industry ought to develop in an economically, socially and environmentally sustainable manner that will provide benefits to the local community. Over the last 15 years, there have been numerous terms used to label sustainable tourism development in less developed nations including pro-poor tourism, ecotourism, sustainable tourism, community tourism, community benefit tourism and responsible tourism (Simpson, 2009, p. 186). However, as Ruhanen (2008, p. 429) notes, much of the literature has been criticised for its preoccupation with defining the concept instead of concentrating on the practical aspects, such as the development of tools to implement the concept in practice. Problems emerge when evaluating whether these types of tourism are providing real benefits to the environment and local communities, whilst sustaining financial feasibility (United Nations Development Programme, 2011).

Tourism in the South Pacific

Economic growth, constructive political situation, technology and upgraded infrastructure have led to continued growth in the number of tourists from both long-haul and intra-regional markets in the greater Pacific Region (Tolkach, Chon & Xiao, 2016). Tourism is currently the principal export earner for many Pacific Island countries, with well-known destinations such as Fiji, Samoa and the Cook Islands all showing continued increases of tourism arrivals over the last year (Table 1). Historically, tourism in the South Pacific has been overshadowed by traditional tourist destinations such as New Zealand, Fiji and Tahiti built on the imagery of beautiful scenery and colourful cultures. And now the positive effects of tourism are being felt in several smaller, lesser-known islands such as Tonga and Papua New Guinea, offering more diverse tourist products. In these less developed smaller islands, the tourism sector is a large contributor to the gross domestic product (GDP) and employment in many of these nations (Pacific Islands Forum Secretariat, 2013).

Unfortunately, the economic benefits of tourism have not reached all Pacific nations, and many of the more remote lesser-known islands such as Tuvalu, Nauru, and Kiribati are being overlooked as potential tourism destinations by prospective
travellers. These developing small island states have numerous challenges to tourism development, which include a lack of economies of scale, limited infrastructure, difficulties with access and considerable distances from major tourist markets (Towner, Vas & Milne, 2015). Despite the numerous obstacles to developing tourism industries in these little-known, remote South Pacific islands, there are limited, traditional-sector development opportunities. Therefore, as Pratt (2013) notes, niche tourism holds the largest area of potential.

Table 1. South Pacific Country Tourist Arrivals and Contribution to GDP

<table>
<thead>
<tr>
<th>Country</th>
<th>2016 (r)</th>
<th>2017 (p)</th>
<th>2017 Absolute Change</th>
<th>2017 % Change</th>
<th>2017 Tourism Performance</th>
<th>2017 % Share</th>
</tr>
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<tbody>
<tr>
<td>America Samoa</td>
<td>20050</td>
<td>19987</td>
<td>-63</td>
<td>-0.3</td>
<td>Negative</td>
<td>0.9</td>
</tr>
<tr>
<td>Cook Islands</td>
<td>146473</td>
<td>161362</td>
<td>14,889</td>
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<td>Positive</td>
<td>7.5</td>
</tr>
<tr>
<td>FSM</td>
<td>29485</td>
<td>30060</td>
<td>575</td>
<td>2.0</td>
<td>Positive</td>
<td>1.4</td>
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<tr>
<td>Fiji</td>
<td>792320</td>
<td>842884</td>
<td>50,564</td>
<td>6.4</td>
<td>Positive</td>
<td>39.4</td>
</tr>
<tr>
<td>French Polynesia</td>
<td>192495</td>
<td>198956</td>
<td>6461</td>
<td>3.4</td>
<td>Positive</td>
<td>9.3</td>
</tr>
<tr>
<td>Kiribati</td>
<td>5018</td>
<td>5663</td>
<td>645</td>
<td>12.9</td>
<td>Positive</td>
<td>0.3</td>
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<td>Marshall Islands</td>
<td>5431</td>
<td>6034</td>
<td>603</td>
<td>11.1</td>
<td>Positive</td>
<td>0.3</td>
</tr>
<tr>
<td>Nauru</td>
<td>3038</td>
<td>3002</td>
<td>-36</td>
<td>-1.2</td>
<td>Negative</td>
<td>0.1</td>
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<td>New Caledonia</td>
<td>115676</td>
<td>120697</td>
<td>5021</td>
<td>4.3</td>
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<td>5.6</td>
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<tr>
<td>Niue</td>
<td>8918</td>
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<td>0.5</td>
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<tr>
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<td>122726</td>
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<tr>
<td>PNG</td>
<td>197632</td>
<td>142943</td>
<td>-54689</td>
<td>-27.7</td>
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<tr>
<td>Samoa</td>
<td>145176</td>
<td>155098</td>
<td>9922</td>
<td>6.8</td>
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<td>7.3</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>23192</td>
<td>25709</td>
<td>2517</td>
<td>10.9</td>
<td>Positive</td>
<td>1.2</td>
</tr>
<tr>
<td>Timor Leste</td>
<td>92502</td>
<td>118586</td>
<td>26,084</td>
<td>28.2</td>
<td>Positive</td>
<td>5.5</td>
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<tr>
<td>Tonga</td>
<td>59130</td>
<td>62434</td>
<td>3304</td>
<td>5.6</td>
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<td>2.9</td>
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<tr>
<td>Tuvalu</td>
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<tr>
<td>Vanuatu</td>
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<td>14.7</td>
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</tr>
<tr>
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<td>2137538</td>
<td>65004</td>
<td>3.1</td>
<td>Positive</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: South Pacific Tourism Organisation, 2018

Small island developing states such as those found in the South Pacific can encounter challenges when employing tourism focused development strategies, due to their
economic and environmental vulnerability (Teelucksingh & Watson, 2013; Towner, Vas & Milne, 2015; Kurniawan, Adrianto, Bengen & Prasetyo, 2016), limited resources, and restricted opportunities for generating employment and foreign exchange (Fotiou, Buhalis & Vereczi, 2002). Bojanic and Lo (2016) note that there is a substantial negative effect on economic development for small island nations that depend more heavily on tourism than those countries located on the main continents. Bishop (2010) adds that when tourism forms the basis of a development strategy for small island developing states, it can be to a disadvantage to agriculture and other sectors.

Many of these small island countries in the South Pacific remain extremely susceptible to climate change and sea level rise. The effects of climate change are inadvertently linked to tourism as large-scale economic changes, such as undermining of food production and damages to infrastructure, can drastically impact the tourism sector (Barnett, 2011, p. 232). Additional, collective threats to tourism on these islands are flooding and inundation due to their low-lying topography; other dangers include saltwater intrusion, beach erosion, pressure on the coastal infrastructure, and adverse changes to daily life (Mimura, 1999). With impacts associated with food and water security, public health and safety, and infrastructure expected to become more significant over the impending decades, it is likely to result in mass migration from low-lying atolls to continental sites and higher islands (Keener, Marra, Finucane, Spooner & Smith, 2012). Reducing vulnerability in these small islands remains effective adaption and mitigation strategies with appropriate assistance from international agencies while empowering communities and enhancing benefits to the local population (Nurse et al., 2014).

The paper now introduces the two case studies of Tuvalu and Nauru and describes the methods. The paper then utilises the SWOT methodology to examine tourism development and offers discussion, mainly focused on climate change in Tuvalu and the refugee processing centre (RPC) in Nauru, as these were the main themes to emerge from the results.

**Case Studies**

Tuvalu and Nauru were selected as case study locations due to similar, largely undeveloped tourism industries, and because sustainable development on both islands is chiefly influenced by a single, significant, but contrasting phenomenon. Tuvalu’s tourism industry is impacted by the environmental phenomenon of climate change, while in Nauru it is the RPC. The comparison of the two case studies is
fascinating and unique because it highlights how those dissimilar phenomena occurring at different destinations can be both potential attractions for niche tourists and at the same time the principal threats to the islands’ survival.

**Tuvalu**

Tuvalu is a low-lying atoll located in the South Pacific between Hawaii and Australia, with a population of approximately 11,000 inhabitants. Tuvalu is particularly vulnerable as freshwater supplies are restricted to a shallow subsurface reserve prone to contamination from saltwater and exhaustion in drought. The highest point in Tuvalu hardly exceeds two meters above sea-level, making the atoll highly vulnerable to wave damage and related infrastructure loss (Barnett, 2001). Due to its low topography, projected sea level rise is probably going to make Tuvalu uninhabitable within the next 100 years (Intergovernmental Panel on Climate Change, 2007; Karl, Melillo & Peterson, 2009). Corlew and Johnson-Hakim (2013) outline that Tuvalu faces a myriad of challenges produced by climate change, such as unstable social structures; disruption to daily life; increased storms and disaster events; and food and water insecurity. Unfortunately, there is no part of the island in Tuvalu that is safe from sea level rise, and therefore the imminent peril from climate change threatens the way of life for many living on the atoll, with mass immigrant to foreign countries around the globe an uneasy reality (Stratford, Farbotko & Lazarus, 2013).

The tourism industry in Tuvalu is focused on Funafuti Atoll and the main population centre of Fongafale. In this section, the key characteristics of the tourism industry are outlined. The number of tourism arrivals into Tuvalu has remained very low over the past 5 years (2011-2015) (World Bank, 2016). The number of travellers visiting Tuvalu fluctuates and heavily depends on the availability of seats and regular air service connections from Suva, Fiji. From 2011, air services started to be maintained at regular intervals with Fiji Airways flying twice a week and more recently a third weekly flight was added to the schedule. The greater capacity of air services and affordable pricing would increase visitor numbers to Tuvalu.

Most visitors to Tuvalu are mostly businesspersons and government officials. The main leisure tourist season is from February-March, coinciding with the King Tides (king tides are the highest tides of the year and normally occur when the moon is closest to the earth). These recreational travellers are primarily attracted to the island by its beautiful natural surroundings. The Government-owned 16-room Vaiaku Lagi Hotel is the hub of tourism activities on Fongafale. Other attractions are found on the
outer islands with the recent development of a small, 6-room, boutique eco-lodge on Mulitefala Island, attracting new visitors to Tuvalu (South Pacific Tourism Organisation, 2014a).

Tourism in Tuvalu has the potential to offer more economic opportunities to the country, provided it is planned, marketed and managed properly. However, tourism development faces a series of challenges such as its isolated geographical location and very low awareness of Tuvalu as a tourism destination in the market place. Other constraints to tourism development include the very fragile local environment of the Funafuti atoll, which has not been helped by the slow progress of local campaigns to clean up areas of Funafuti and the ineffective Funafuti Falekaupule, who are responsible for the collection and disposal of household rubbish (South Pacific Tourism Organisation, 2014a). The very small size and the limited capacity of the private sector is also a constraint to tourism growth (United Nations Development Programme, 2010).

While Tuvalu does not possess a wide array of traditional tourist attractions, it offers a unique set of cultural and environmental resources that will be of interest to niche markets. Niche market development and special interest tourism offer real potential. Small scale ecotourism operations, tours associated with witnessing the effects of climate change, and voluntourism all have a small foothold in Tuvalu. There is also potential to tap into niche markets in WWII related history. An abandoned airstrip located on the north-eastern side of Nanumea Island, the relics of planes from World War 2, and a wrecked ship close by Numea village are just some of the items of interest. Indeed, Fongafale atoll was the chief base for the US army who left behind numerous, discarded war relics and an underground bunker on the outlying atoll of Tepuka (SPTO, 2014a).

**Nauru**

Nauru is a remote island located 300 kilometres east of Kiribati and is the smallest state in the South Pacific, with a total land area of 21km² and a population of approximately 10,000 inhabitants. Nauru’s economy has been dominated by the phosphate industry for more than 100 years, ever since mining commenced in 1906 under the auspices of the Pacific Phosphate Company (Nauru Bureau of Statistics, 2013). In 1968 Nauru gained its independence from the government of Australia. Previously, its prospective wealth through the phosphate mining was thought to be guaranteed (Fagence, 1996, 1997 & 1999). Nauru’s affluence has however changed dramatically over the past 40 years. In the 1980s, because of its extensive resources
of phosphate (a key ingredient in agricultural fertilizer), Nauru was one of the most affluent countries per capita. However, by 2000 commodity prices plummeted, and with the country's phosphate reserves coming close to exhaustion, Nauru found itself crippled by debt. During this period, the tourism sector did not play a major role in the island’s economic growth. Tourism was not considered a sector worth pursuing, as a disfigured landscape covering two-thirds of the island renders it largely unattractive and inhospitable for visitors (SPTO, 2014b).

Despite possessing the natural features of exotic varieties of tropical plants and fish, an ideal destination for game-fishing and interesting WW2 relics, tourism development in Nauru has been sluggish. The tourism industry in Nauru had its beginning with the establishment of the national carrier Air Nauru in the 1970s and the construction of the two main hotels, the Menen Hotel and the Odn Aiwo. Excluding regional sporting events and political forum meetings, tourism arrivals to Nauru have historically remained low, averaging under 2,000 visitors annually from the late 1970s to the early 1990s. Visitor numbers dropped even further during the 1990s, with the Air Nauru experiencing financial problems, and the country going into bankruptcy as revenue from the phosphate industry continued to diminish (SPTO, 2014b).

Nauru's unemployment rate in 2012 was as high as 90%, and the average national income is about US$6,746 a year, with few industries other than fishing providing income (Nauru Bureau of Statistics, 2013). Foreign aid from the government of Australia remains a significant contributor to Nauru’s gross domestic product (GDP). During the 2013-2014 period, AusAID provided US$27 million, which equated to nearly 40% of Nauru's GDP (Figure 1) (The Asian Development Bank, 2014). The Australian government's program to resettle refugees as from 2012 has brought an influx of investment and RPC-related officials and workers to Nauru, giving it a much-needed economic boost. The Asian Development Bank (ADB) estimated the refugee centres, home to about 800 refugees, boosted Nauru's economic growth by 8% annually in 2013 and 2014, up from 4.9% in 2012 (The Asian Development Bank, 2014).
The current RPC activities in Nauru are producing unprecedented demand on the accommodation sector, hospitality businesses and services, infrastructure, and utilities supply. Currently, there are limited tourism services, facilities and infrastructure, and the island is struggling to cater for the hundreds of weekly RPC-associated visitors to the country. The government needs to upgrade tourism infrastructure and restore public utilities if Nauru’s tourism industry is to develop into a significant economic sector for the Island (SPTO, 2014b). Unfortunately, the RPC has generated unwanted media attention for Nauru, regarding the tensions between refugees and the local community. In April 2016, Nauru MP, Sprent Dabwido, commented in an ABC news report that the RPC has the capacity to house more refugees. However, without a final destination, there will be tension amongst refugees living on Nauru (ABC, 2016). Earlier in 2016, another media article by spinoff.com (2016) reported that tensions between refugees and locals were escalating. Some refugees had been threatened and forced to stop working, and police didn’t provide protection from assaults, with many women and children being concerned over their personal safety.

Methods

To ensure an on-going social, economic, and environmentally sustainable contribution from the tourism industry to the overall economy of Nauru and Tuvalu, this paper utilized three different data collection techniques. Step one of the research consisted of a review of current literature focusing on the current sector and related economic activities; market and product development; accessibility, aviation policies
and the airline roles; niche analysis; tourism and environmental sustainability; infrastructure development, and public and private institutional roles and set up. Step two involved a series of workshops carried out in Nauru and Tuvalu during 2013 and 2014; for specific dates and locations, see Table 2. The participants were identified by the Nauru Tourism Officer and Tuvalu Secretary of Tourism. Key participants included government, relevant community members, and private sector stakeholders involved in the tourism industry, such as local fishing tour operators and accommodation providers. In both cases, due to the small size of their respective tourism industries, the sample was effectively the entire tourism stakeholder population. The final stage of the research required the data collected in the field to be analysed and integrated into relevant theory and tourism strategies.

Table 2. Fieldwork Schedule

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Location</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>October-November 2013</td>
<td>Auckland, New Zealand</td>
<td>Review of current academic literature and relevant tourism plans/strategies</td>
</tr>
<tr>
<td>November 28th-4 December 2013</td>
<td>Nauru</td>
<td>Workshops with key government, community and private sector stakeholders.</td>
</tr>
<tr>
<td>16-21 January 2014</td>
<td>Tuvalu</td>
<td>Workshops with key government, community and private sector stakeholders.</td>
</tr>
<tr>
<td>November 2015 – May 2016</td>
<td>Auckland, New Zealand</td>
<td>Analysing data, integration of theory and formulation of tourism strategies</td>
</tr>
</tbody>
</table>

Source: Authors’ compilation

The workshops were organised with the assistance of the Nauru Tourism Officer and Tuvalu Secretary of Tourism. The total length of the workshops was approximately three hours. The format of the workshops consisted of an informal lunch followed by an overview of tourism in the Pacific region and preliminary, future strategic tourism planning. The participants were asked their thoughts on tourism in general, focusing on how it impacts their daily lives and whether the strategic vision would be acceptable. This format proved to be effective as it was culturally and socially appropriate for conducting research in small Pacific Islands. Due to cultural sensitivities, workshop discussions were not documented using a recording device, rendering direct quotations from participants impossible. Significant themes that emerged during the workshops were recorded as workshop minutes.

During the workshops, it was very important that the government and people of both Nauru and Tuvalu take ownership of their involvement in the plan. This ensured greater success in implementation, and that it remains sustainable. Specifically, the
workshops focused on developing a realistic strategic vision for the local tourism sector through exploring tourism offerings, infrastructure, environment, advantages, constraints, product development and institutional arrangements. Workshops were dynamic, with the overall direction dependent on the participants’ attitudes and perceptions of tourism development. Additional areas of discussion varied greatly between the two nations included in the study. In Nauru, there was much debate centred on the impact of the RPC and the availability of air services as essential for tourism development. On the other hand, in Tuvalu, there was much discussion on the impact of climate change and environment issues impacting the tourism industry.

During the data analysis phase of the research, due to the absence of detailed quotes and verbatim, it was determined that a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis would be a practical and useful technique for exploring the information collected during the stakeholder workshops, as emergent themes could be easily grouped into the four different categories. SWOT analysis has been widely used in tourism development studies, as it can simply evaluate the current state of tourism and prospects for future development in a destination (Wall, 2002; Collins-Kreiner and Wall, 2007; Kantawateera, Naipinit, Sakolnakorn, Churngchow & Kroeksakul, 2013; Demir, Esbah & Akgun, 2016). Collins-Kreiner and Wall (2007) found that the SWOT technique was an effective evaluation of tourism potential of was wide applicable to tourism destination in their early stages and that it can assist decision makers by approximating the benefits and threats.

Results and Discussion

The following SWOT analysis is based on the main themes that emerged from the workshops, meetings, and 27 returned surveys (identified in Table 2). The message that comes through from the SWOT analysis is that Tuvalu’s natural beauty, isolation, and the Funafuti lagoon are the main distinguishing features that provide a unique product for further niche market development (Table 3). Increasing awareness of climate change and rising sea levels has alerted the global population of Tuvalu in the market place, and provides the opportunity to further develop tourism associated with the effects of climate change. Tuvalu has the potential to attract more visitors for this identified niche market where tourists can view the effects of climate change first-hand.
Table 3. Tuvalu Tourism SWOT Analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Natural scenery, uniqueness and remoteness</td>
<td>• Potential to tap into both long-haul and short-haul demand for niche travel</td>
</tr>
<tr>
<td>• The Funafuti lagoon and the surrounding islands, attractions for recreational marine activities</td>
<td>• Ecotourism activities, marine reserves, new product development and initiatives</td>
</tr>
<tr>
<td>• Hospitable and friendly host population</td>
<td>• Educational tourism niches on impacts associated with global sea level rise and climate change</td>
</tr>
<tr>
<td>• A safe and non-threatening peaceful destination</td>
<td>• Small-scale, culturally-focused activities and handicraft production</td>
</tr>
<tr>
<td>• Unique opportunities to view first-hand the impacts of sea level rise</td>
<td>• To further develop a new marina in the Vaiaku waterfront as a departure point for marine tours and excursions to the outer islands around the lagoon</td>
</tr>
<tr>
<td>• A supportive government, with aid agencies willing to help develop tourism in the islands especially off-shore islands and eco-lodges</td>
<td>• WW2 relics, cruise ship, and yacht market</td>
</tr>
<tr>
<td>• Interesting history and WW2 relics</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Remoteness, poor accessibility and high airfares</td>
<td>• Global warming effects</td>
</tr>
<tr>
<td>• Low awareness, still an unknown destination in the Pacific</td>
<td>• Change in Fiji aviation policy may adversely affect air services to Funafuti</td>
</tr>
<tr>
<td>• Fragile environment, pollution and waste management limited, land area and land use complications/challenges</td>
<td>• Lack of improvements in cleaning up the environment and litter</td>
</tr>
<tr>
<td>• Lack of infrastructure</td>
<td>• Growing population density is having a negative impact on the Funafuti ecosystem</td>
</tr>
<tr>
<td>• No unique selling point</td>
<td>• Slow development and upgrading of the airport facility and runway</td>
</tr>
<tr>
<td>• Lack of skilled personnel, lack of trained workforce</td>
<td>• The low priority given to the tourism sector by Government irrespective of its associated financial and economic benefits to the people</td>
</tr>
<tr>
<td>• Non-prioritising of tourism as important</td>
<td></td>
</tr>
<tr>
<td>• No organised inbound tour operation</td>
<td></td>
</tr>
<tr>
<td>• Lack of hotel rooms</td>
<td></td>
</tr>
<tr>
<td>• Poor services and facilities for visitors</td>
<td></td>
</tr>
<tr>
<td>• A physical environment that doesn’t look clean and appealing to visitors</td>
<td></td>
</tr>
</tbody>
</table>

Note: Due to the time lag between data collection/analysis and publication several characteristics listed in the SWOT have changed; however, the core themes remain relevant.

The current state of air services to and from Tuvalu (Funafuti) is the key hindrance to the development of tourism. A more sustainable and reliable transportation sector is necessary to support tourism development. Air accessibility from Fiji requires improvements along with endeavours to explore other potential regional markets.
Airfares to Tuvalu are expensive compared to routes of similar distance in Oceania. Other weaknesses and threats lie, to a certain degree, beyond the direct control of the public and the Tuvalu Government, such as limited land area, small ecosystem, and limitations in natural resources development. Other weaknesses identified could be overcome, such as further development of a viable marine tourism industry; improvement to an expansion of tourism facilities; continual training of a core team of a confident tourism workforce; and smart, online marketing programmes to highlight the unique aspects of Tuvalu - especially for tourists wanting to witness first-hand the effects climate change and other specific niches.

Construction of a small marina and tourism precinct for yachts and fishing boats alongside the existing Vaiaku Lagi pier is an opportunity worthy of more exploration. This area could potentially become a tourism hub for activities for offshore day trips and eventually become an economic centre for the entire island. There is a requirement to ensure that appropriate infrastructure, equipment, and resources, such as rubbish trucks and proper waste management for cleaning up areas surrounding Fongafale, are implemented. An unpolluted, attractive environment would be more conducive for tourism growth. Upgrading and expanding current accommodation options is recommended, with opportunities to hold minor, regional conferences, workshops, and tours relating to climate change. Rejuvenation of the small handicraft and culture centre, and the associated replanting of raw materials and teaching of traditional skills would provide a direct economic link to the local community. Destination marketing, and other web-based actions would be cost-effective ways of promoting the tourism sector, ensuring global visibility for Tuvalu.

The SWOT analysis highlighted that Nauru’s main strength lies in the current development of the RPC, which has led to upgraded air services and improved tourism infrastructures and services (Table 4). The increased inflow of visitors (principally Australian employees/contractors) has been positive for the local economy; however, the inhospitable, lunar-like physical landscape, largely affected by a long history of phosphate mining combined with a polluted environment, doesn’t create an appealing destination for prospective tourists. The unattractive physical environment is not the only restriction to tourism development, as Nauru also suffers from a lack of a trained workforce, minimal experienced inbound tourism operators, and poor services and facilities for visitors. These identified weaknesses could be improved through tourism and hospitality training program on customer service and basic upskilling; continued clean-up programmes to address the major issue of human waste polluting the beach environment; accommodation restoration, upgrading and expansion; improvement of roading; a water desalination plant; and
sanitation systems.

Table 4. Nauru Tourism SWOT Analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• New yet to be explored destination</td>
<td>• Availability of public funds from the RPC</td>
</tr>
<tr>
<td>• Much improved air services, especially from Brisbane</td>
<td>• activities for the development of infrastructure and facilities very much</td>
</tr>
<tr>
<td>• Improved tourism infrastructures and services</td>
<td>• needed to 'jump start' tourism development</td>
</tr>
<tr>
<td>• Mild impact of aspects of climate change, such as less frequency of the</td>
<td>• New, yet-to-discover Pacific destinations</td>
</tr>
<tr>
<td>occurrences of cyclones</td>
<td>• Proximity and familiarity with the Australian market</td>
</tr>
<tr>
<td>• New Ministry of Home Affairs (Tourism Office) determined to put in</td>
<td>• Potential gateway to other smaller destinations in Central Pacific, such as</td>
</tr>
<tr>
<td>place tourism policies and active events</td>
<td>Kiribati</td>
</tr>
<tr>
<td>• Key tourism stakeholders managed by resourceful teams with</td>
<td>• The new, commercial, international strategic role of the national airline</td>
</tr>
<tr>
<td>commendable commercial visions to the future</td>
<td>• Much improved infrastructure and good roads</td>
</tr>
<tr>
<td>• Availability of public funds from the RPC</td>
<td>• Establishment of a tourism ‘Mining Town’ complex/museum</td>
</tr>
<tr>
<td>• New, yet-to-discover Pacific destinations</td>
<td>• Deep sea fishing and surfing attractions</td>
</tr>
<tr>
<td>• Proximity and familiarity with the Australian market</td>
<td></td>
</tr>
<tr>
<td>• Potential gateway to other smaller destinations in Central Pacific,</td>
<td></td>
</tr>
<tr>
<td>such as Kiribati</td>
<td></td>
</tr>
<tr>
<td>• The new, commercial, international strategic role of the national</td>
<td></td>
</tr>
<tr>
<td>airline</td>
<td></td>
</tr>
<tr>
<td>• Much improved infrastructure and good roads</td>
<td></td>
</tr>
<tr>
<td>• Establishment of a tourism ‘Mining Town’ complex/museum</td>
<td></td>
</tr>
<tr>
<td>• Deep sea fishing and surfing attractions</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Still unknown destination in the Pacific</td>
<td>• Unknown future and direction of the Australian Refugee Processing</td>
</tr>
<tr>
<td>• Non-prioritising of tourism as important, lack of infrastructure.</td>
<td>Centres (RPC)</td>
</tr>
<tr>
<td>• Market perception that it’s an inhospitable, lunar-like, physical</td>
<td>• Lack of improvements in cleaning up the environment and rubbish</td>
</tr>
<tr>
<td>landscape island</td>
<td>• Possible contamination of the water tables and source</td>
</tr>
<tr>
<td>• Limited traditional attractions/natural resources possessed by other</td>
<td>• Slow development and upgrading of the airport facility and runway</td>
</tr>
<tr>
<td>Pacific destinations</td>
<td>• The commercial viability of the national airline should there be a</td>
</tr>
<tr>
<td>• Poorly performing national airline</td>
<td>change in the RPC plan</td>
</tr>
<tr>
<td>• Lack of trained workforce</td>
<td>• The low priority given to the tourism sector by government in view of</td>
</tr>
<tr>
<td>• No organised inbound tour operation</td>
<td>the RPC and its associated financial and economic benefits to the</td>
</tr>
<tr>
<td>• Lack of hotel rooms, along with</td>
<td>people</td>
</tr>
<tr>
<td>• Poor services and facilities for visitors</td>
<td>• Lack of a strategic tourism plan with reasonable objectives</td>
</tr>
<tr>
<td>• The physical environment doesn't look clean and appealing to visitors</td>
<td>• Only one national airline serving the island</td>
</tr>
<tr>
<td>• Complacency - attitude amongst some community leaders</td>
<td>• Tensions between refugees and the local community</td>
</tr>
<tr>
<td>• Fiji restrictive aviation policy</td>
<td></td>
</tr>
</tbody>
</table>

*Note:* Due to the time lag between data collection/analysis and publication several characteristics listed in the SWOT have changed however the core themes remain relevant.
The increased number of direct flights from Brisbane, Australia has created a vital link to the largest tourism market in the South Pacific. Therefore, opportunities identified, including the establishment of a tourism “Mining Town” complex and development of water-based activities, need to be further explored. The proposed tourism “Mining Town” complex and museum development would be administered by the Rehabilitation Corporation in a historic inland mining site. The concept is to re-experience the old mining days with a small museum, shops and cafes with descriptions and stories. The development of water-based activities would include the expansion of the Nauru Surf Club and the encouragement of local marine-based tourism activities, such as deep-sea fishing and surfing.

With fresh opportunities presenting themselves, it will be imperative that Nauru creates a national tourism organisation, with the key role being to develop marketing, policies and strategies, and capacity-building programs, including training. A primary objective of the Nauru Tourism Organisation would be to aggressively promote Nauru through strategic marketing activities to appeal to a wide-ranging segment of international tourists. Another responsibility would be to provide prospective travellers with comprehensive information on the island’s attractions, services and activities.

The emerging tourism industry in Nauru is currently at full capacity due to the recently introduced RPC centres. The RPC project is now the main priority for the Nauru government, employing more than 1000 locals in various jobs and creating high demand for all the accommodation facilities. Many government officials are, however, predicting a decelerating of RPC activities, which would result in a dramatic decrease in visitor numbers. The future of the RPC is not known, and therefore poses many questions surrounding tourism development in Nauru, such as the viability of maintaining regular flights and necessary infrastructure.

**Conclusion and Future Research**

This paper evaluated the current situation of tourism development on Tuvalu and Nauru and explored the potential for future tourism growth. The findings of the SWOT analysis highlighted that both Tuvalu and Nauru have largely undeveloped tourism industries due to a large number of challenges faced by isolated, small-island nations. However, both islands possess fascinating and unique features that have the potential to attract niche tourism markets. These results contribute to the growing body of work related to tourism and Pacific island nations (Pratt & Harrison, 2015) by offering a snapshot of tourism development in two similarly obscure, South
Pacific destinations. This research builds upon knowledge on previous explorative studies on Tuvalu by Prideaux and McNamara (2013) and earlier works on Nauru by Fagence (1996, 1999, 1999).

The paper extends on current understandings by contrasting the influence of two disparate phenomena (the environmental phenomenon of climate change in Tuvalu and the anthropogenic phenomenon of the RPC in Nauru) on tourism development. A key finding of this paper is that it offers a divergent outlook on current mass tourism development in the South Pacific (Panakera, Willson, Ryan, & Liu, 2011) by highlighting that the tourism stimulus or potential attraction can also be the chief threat to the island’s economic survival. For example, in the case of Tuvalu, due to increasing climate change impacts, there is a real fear that the nation will no longer exist in 50 years. This unique situation presents creative opportunities for "last chance tourism" (also identified by Prideaux and McNamara, 2013, p. 591), where tourists seek to experience threatened sites before they vanish (Eijgelaar, Thaper & Peeters, 2010; Lemelin, Dawson, Stewart, Maher & Lueck, 2010; Dawson, Johnston, Stewart, Lemieux, Lemelin, Maher & Grimwood, 2011) and "bucket list tourism", which involves individuals ticking off as many countries on their list as possible (Thurnell-Read, 2017).

A drawback of this study was the reliance on the SWOT analysis. Helms and Nixon (2010) note that, although the SWOT analysis has been popularly utilized when assessing industries in two different countries, the technique is not without its limitations. They conclude that the biggest weakness of the SWOT analysis is that it lacks a theoretical basis and needs continual improvement due to the constantly changing environment (Helms & Nixon, 2010, p. 239-240). Helms and Nixon (2010, p. 240) recommend that the SWOT analysis should generate a strategic plan and be linked with other research methods. Both recommendations were achieved in this study. Similarly, the research provided the foundation for strategic tourism plans for both Tuvalu and Nauru, and the SWOT analysis was supported by academic literature, in-depth interviews and multiple stakeholder workshops.

A key focus for future research in both Tuvalu and Nauru is an in-depth assessment of the main threats associated with the early termination of the RPC project by the Australian government and accelerated effects of climate change on Tuvalu. In Nauru, an early withdrawal of the RPC would generate overcapacity of accommodation and other tourism facilities, an oversupply of national airline services and a large decrease in revenue. These forecast impacts could have disastrous ramifications for Nauru’s long-term economic survival. Another area
requiring more investigation is the effect that increased tensions between refugees and the local community could have on Nauru's destination image and ability to attract international visitors. In Tuvalu, the impending impacts of climate change on the vulnerable atoll, and subsequent influences on the tourism industry and livelihoods of the local population require in-depth examination.

Concepts of tourism and climate change (Belle & Bramwell, 2005; Dickinson, 2010; Weaver, 2011) have been a focus of research for over 15 years. However, climate change adaption in tourism (Wong, De Lacy, Jiang, 2012; Kaján & Saarinena, 2013: Wong, Jiang, Klint, Dominey-Howes, & DeLacy, 2013) has only recently started to receive more attention from academics. This paper calls for further targeted assessments that incorporate Tuvalu’s unique set of characteristics. Lastly, this paper has outlined the major strengths, weaknesses, opportunities and threats in isolated small island nations, laying a foundation for further research centred on tourism development in the South Pacific.

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analysis of the Western Negev, Israel. *Tourism, 55*(1), 51-63.


Determinants of Microentrepreneurial Success in One of the Small Island Developing States of the Pacific: Evidence from Samoa

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Romalani Leofo¹, Afualo Wood Salele²

Abstract

This study examines the attributes of Samoan microentrepreneurs to identify the important determinants of business success measured by income. Using survey analysis, we find a positive association between participation in social support network, age of microentrepreneurs, and business income. Additionally, we find weakly significant results that participation of microentrepreneurs in microfinance increases their business income. Furthermore, we find that social support network participation has a positive and significant impact on microbusiness income. Our findings extend the results of prior studies, and should be of interest to government authorities, non-government organisations and microfinance institutions for policy planning and future improvements in the microfinance sector. We recommend for microfinance policy makers and practitioners to value the importance of creating safe environments for microentrepreneurs to interact with each other and with various groups from the community for support and growth.

Keywords: microentrepreneur; microfinance; Samoa; Small Island developing states; social support

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Introduction

In the past four or more decades, governmental and non-governmental authorities around the world, on the search for solutions to promote economic development, welcomed the microfinance pitch with great support. This was an idea with promising potential to improve the overall economic welfare of the poor and reduce poverty (Morduch, 1999; Ketchell, 2018). The main idea of microfinance is to allow people with low income and no assets that can be used as collateral to access funds through small loans from microfinance institutions at low or subsidized interest rates. Microfinance gave the poorest and most vulnerable people an opportunity to remove themselves from desperate poverty. Muhammad Yunus, the pioneer of microfinance, was even awarded a Nobel Peace Prize to recognise his work on fighting poverty and improving economic development through microfinance, particularly in developing countries. The microfinance industry expanded globally since the World Microcredit Summit in Washington, DC, in 1997. The Summit committed to the 100 million poorest households around the world to be financially supported and empowered through microfinance. A recently-published, ever-increasing amount of total funds in microfinance programs around the world amounts to $US34 billion (The Conversation, 2018).

While the number of microfinance studies increased in general, a large majority of these studies are based on microfinance in countries like India and Bangladesh where it originated before its rapid spread across the world. Field and Pande (2008); Imai, Arun, and Annim (2010); Leach and Sitaram (2002); and Morduch (1998) are a few examples of these studies. Some Small Island Developing states (SIDs) in the Pacific, such as Samoa, Fiji, and Papua New Guinea openly supported microfinance as a means to fight poverty for years (A. Yusuf, 1995; A. B. Yusuf, 1998). Nevertheless, there is limited evidence about the status of microfinance programs in developing countries in the Pacific. A. Yusuf (1995), and A. B. Yusuf (1998) report some early evidence of microfinance activities in the Pacific by conducting a survey of local entrepreneurs’ perceptions about the barriers to starting and remaining in business, and the factors that help with business success. The findings of the impact of microfinance programs in India are less generalizable to Pacific countries like Samoa. For instance, World Bank (2019) reports drastic differences in poverty rates for Samoa relative to India and Bangladesh. Samoa currently has a poverty rate of 1.1 percent of its population living with less than $1.90 per day, while India and Bangladesh have poverty rates of 21.2 percent and 14.8 percent of their population respectively. The different levels of poverty between Pacific SIDs and South East Asian countries is one reason amongst others, such as the differences in resources,
that would make the results of studies based solely on microfinance in Asian countries less likely to hold for SIDs in the Pacific.

In this regard, our research contributes to the gap in literature by providing evidence about the status and impact of one of the local microfinance initiatives in Samoa. The main objective of this study is to provide insights about the status of microfinance in Samoa with respect to business profitability. For years, the Central Bank of Samoa, as the regulator of Samoa’s financial system, listed an inclusive financial system for all of Samoa, including the poor and vulnerable groups, as one of their key priority areas (Central Bank of Samoa, 2017). Microfinance has been an important stepping-stone towards achieving this goal for Samoa. This paper is one of the first studies to conduct an impact assessment of the microfinance schemes in Samoa. The purpose of this study is not to evaluate the Nofotane project, but to examine the livelihood of individuals who were previous microfinance clients of the microfinance institutions (MFIs) discussed in this paper.

Our results indicate that project participants are predominantly unemployed females, earning extremely low levels of income and with many dependants to care for. Univariate tests through contingency tables indicate associations between factors such as age, gender and involvement in networks with the community and other entrepreneurial support groups are associated with business income. Further multivariate tests using ordinary least squares find a positive and significant relation between participants’ involvement in community and business support networks and small business income. This result is consistent with Besser (1999) that small businesses benefit from involvement in the community, with higher likelihood to succeed as their involvement increases visibility and recognition of their businesses in the community. Participant age also has a significant and positive association with business income. However, female and employment variables have negative and significant associations with income, suggestive of gender inequity where female entrepreneurs earn less business income than males. Further, we find that when controlling for participants who are microfinance clients at the time that they joined the Nofotane project, there is no significant difference in business income for microfinance participants from non-microfinance participants. This result undermines the impact of microfinance programs to improve business income for their clients.

While this study has been performed to the best of our ability, it has a few limitations. First, the validity of the results depend on the truthfulness of the responses by the participants at the time the survey was conducted when the participants first joined
the project. Participants may choose not to state whether they have taken part in microfinance activities due to their pride, or fear of what others may think. This concern is partially minimised by participants’ filling the survey form by themselves without others around. Second, it may be likely that participants’ business income may be influenced by their participation in the Nofotane project. To alleviate this concern, we focus on participants’ business income at the start upon signing up to the Nofotane project so that any effects of the project do not affect business income. We recommend that more studies are needed to examine other attributes of small business performance, as well as factors that inhibit or increase business performance.

The rest of the paper proceeds as follows. The next section reviews the relevant microfinance literature about the impacts of microfinance and the determinants of microfinance performance. Then we briefly describe the institutional background of the Samoan microfinance sector. Description of data collection procedures and research methodology is then set out and the results are discussed. Finally, the paper concludes.

**Literature Review**

**Microfinance Theoretical Development**

From its beginnings, microfinance has been seen as a tool for socio-economic development for the world’s poorest households. Self-development (Morduch, 1999), marginal economic output (Lucas Jr, 1988), and social enterprise (Chell, 2007) theories motivate the results of prior studies that support microfinance. Self-development and social enterprise views of microfinance are comparatively similar in that they emphasize the social role of microfinance to help groups of people improve their livelihood. In contrast, the marginal economic output theory relates to the notion that, assuming market efficiency holds, microfinance is a viable business initiative for MFIs and a good investment for microfinance clients.

In terms of a practical microfinance model, the Grameen style model is the commonly used model by MFIs. This microfinance model operates through group borrowing, where all group members within the group bear the risk of non-repayment by other members. This unique characteristic of the Grameen model partially addresses the issue of clients lacking proper assets as collateral for their loans, as other members of the group carry the risk of other members. However, whether the model works is debatable. For instance, Selinger (2008) documents mixed evidence about the merits and limitations of the Grameen model by describing it as a
framework that is reductive because it reduces the ability to understand and assess different development programs. Some women found it less empowering.

A large body of literature supports a positive view of microfinance (Copestake, 2002; Hulme & Mosley, 1996; Khandker, 2005; Miled & Rejeb, 2018; Tedeschi, 2010). Hulme and Mosley (1996) note the great potential that microfinance has for improving poor households’ livelihoods. Morduch (1999) presents similar reasoning by comparing microfinance against subsidised credit lines, explaining the costs and benefits of each technique. Morduch (1999) stresses how microfinance appears to be superior and more sustainable because it encourages self-development by the poor rather than depending on subsidies.

Other studies find that microfinance on average empowers women, and reduces violence against them (Bhatt & Shastri, 2018; Boehe & Cruz, 2013). In a study of microfinance projects in multiple Asian, Eastern European, and Latin American countries, Boehe and Cruz (2013) find that female participation in microfinance has positive impacts on microfinance institutions’ (MFIs’) performance. While their study suggests improved MFI performance to be positively related to female clients, it does not provide evidence about whether female entrepreneurs have better business performance outcomes by participating in microfinance. Our paper fits into this line of studies by providing evidence of how female participation in microfinance influences income from their businesses.

**Microfinance Around the Globe**

Despite the several theoretical papers detailing the positive prospects of microfinance, it has been confronted with criticisms about failing to achieve its mandate. Practitioners and academics from countries like Bangladesh and India criticised the programs on a two-fold basis (Biswas, 2010; Hassan & Sanchez, 2009; Schicks, 2010, 2014). Hassan and Sanchez (2009) find that microfinance schemes lacked positive outcomes, and are generally inefficient. Firstly, many clients defaulted on loan repayments, exacerbating financial situations from before. In an Indian state called Andhra Pradesh, about 30 million households took out microloans. A report showed the devastating effects of microloans leaving the poor trapped in debt, followed by coercive pressure from microfinance institutions to pay back loans (Biswas, 2010). In only a few months, about 80 people from this state took their lives after defaulting on microloans. As a result, the booming microfinance industry in India was considered a crisis likened to the Global Financial Crisis in 2008 and the subprime mortgage demise in the United States. This is one extreme case in which
microfinance has been deemed to fail. Another criticism of microfinance discussed in the literature is that, while microfinance showed little or no effect on improving the economic welfare of the poor, the microfinance institutions lost billions of donor funds and struggled to meet at least 75 percent of their running costs (Harford, 2009; Terberger, 2012). Proponents of microfinance often ignore that micro loans come with risk just like any borrowing of any sort. There is a risk that clients’ entrepreneurial activities may not turn out as well as they had expected for whatever reasons, so when their small businesses fail they end up with debts they cannot afford to pay and no source of income to meet basic needs. As a result, the livelihood of the poor may be worse off with microfinance schemes than their initial condition prior to becoming microfinance clients.

**Microfinance in the Pacific**

The microfinance literature about developing countries in the Pacific region is quite sparse, and there is a rising demand for future research to inform microfinance in these countries. Yusuf (1995) examines the perceptions of small business entrepreneurs about the factors that are critical for small business development in the South Pacific region. The study was conducted through a survey of 220 small business entrepreneurs from Papua New Guinea, Vanuatu, Samoa, Marshall Islands, and Fiji. The survey participants were asked to rank the stated factors in the survey in the order of importance. Of the listed critical factors in the survey, good management and access to finance were ranked as the top two factors for small business development. While the perceptions of entrepreneurs is important, our paper looks at outcomes of small business development and microfinance rather than mere opinions. Outcomes enable comparisons between entrepreneurs about their performance rather than their perceptions. Our paper extends Yusuf’s (1995) study by focusing on a particular business outcome and identifies the critical factors to increasing business outcomes; in the case of our study, the outcome is business profitability.

Yusuf (1998) surveyed small entrepreneurs perceptions of the barriers to small business development and survival in the region. In addition to identifying the critical barriers to small business development, they proposed a framework to deal with the hurdles to enterprise creation. The survey results rank limited support and cultural practices as the top two barriers to small business development for entrepreneurs in the Pacific. This suggests that the top two reasons for why businesses fail are the lack of nurturing support from various segments of the community, and the various cultural obligations of entrepreneurs that inhibit business growth. For instance, most
small business owners’ savings and business daily takings are spent on contributions to weddings, funerals, and title bestowal ceremonies rather than on reinvesting in the business for improvement. As a result, entrepreneurs with micro loans default on loan repayments because they have no savings and no money to meet business-operating costs. They end up out of business and no longer eligible for microloans given their loan-default history. Banthia, Tyroler, Schoeffel, and Saho (2013) echo the same results from focus groups held with women entrepreneurs indicating that their cultural and familial obligations impeded their ability to develop and sustain small businesses.

Our paper examines how business profitability is influenced by factors such as participating in a support group. Support groups include cultural groups such as a village women’s committee, church and youth groups, and formal mentoring groups provided by MFIs. Thus, we provide evidence for how cultural support groups enhance business success. While our paper does not study multiple Pacific countries as in prior studies, Moustafa (2016) in the analysis of the Samoa Hardship and Poverty report points out that Samoa is relatively akin to other Pacific countries.

Microfinance Literature Summary

While social and economic theories propose microfinance to improve the economic and social welfare of the poorest individuals, prior studies provide inconsistent evidence. Some find evidence of greater issues faced by the poor, such as over-indebtedness (Biswas, 2010; Hassan & Sanchez, 2009; Schicks, 2010, 2014). Another study identifies critical contributing factors to small business success, including good business management and access to finance, while inhibiting factors include limited support and cultural practices (A. Yusuf, 1995; A. B. Yusuf, 1998). Our study extends prior studies by examining how business profitability, an outcome of business success, is influenced by factors such as clients’ participation in cultural support groups in addition to formal support groups offered by MFIs.

Institutional Background: Microfinance Sector of Samoa

The microfinance sector in Samoa is largely liberalised and moderately regulated, with only four microfinance institutions and a few recently joined organisations whose primary focus is not microfinance, but provide limited microfinance services (Moustafa & Kumar, 2016).
**South Pacific Business Development Microfinance Limited (SPBD)**

The South Pacific Business Development Microfinance Limited (SPBD) is one of the very few major microfinance institutions in Samoa, and has operations in other Pacific island countries. Their mission is to eradicate poverty by empowering women in poor rural villages with the opportunity to start, grow, and maintain sustainable, income-generating microenterprises. SPBD provides small, unsecured loans to groups of rural women to operate small businesses using existing livelihood and skills. Clients are given training, on-going guidance, and support through frequent visits and inspections within the duration of the loans. SPBD also accepts loans for home improvement and children’s education.

**Women In Business Development Incorporated (WIBDI)**

WIBDI is the second microfinance institution whose mission is to provide and empower vulnerable families with knowledge and skills through capacity building workshops, opportunities, and access to finance and markets. WIBDI encourages their clients to cultivate sustainable business practices that utilise agriculture and livelihood resources. WIBDI’s operations is slightly different from SPBD in that it encourages client savings and allows limited client loans from their savings accounts. In addition, WIBDI collaborates with established local and international businesses to create markets for its clients’ products.

**Small Business Enterprise Centre (SBEC)**

SBEC provides the core services of small business management training and advisory services, as well as advocacy and support services for microentrepreneurs. Part of SBEC’s business model for business development combines business training, planning, and advice to facilitate access to finance from at least one of the five banks in collaboration with SBEC, Development Bank of Samoa (DBS), National Bank of Samoa (NBS), ANZ, Westpac, and Samoa Commercial Bank (SCB). One of the most important roles they provide for those unqualified for the banking system is a financial guarantee of up to 75% of the loan principal on behalf of the clients. They also facilitate business nurturing and support. According to SBEC’s Business Training manager, the success rate of SBEC’s clients is around 30% to 40%.
Development Bank of Samoa (DBS) in Collaboration with the Ministry of Women, Communities, and Social Development (MWCSD)

The Development Bank of Samoa (DBS) started this microfinance scheme in collaboration with Ministry of Women, Communities, and Social Development (MWCSD) in 2008. This scheme was designed specifically for women groups in communities and villages. Assistance given was mainly for agriculture, food processing, sewing, handicrafts, livestock, retail, and fishing. This microfinance program initially started with a women’s committee. MWCSD provides training and workshops for women to teach them skills such as sewing, while DBS administers the microcredit and lending part of the scheme to women who have been recommended by MWCSD to be considered for loans. The major challenge for this programme was the poor loan repayment performance; a large number of clients were taken to court due to inability to settle their loans and outstanding repayments. Clients often used borrowed funds for contributions to cultural ceremonies, travel, or church donations rather than small enterprises or home improvements. It was reported that the success rate was only about 10% of the clients that were doing well. They have not been able to sustain success over time, and as a result the scheme is no longer operating (Motusaga, 2018).

Samoa Victim Support Group (SVSG) Nofotane Project

The Nofotane project, facilitated by the SVSG, enables the use of a control-group approach as used in prior studies to assess the impact of microfinance schemes (Duflo, Glennerster, & Kremer, 2007). The project provides a setting that makes it possible to explore an impact assessment of microfinance initiatives in the country. The overarching goal of the project is to empower women through self-development as an indirect means to combat violence against them. The project provided a series of workshops and training for the participants.

The purpose of this study is not to evaluate the Nofotane project. However, the project was opened to the public, and around 3800 men and women from all around the country participated and joined the workshops as the SVSG team went out to the village communities to conduct trainings on various livelihood and entrepreneurial skills. Thus, the participants included people who are microfinance clients and non-microfinance participants or people who have never taken microloans from microfinance institutions. This data is available as participants indicated whether they have or have not taken out microloans from any of the formal microfinance institutions.
Therefore, this paper explores this setting by comparing microfinance participants to non-microfinance participants as a way to isolate the average impact of microfinance activities. In addition to identifying important factors to entrepreneurial success for the full sample of participants, we use non-microfinance participants as a control group to test whether there is a significant difference between small business performance, measured by business income of microfinance participants relative to the control group using propensity score matching.

**Data and Methodology**

This paper employs a mixture of qualitative, semi-structured interviews, and quantitative survey analysis techniques to collect and analyse data from a sample of 1009 participants in the Nofotane Project. The dataset is from a survey completed by participants of the Nofotane project at the start of the project in 2017. While the name “Nofotane” means married women that are living with the husbands’ families, the project included both male and female participants from all age groups. In total, there are about 3800 project participants.

We used multi-stage sampling by i) randomly selecting 11 out of 41 constituencies, and then ii) randomly selecting a number of participants from the chosen 11 constituencies based on their respective proportion of the total population. Table 1 shows the composition of the sample by constituency with Alataua West getting the most number of survey participants. The survey data had been obtained from Samoa Victim Support Group on a survey they conducted on all the participants at the start of the project, and we have permission to select a sample from their database for the purpose of this study only. Five semi-structured interviews were conducted with representatives from the main local MFIs. Two interviews were done with staff from SPBD, one from WIBDI, one from SBEC, and one with SVSG staff.

<table>
<thead>
<tr>
<th>Island</th>
<th>Constituency</th>
<th>No. of Females</th>
<th>No. of Males</th>
<th>Total No. of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPOLU</td>
<td>Aana Alofi No. 2</td>
<td>11</td>
<td>37</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>Aana Alofi No. 3</td>
<td>6</td>
<td>97</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>Anoamaa West</td>
<td>19</td>
<td>79</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>Vaimauga West</td>
<td>22</td>
<td>57</td>
<td>79</td>
</tr>
<tr>
<td>SAVAI</td>
<td>Alataua West</td>
<td>58</td>
<td>108</td>
<td>166</td>
</tr>
<tr>
<td></td>
<td>Faasaleleaga No.1</td>
<td>8</td>
<td>54</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Faasaleleaga No.3</td>
<td>14</td>
<td>29</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>Gagaifomauga No.3</td>
<td>32</td>
<td>80</td>
<td>112</td>
</tr>
<tr>
<td></td>
<td>Itu Salega</td>
<td>9</td>
<td>65</td>
<td>74</td>
</tr>
</tbody>
</table>
The following model is used in Table 3 to run a multivariate Tobit regression to test potential factors that are important in predicting business income in Model 1. Model 2 in Table 3 includes one additional variable to control for microfinance status of the participants.

\[ INCOME_i = SUPPORT\_NETWORK_i + FEMALE_i + SKILL_i + EMPLOYMENT_i + AGE_i + NUM\_CHILDREN_i + \varepsilon_i \]

where \( INCOME \) is a variable that takes values integers between one and six. One means lower income, while six means higher. Since the values of the dependent variable INCOME is somewhat bounded, a Tobit regression is suitable, so we report a Tobit regression of the above model and report the results in Table 3, Model 1. SUPPORT\_NETWORK is a dummy equal to one if a participant is part of a business support network, zero otherwise. FEMALE is a dummy equal to one if a participant is a female, and zero otherwise. SKILL and EMPLOYMENT are both indicator variables that equal to one if a participant has a particular livelihood skill or if he or she is employed. AGE can take values in the range between one and six, with one representing less than 21 years, and six representing 70 plus years.

Results and Analysis

We will first discuss a summary of the attributes of participants. Then we will perform univariate analysis between participant attributes and small business income. Further, we will perform robust multivariate regressions of business income on various attributes of participants. Finally, we will use propensity score matching to analyse how microfinance status and participation in support network activities influences business income.

Summary of Participant Demographic Attributes

Of the 1009 participants in the sample, 781 are females (Figure 1) and 893 are unemployed (Figure 4). Of those unemployed, 228 are males and 665 are females. This is consistent with prior studies where unemployed females dominate microfinance and other social empowerment programs.

Based on Figure 2, the top four age groups with the greatest number of participants
are 41 to 50 years (212 participants), 51 to 60 years (194 participants), 31 to 40 years (192 participants), and 21 to 30 years (185 participants). Figure 3 shows that 238 participants have no children, 163 participants have one or two children, 214 have three or four children, 222 participants have five to six children, while the rest have more than seven children.

Figure 1. Participants Gender Composition.

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants</td>
<td>781</td>
<td>228</td>
</tr>
</tbody>
</table>

Source: Nofotane Project and Authors

Figure 2. Age Groups of Sample Participants.

Source: Nofotane Project and Authors
Figure 3. Number of Children Dependents

<table>
<thead>
<tr>
<th>Number of Children Dependents</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>7+ children</td>
<td>172</td>
</tr>
<tr>
<td>5-6 children</td>
<td>222</td>
</tr>
<tr>
<td>3-4 children</td>
<td>214</td>
</tr>
<tr>
<td>1-2 children</td>
<td>163</td>
</tr>
<tr>
<td>No children</td>
<td>238</td>
</tr>
</tbody>
</table>

Source: Nofotane Project and Authors

Figure 4. Employment Status of Clients.

Source: Nofotane Project and Authors
Table 1 (above) presents the distribution of participants by constituencies. Four of the eleven constituencies are from the main island Upolu while the rest are from Savaii. Most of the constituencies are in the rural areas of both islands, except for Vaimauga West in Upolu, and Faasaleleaga No.1 and No.3 in Savaii. Prior studies show similar results that the target population for microfinance programs are often concentrated in the rural areas (Hashemi, Schuler, & Riley, 1996; Sibley, 2007). A vast majority of the total participants (858) operate businesses in the agricultural sector. Of this 858, 463 grow and sell vegetables, 115 run poultry and pigs farms, 228 grow plantations of crops such as taro, or banana, while the remaining run plant nurseries and sell potted plants. Other types of activities include handicrafts, commercial cooking, printing, and sewing.

Univariate Analysis Between Participant Attributes and Small Business Income

Business income is an important measure that reflects business success. Income in this study refers to income from microbusinesses only. Figure 5 shows the sample distribution of small business income and Figure 6 shows the type of business activity. 380 participants earn less than $100SAT per week, 163 participants earn between $101 and $200SAT, and 394 participants earn between $201 and $300SAT. Income is concentrated at the lower levels of income. By comparison, the average weekly household expenditure in Samoa is around $950.43SAT, while that of the lowest quintile of the population is $467.93SAT (Samoa Bureau of Statistics [SBS], 2014). This means that most of the participants earn well below the average weekly household spending and fall mostly in the lowest quintile.

Figure 5. Percentage of Clients by Weekly Income.
Table 2 cross-tabulates business income with various attributes of participants. Table 2, Panel A shows that the highest proportion of male participants (85 out of 228) earn business income under $100SAT, while the highest number of female participants (316 out of 781) earn business income of between $201SAT and $300SAT. This suggests a potential for female entrepreneurs outperforming males.

Figure 6. Type of Business Activity.

One of the reasons why female-owned businesses earn more income than males could be that females have better management and leadership skills than their counterparts (Bart & McQueen, 2013; Burke & Collins, 2001; Lee, Jasper, & Fitzgerald, 2010). Bart and McQueen (2013) find correlation with female managers and good corporate governance practices, while Burke and Collins (2001) show that women exhibit management traits and skills of the transformational leadership style, one where the leaders are inspired and motivated to innovate and create change to enable growth and future success of the business. However, we cannot make this conclusion solely based on univariate analysis. We need further tests that control for other possible determinants of business income that are also correlated with gender.
Table 2. Univariate Tests Between Business Income and Participants’ Attributes.

Panel A: Business Income by Participant Gender

<table>
<thead>
<tr>
<th>BUSINESS INCOME</th>
<th>$0-100</th>
<th>$101-200</th>
<th>$201-300</th>
<th>$301-400</th>
<th>$401-500</th>
<th>$501-600</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>85</td>
<td>43</td>
<td>78</td>
<td>9</td>
<td>6</td>
<td>7</td>
<td>228</td>
</tr>
<tr>
<td>Female</td>
<td>295</td>
<td>120</td>
<td>316</td>
<td>14</td>
<td>31</td>
<td>5</td>
<td>781</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>163</td>
<td>394</td>
<td>23</td>
<td>37</td>
<td>12</td>
<td>1,009</td>
</tr>
</tbody>
</table>

Panel B: Business Income by Participant Age

<table>
<thead>
<tr>
<th>AGE</th>
<th>$0-100</th>
<th>$101-200</th>
<th>$201-300</th>
<th>$301-400</th>
<th>$401-500</th>
<th>$501-600</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 – 20 years</td>
<td>31</td>
<td>16</td>
<td>41</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>90</td>
</tr>
<tr>
<td>21 – 30 years</td>
<td>92</td>
<td>27</td>
<td>56</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>185</td>
</tr>
<tr>
<td>31 – 40 years</td>
<td>73</td>
<td>37</td>
<td>70</td>
<td>4</td>
<td>8</td>
<td>0</td>
<td>192</td>
</tr>
<tr>
<td>41 – 50 years</td>
<td>74</td>
<td>27</td>
<td>93</td>
<td>5</td>
<td>12</td>
<td>1</td>
<td>212</td>
</tr>
<tr>
<td>51 – 60 years</td>
<td>67</td>
<td>38</td>
<td>75</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>194</td>
</tr>
<tr>
<td>61 – 70 years</td>
<td>34</td>
<td>11</td>
<td>36</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>88</td>
</tr>
<tr>
<td>70 + years</td>
<td>2</td>
<td>5</td>
<td>14</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td>Not stated</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>163</td>
<td>394</td>
<td>23</td>
<td>37</td>
<td>12</td>
<td>1,009</td>
</tr>
</tbody>
</table>

Panel C: Business Income by Participant Support Network Involvement

<table>
<thead>
<tr>
<th>Support Network</th>
<th>$0-100</th>
<th>$101-200</th>
<th>$201-300</th>
<th>$301-400</th>
<th>$401-500</th>
<th>$501-600</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>248</td>
<td>89</td>
<td>292</td>
<td>13</td>
<td>31</td>
<td>0</td>
<td>673</td>
</tr>
<tr>
<td>No</td>
<td>132</td>
<td>74</td>
<td>102</td>
<td>10</td>
<td>6</td>
<td>12</td>
<td>336</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>163</td>
<td>394</td>
<td>23</td>
<td>37</td>
<td>12</td>
<td>1,009</td>
</tr>
</tbody>
</table>

Panel D: Business Income by Participant Employment Status

<table>
<thead>
<tr>
<th>Employment status</th>
<th>$0-100</th>
<th>$101-200</th>
<th>$201-300</th>
<th>$301-400</th>
<th>$401-500</th>
<th>$501-600</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>63</td>
<td>0</td>
<td>49</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>112</td>
</tr>
<tr>
<td>Unemployed</td>
<td>317</td>
<td>163</td>
<td>345</td>
<td>20</td>
<td>36</td>
<td>12</td>
<td>897</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>163</td>
<td>394</td>
<td>23</td>
<td>37</td>
<td>12</td>
<td>1,009</td>
</tr>
</tbody>
</table>

Panel E: Business Income by Number of Children Dependents

<table>
<thead>
<tr>
<th>Number of children dependants</th>
<th>$0-100</th>
<th>$101-200</th>
<th>$201-300</th>
<th>$301-400</th>
<th>$401-500</th>
<th>$501-600</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 2 children</td>
<td>67</td>
<td>18</td>
<td>68</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>163</td>
</tr>
<tr>
<td>3 – 4 children</td>
<td>82</td>
<td>31</td>
<td>89</td>
<td>4</td>
<td>7</td>
<td>1</td>
<td>214</td>
</tr>
<tr>
<td>5 – 6 children</td>
<td>81</td>
<td>38</td>
<td>85</td>
<td>8</td>
<td>9</td>
<td>1</td>
<td>222</td>
</tr>
<tr>
<td>7+ children</td>
<td>58</td>
<td>34</td>
<td>66</td>
<td>3</td>
<td>11</td>
<td>0</td>
<td>172</td>
</tr>
<tr>
<td>No children</td>
<td>81</td>
<td>32</td>
<td>80</td>
<td>2</td>
<td>8</td>
<td>9</td>
<td>212</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>163</td>
<td>394</td>
<td>23</td>
<td>37</td>
<td>12</td>
<td>1,009</td>
</tr>
</tbody>
</table>

Source: Nofotane Project and Authors
Multivariate Regression of Business Income on Attributes of Participants

Table 3 presents the results of the multivariate regression of business income of various attributes of participants. Model 1 shows the results of a Tobit regression model. The values of outcome variables are bounded between one and six. The coefficients for support network and participant age are positive and significant at less than one percent. This suggests that participants who are part of a business support network and older are associated with more business income. Microentrepreneurs’ involvement in social networks for support is likely to improve business income by 0.455 percent, consistent with Cheston and Kuhn (2002), who find that entrepreneurs who join social networks have lower transaction costs and better access to resources to improve their businesses. Some examples of social networks can range from village women’s groups to more specific social groups such as the local farmers’ association. Social networking and participating in community groups helps people to learn from and share experiences with others to improve their skills and knowledge in running their individual businesses.

Table 3. Tobit regression model. Dependent variable - income.

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPPORT_NETWORK</td>
<td>0.4555***</td>
<td>0.4484***</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>FEMALE</td>
<td>-0.2754*</td>
<td>-0.2797*</td>
</tr>
<tr>
<td></td>
<td>(0.078)</td>
<td>(0.077)</td>
</tr>
<tr>
<td>SKILL</td>
<td>0.1568</td>
<td>0.1606</td>
</tr>
<tr>
<td></td>
<td>(0.325)</td>
<td>(0.326)</td>
</tr>
<tr>
<td>EMPLOYMENT</td>
<td>-0.2996**</td>
<td>-0.3066***</td>
</tr>
<tr>
<td></td>
<td>(0.012)</td>
<td>(0.009)</td>
</tr>
<tr>
<td>AGE</td>
<td>0.0713***</td>
<td>0.0715***</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.001)</td>
</tr>
<tr>
<td>NUM_CHILDREN</td>
<td>-0.0281</td>
<td>-0.0277</td>
</tr>
<tr>
<td></td>
<td>(0.295)</td>
<td>(0.294)</td>
</tr>
<tr>
<td>MICROFIN_CLIENT</td>
<td>0.0594</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.549)</td>
<td></td>
</tr>
<tr>
<td>CONSTANT</td>
<td>1.8168***</td>
<td>1.8082***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
</tbody>
</table>

Notes: p - value in parentheses, ***, ** and * indicates significance at 1%, 5% and 10% level.
Source: Authors’ own estimation
The coefficient for female is negative and marginally significant. Our result is consistent with findings of prior gender studies that document evidence of gender inequity in different contexts. Our findings allude to a gender difference effect on business income, where female entrepreneurs earn 28 percent less business income relative to males on average. This result is more robust than univariate results discussed elsewhere in this paper.

Employment status of participants is negative and significant, suggesting that microentrepreneurs that are employed earn less income from their businesses. This result is reasonable as people who have jobs are more likely to spend time working at their jobs and less time on developing their businesses. It is also possible that participants with jobs will let their relatives or hire employees to run their businesses while at their jobs. This could mean that their businesses bear agency costs from the separation of ownership and management that could manifest in lower business income relative to a similar business owned and managed by the same person.

Model 2 in Table 3 shows the regression results when the microfinance status of participants is added to Model 1 to test whether the microfinance status of participants is important in predicting business income. Microfinance status is captured through an indicator variable coded equal to one if a participant has previously taken out a loan from any of the formal MFIs discussed previously, zero otherwise. Similar results to Model 1 are observed in Model 2 for the variables support network, female, employment status, and participant age. However, the microfinance status variable is not significant. This indicates that there is no significant difference in business income for participants who took out microloans from MFIs to those who have not borrowed from MFIs before. Our findings complement the results of studies that find weak or no evidence of positive outcomes of microfinance on clients (Hassan & Sanchez, 2009; Biswas, 2010).

**Additional Test Using Propensity Score Matched to Test any Effect of Participant Microfinance Status on Business Income**

Despite not getting significant results for microfinance status in Table 3, Model 2, there is a potential issue of self-selection bias. This is because it is possible that some participants participated in microfinance when they were already earning income and their business are reasonably stable. Thus, the impact of microfinance status on income is influenced by experienced microentrepreneurs already earning a good amount of business income self-selecting to participate in microfinance to expand their already established businesses. The wealthy microentrepreneurs, or people with
more entrepreneurship abilities are more likely to self-select into the program. Thus, microfinance status for participants is not random and is likely to be endogenous. The effect of this bias may mean that participants who participate in microfinance may have certain distinct characteristics from participants who have not become clients of the local MFIs. The bias should make it easier to find a positive significant result of microfinance status. However, we found no significant result in Table 3, Model 2 which means that the bias may not be serious.

Nonetheless, we follow prior research and use the propensity score matching (PSM) method to address selection bias (Setboonsarng & Parpiev, 2008). We construct a treatment and control group based on microfinance status. The first step is to run a probit model of the microfinance status dummy variable on non-treatment variables, which are the participants’ background attributes. This regression computes propensity scores based on the non-treatment variables. These propensity scores will be used to match participants between the treatment and control groups. We implement the PSM method to match participants with the nearest (neighbour) with a calibre of 5%. This technique rules out any systematic differences between participants with microfinance status and those with none.

Based on Panel A (Table 4), we find that participation in social support networks and employment status of participants are significant predictors of their likelihood to be microfinance clients. Age, possession of a livelihood skill, and number of children are not significant explanations of microfinance status. After matching based on propensity scores, the treatment group contains 184 participants, while the control group has 657 participants with common support.
Table 4. Propensity Score matching - Dependent Variable: Dummy Variable for Microfinance Participants Status

Panel A: Effect of Microfinance Status of Participants on Income.

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>MFClient_status</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPPORT_NETWORK</td>
<td>0.7308***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
</tr>
<tr>
<td>SKILL</td>
<td>-0.2542</td>
</tr>
<tr>
<td></td>
<td>(0.254)</td>
</tr>
<tr>
<td>EMPLOYMENT_STATUS</td>
<td>0.3381**</td>
</tr>
<tr>
<td></td>
<td>(0.017)</td>
</tr>
<tr>
<td>AGE</td>
<td>-0.0091</td>
</tr>
<tr>
<td></td>
<td>(0.761)</td>
</tr>
<tr>
<td>NUM_CHILDREN</td>
<td>-0.0289</td>
</tr>
<tr>
<td></td>
<td>(0.428)</td>
</tr>
<tr>
<td>CONSTANT</td>
<td>-1.0564***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
</tr>
</tbody>
</table>

Observations: 841
Log likelihood: -419.19
Chi square: 41.80
Pseudo R-square: 0.0513

Panel B: Effect of microfinance status of participants on business income

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Treatment</th>
<th>Control</th>
<th>Difference (t-statistic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of observations</td>
<td>184</td>
<td>657</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>2.245</td>
<td>2.098</td>
<td>0.1467 (1.28)</td>
</tr>
<tr>
<td>Support network</td>
<td>0.906</td>
<td>0.906</td>
<td>(0)</td>
</tr>
<tr>
<td>Skill</td>
<td>0.971</td>
<td>0.971</td>
<td>(0)</td>
</tr>
<tr>
<td>Employment status</td>
<td>0.201</td>
<td>0.201</td>
<td>(0)</td>
</tr>
<tr>
<td>Age</td>
<td>3.152</td>
<td>3.135</td>
<td>(0.11)</td>
</tr>
<tr>
<td>Number of children</td>
<td>2.731</td>
<td>2.737</td>
<td>(-0.04)</td>
</tr>
<tr>
<td>Observations</td>
<td>841</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: p - value in parentheses, *** , ** and * indicates significance at 1%, 5% and 10% level.
Source: Author’s own estimation

Panel B shows that average income for the treatment and control groups are 2.245 and 2.098 respectively. Despite microfinance participants having higher average income than the control group, the difference is not statistically significant with a t-statistic of 1.28. Panel B also shows the descriptive statistics for the non-treatment variables of the treatment and control groups. We expect to observe no significant
differences between the mean of the covariates for the treatment and control groups. Accordingly, we observe that the means for support network, skill, employment status, age, and number of children for treatment and control groups are relatively similar and non-significant differences between the mean of both groups. This suggests that we have successfully implemented PSM. However, we do not find a significant evidence to support microfinance participants earning higher income than the control group.

Additional Average Treatment Effects Regression to Control for Self-selection Bias

Another technique that is often used by researchers to deal with selection bias and to make causal inferences in observational studies where the treatment variable is endogenous is to run an average treatment effects regression (Rosenbaum, 1989; Setboonsarng & Parpiev, 2008). We report the results of the average treatment effects regression in Table 5. Column 1 reports the main results for the model after controlling for the alternative explanation that the relation between business income and participation in microfinance may be driven by some other factor that affects both microfinance status and income. In our case, we argue that involvement in social and support networks may influence a participant’s microfinance status as well as their income (Cheston & Kuhn, 2002). After doing this, the coefficient for microfinance (MFCLIENT) status is 1.1392, which is positive and significant at the 5 percent significance level.
Table 5. Results for Treatment Effects Regression to Address Selection Bias in Participation in Microfinance.

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) INCOME</th>
<th>(2) MFCLIENT</th>
<th>(3) HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFCLIENT</td>
<td>1.1392**</td>
<td>-0.2542</td>
<td>-0.6237*</td>
</tr>
<tr>
<td></td>
<td>(0.040)</td>
<td>(0.256)</td>
<td>(0.055)</td>
</tr>
<tr>
<td>SKILL</td>
<td>0.2323</td>
<td>-0.2542</td>
<td>-0.0091</td>
</tr>
<tr>
<td></td>
<td>(0.158)</td>
<td>(0.256)</td>
<td>(0.773)</td>
</tr>
<tr>
<td>EMPLOYMENT_STATUS</td>
<td>-0.4121***</td>
<td>0.3381**</td>
<td>-0.0289</td>
</tr>
<tr>
<td></td>
<td>(0.008)</td>
<td>(0.016)</td>
<td>(0.427)</td>
</tr>
<tr>
<td>AGE</td>
<td>0.0658***</td>
<td>-0.0091</td>
<td>0.7308***</td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
<td>(0.773)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>NUM_CHILDREN</td>
<td>-0.0230</td>
<td>-0.0289</td>
<td>-0.0289</td>
</tr>
<tr>
<td></td>
<td>(0.435)</td>
<td>(0.427)</td>
<td>(0.427)</td>
</tr>
<tr>
<td>SUPPORT_NETWORK</td>
<td></td>
<td></td>
<td>0.7308***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.000)</td>
</tr>
<tr>
<td>LAMBDA</td>
<td></td>
<td></td>
<td>-0.6237*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.055)</td>
</tr>
<tr>
<td>CONSTANT</td>
<td>1.6231***</td>
<td>-1.0564***</td>
<td>-0.6237*</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.055)</td>
</tr>
<tr>
<td>Observations</td>
<td>841</td>
<td>841</td>
<td>841</td>
</tr>
</tbody>
</table>

Notes: p-value in parentheses, ***, ** and * indicates significance at 1%, 5% and 10% level.
Source: Authors’ own estimation

This result means that microfinance participants earn 1.14 percent more income than non-microfinance participants do. Possession of specific livelihood skills does not explain income. However, employment is negative and significant, which is similar to the results in Table 3 that participants who are employed earn less income from their business because they spend less time on their business when they work, relative to participants who are unemployed and focus most of their time in developing their business. Participant age is another significant predictor of income, with older participants associated with more income. Experience and knowledge is positively related with age, so older participants have more experience and knowledge in business management.

**Additional Test on the Relation Between Participants’ Social Support Network and Business Income**

We observe in the main results that the coefficient for social support network has been consistently positive and significant in relation with business income. Thus, to test any causal inference between participation in social support network and
business income, we perform propensity score matching with participation in social support network as the treatment variable. The results are reported in Table 6, following the same procedure as discussed previously, but with support network as the treatment variable. The probit model results are given in Panel A. Microfinance status, skill, age, and number of children explain participation in social support networks.

Table 6. Propensity score matching: Dependent variable : Dummy variable for Support network participation

Panel A: effect of social support network on income.

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) SUPPORT_NETWORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFCLIENT</td>
<td>0.7362***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
</tr>
<tr>
<td>SKILL</td>
<td>1.5125***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
</tr>
<tr>
<td>AGE</td>
<td>-0.0858***</td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
</tr>
<tr>
<td>NUM_CHILDREN</td>
<td>-0.0924**</td>
</tr>
<tr>
<td></td>
<td>(0.014)</td>
</tr>
<tr>
<td>CONSTANT</td>
<td>-0.3953</td>
</tr>
<tr>
<td></td>
<td>(0.104)</td>
</tr>
<tr>
<td>Observations</td>
<td>740</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-386.25</td>
</tr>
<tr>
<td>Chi square</td>
<td>104.86</td>
</tr>
<tr>
<td>Pseudo R-square</td>
<td>0.1390</td>
</tr>
</tbody>
</table>

Panel B: Effect of participation in Support Network activities on business income

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Treatment</th>
<th>Control</th>
<th>Difference (t-statistic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of observations</td>
<td>162</td>
<td>218</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>2.315</td>
<td>1.981</td>
<td>0.333** (2.78)</td>
</tr>
<tr>
<td>Microfinance client status</td>
<td>0.0866</td>
<td>0.0866</td>
<td>(0)</td>
</tr>
<tr>
<td>Skill</td>
<td>0.9685</td>
<td>0.9685</td>
<td>(0)</td>
</tr>
<tr>
<td>Employment status</td>
<td>0</td>
<td>0</td>
<td>(0)</td>
</tr>
<tr>
<td>Age</td>
<td>3.1496</td>
<td>3.1575</td>
<td>(-0.04)</td>
</tr>
<tr>
<td>Number of children</td>
<td>2.6614</td>
<td>2.6535</td>
<td>(0.04)</td>
</tr>
<tr>
<td>Observations</td>
<td>841</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.1390</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: p-value in parentheses, ***, ** and * indicates significance at 1%, 5% and 10% level.
Source: Authors’ own estimation

In Panel B, there are 162 participants in the treatment group, and 218 participants in the control group. The average income for the treatment group is 2.315 and 1.981 for
the control group. The difference in income between the groups is significant at the 5 percent level, with a $t$-statistic of 2.78. To confirm that the PSM has been implemented effectively, we compare the mean of the treatment group to the control group for each of the covariates or non-treatment variables. We find that the means for both groups are relatively similar, and the $t$-statistics for all covariates are not significant. These results imply a positive causal impact of entrepreneurs’ participation in social support networks and ability to generate higher business income.

**Summary of Results**

Our results are generally consistent with prior studies. We find certain attributes of participants are related with business income as a performance outcome. We find a positive association between social support network, age, and business income. However, female participants and those with formal employment are negatively associated with income. When we controlled for microfinance clients in the model, it was not significant. However, in further robustness tests where we use propensity score matching and average treatment effects regression to control for self-selection bias in participants’ choices to become microfinance clients, we find that microfinance client status is positively associated with income in both models, but it is only significant in the average treatment effects results in Table 5.

We conclude that the impact of microfinance participation on income is not convincing. In one of our additional sensitivity tests, we attempt to draw causal inference in the relation between participation in social groups and support networks, and micro business income. We find significant results that social support network participation has a positive impact on micro business income. Our findings extend the results of prior studies like A. Yusuf (1995), A. B. Yusuf (1998), and Moustafa and Kumar (2016). These studies analyse the perceptions of microfinance clients in the Pacific region by identifying the critical success factors and barriers to small business development. We provide evidence about small business success outcomes and the important determinants of small business income.

**Conclusion**

In conclusion, this study examines the participant attributes that are important determinants of business success. In doing so, we are able to observe a profile of an average participant. Using survey data from a local project in Samoa that includes microfinance and non-microfinance participants, we find consistent results with prior studies assessing the impact of microfinance in other countries. Specifically, we find
that project participants are predominantly unemployed females, earning extremely low levels of income, and with many dependents to care for. Univariate tests through contingency tables indicate associations between factors such as age, gender, and involvement in networks within the community and other entrepreneurial support groups are each associated with business income. Further multivariate tests using ordinary least squares find a positive and significant relation between participants’ involvement in community and business support networks and small business income. Participant age also has a significant and positive association with business income. However, female and employment variables have negative and significant associations with income, suggestive of gender inequity where female entrepreneurs earn less business income than males. Further, we find that when controlling for participants who are microfinance clients at the time that they joined the Nofotane project, there is no significant difference in business income for microfinance participants from non-microfinance participants. This result undermines the impact of microfinance programs to improve business income for their clients.

The results of this study contributes to the literature in the South Pacific region and document a marginal positive association between participation in microfinance and profitability. Another interesting finding of this study is a positive relation between involvement in support and social networks with various segments of the community and entrepreneurial profitability. This relation has been tested under various model specifications, and we find consistent significant results. Our findings should be of interest to government authorities, non-government organisations (NGOs), and MFIs for policy planning and future improvements in the microfinance sector.

Based on our findings, we recommend for the government, NGOs, and practitioners whose goal is to promote economic development and empower the poor to value the importance of creating safe environments for microentrepreneurs to interact with each other and with various groups from the community to share their experiences and knowledge and turn to for support. MFIs also need to consider that microentrepreneurs are relational people who generally lack confidence and motivation. Thus, one way to improve microfinance services is to strengthen their focus on building genuine relationships with clients, as well as connecting them to the right support groups that will help them grow in not only their businesses, but also in other areas of their lives. There is a great need for future research on the impact of microfinance on other aspects of the lives of microentrepreneurs. Future studies may investigate non-financial outcomes of microfinance on microentrepreneurs.
References


Gender Differences in HIV Risk Perception and Sexual Behaviour of Young Adults in Metropolitan Areas of Fiji

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Abstract

This study seeks to understand variations in Human Immunodeficiency Virus (HIV) risk perception and sexual behaviour among male and female adults in Fiji. The Second-Generation Surveillance Report (2006) indicates the median age of first sex within the youth group as 16 years (range 10 – 23 years). Therefore, this study was purposively targeted at individuals of reproductive age, preferably 10 years and above. We utilized convenience sampling to collect 137 self-administered surveys from individuals working in both public and private sector organizations in two highly populated areas of Fiji. Independent samples t-test analyses revealed that men living in urban areas are more likely to experiment with multiple sexual partners, have a higher tendency of engaging in sexual practices, and are highly likely to have unsafe sex with multiple partners. Gender-sensitive interventions may help facilitate and achieve positive behaviour change among males and influence the sexual health of females.

Keywords: Fiji; Gender Differences; HIV; Sexual Behaviour; Sexual Health

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³ Research Fellow (Survey Statistics), Centre for Social Research & Methods, College of Arts & Social Sciences, Australia National University, Australia, email: Karuna.Reddy@anu.edu.au
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Introduction

The prevalence of sexually transmitted infections (STI) among young adults is relatively high in the Pacific (Hammar, Gucake, & Strobel, 2013; UNICEF Pacific, 2013). In fact, the Western Pacific Region has the highest median rate of gonorrhoea cases among adult men (52.4 per 100,000) when compared to the median case rate reported across 64 countries (18.8 per 100,000) in 2016-2017 (WHO, 2018a). STI rates among Pacific women is also alarming. Latest reports from the World Health Organization (2018b) indicate that one in three women visiting antenatal clinics in Vanuatu has reported some form of STI, the common one being Chlamydia infection and Trichomoniasis reported mostly among women below the age of 25 years. Similarly, more than 70 percent of STI cases in Fiji are reported among young people aged between 15 to 25 years (WHO, 2018b). The presence of STI increases the risk and transmission of HIV (Secretariat of the Pacific Community, 2010). Fiji has low HIV prevalence, estimated to be 0.1% for the adult population in 2016 (UNICEF Pacific, 2013). At the end of 2016, a total of 730 individuals were living with HIV/AIDS in Fiji (WHO, 2018b). The Ministry of Health (2014) reports that HIV is predominantly spread through young adults and transmitted via heterosexual contact.

Social and epidemiological research to date offer useful insights into the sexual attitudes and expectations of Fijian men (for instance, Kaitani, 2000, 2003), Fijians’ self-assessments of HIV transmission risks (Hammar et al., 2011), the context in which risky behaviours occur (Buchanan-Aruwafu, 2007), and the factors that potentially fuel the HIV epidemic in Fiji (see ADB, 2006; UNAIDS et al., 2010; UNAIDS, 2012; UNGASS, 2010). Few studies, however, have conducted advanced comparative analyses of men’s and women’s sexual attitudes, risk perception\(^1\), and behaviour associated with HIV infection. Given that HIV transmission is predominantly through heterosexual contact (UNAIDS, 2012), the present study seeks to explore whether there are significant gender differences in men’s and women’s sexual attitudes, HIV risk perceptions, and protective behaviour in Fiji. Analysis of this type will help in determining the need for gender-specific HIV interventions.

Gender and HIV

Sexual attitudes and behaviours are strongly shaped by social constructions of gender (Ricardo et al., 2006). Adolescent risky sexual behaviours, such as having multiple

\(^1\) Risk perception refers to an individual’s personal assessment of vulnerability to contracting HIV. In HIV prevention work, segmenting audiences on the basis of risk perceptions and efficacy beliefs provides a heuristic model for developing well-targeted messages (Rimal et al., 2009).
sexual partners and having unprotected sex, represents a serious public health concern (Yoon, Voithb, & Kobulskyc, 2018). Mensch, Bruce, & Greene (1998), and UNFPA (2005) recognise gender as a key issue for understanding the sexual behaviour of people, and there is an urgent need for this to be incorporated into the design of sexual health programs (Boender et al., 2004; Schueller, Finger, & Barker, 2005). A recent study regarding the delivery of sexuality education in Fijian secondary schools shows that male and female students prefer sexual health education to be delivered separately to them, particularly with regards to sensitive topics such as conception and contraception (Ram, 2018).

Social biologists have long associated gender differences in human sexual behaviour to variations in physiology, social, and cognitive elements (De Gaston, Weed, & Jensen, 1996). Recent research by Techasrivichien et al. (2016) and Morrison (2004) ascertain that patterns of sexual behaviour and attitudes vary substantially across generations and across gender. Pan et al. (2016) also found significant gender differences in sexual risk behaviours. Some studies attribute gender differences to the impact of social and intimate relationships on behaviour (DiClemente et al, 2009).

Gender roles and relations significantly influence an individual’s risk of exposure and vulnerability to HIV infection (Lerdboon et al., 2008). Discussions on gender have too often ignored the gender-specific challenges and vulnerabilities of men (Mensch et al., 1998). Looking at the notions of masculinity, for instance, men who engage in risky sexual behaviour to express their machismo (Meleisea, 2010; USAID, 2009; Varga, 2001) are likely to avoid seeking support services or social networks to discuss their HIV risk (CPHA, 2001). The results of a study conducted by Whitley (1988) indicate that sexual behaviour is influenced both by societal gender role norms and by individual differences in the acceptance of those norms. Societal norms surrounding male–female behaviour allow for boys to succumb to their desire for sex, while girls are encouraged to stay virgins until marriage (Nahom et al., 2001). Given this acceptance of their sexual freedom, it is not uncommon for men to report a greater number of sexual partners compared to women (Wiederman, 1997).

Some studies have found that males tend to initiate sexual activity at an earlier age than females (Browning, Hatfield, Kessler, and Levine, 2000). Moreover, as compared to women, men are less likely to negotiate safer sex practices (CPHA, 2001) because many young women have been socialised to accept male control of sexual decision-making including the use condoms (Harrison, Xaba, & Kunene, 2001). According to Varga (2001), men are equally as likely as women, if not more
so, to behave in ways that place both themselves and their partners at risk of sexual and reproductive health complications. Absalon et al., (2006) compared sexual behaviours and determined sexual risk correlates associated with HIV by gender among street-recruited drug users and found that men reported higher-risk sexual behaviours as compared to women. Looking at these differences, Sun et al., (2018) suggest that interventions should address gender differences and consider offering parallel interventions.

**Gender Norms in Fiji**

Throughout Pacific Island Countries (PICs), unequal gender relations and gender-based violence pose serious problems that aid the spread of HIV (Meleisea, 2010). Studies indicate that Pacific women tend to have less independence and fewer opportunities than men in matters pertaining to economic growth, property ownership and sexuality (Meleisea, 2010). Prevailing ideologies of gender inequality and masculinity have provided men with more social power and sexual license than women (Meleisea, 2010). Fijian men’s sexual freedom is clearly portrayed in the study by McMillan and Worth (2010), who found that clients of sex workers in Fiji were exclusively males from all professional and ethnic groups. Furthermore, recent research by Lincoln, Mohammadnezhad, and Khan (2018) ascertain that male dominance over female sexuality continues to be a problem in Fijian communities.

Evidently, at the international level, gender-neutral programmes are considered less effective because they fail to respond to gender-specific needs of individuals (Gupta, 2000). More importantly, the global prevalence of gender inequality, discrimination, and gender violence, especially towards women, emphasizes the need for gender-specific HIV and AIDS interventions (Middleton-Lee, 2010). The applicability of these comments to the Fiji situation has not been explored fully. Therefore, there is a need to understand the sexual behaviour of Fijians by examining the gender differences that can then help in informing HIV prevention interventions. The aim of the present study is to understand the gender differences in HIV-related knowledge, awareness, attitudes, risk perception, and sexual behaviour among sexually active people in Fiji. In other words, this study aims to answer the question, “how do men and women in Fiji differ in regard to their sexual knowledge, attitudes and behaviours?”

**Methodology**

In seeking to identify possible gender differences in sexual attitudes and behaviour, the present study examines individual characteristics of a sample of women and men
regarding: 1) HIV knowledge and information-seeking behaviour; 2) attitudes towards HIV testing; 3) attitudes towards sex (particularly about multiplicity of sexual partners, premarital sex, and contraceptive use); and 4) self-reported behaviour with respect to sexual practices and condom use. Premarital sex is an important predictor of HIV risk (Ghebremichael & Finkelman, 2013; Mulugeta & Berhane, 2014; Tekletsadik, Shaweno, & Daka, 2014).

Information on these areas was elicited by means of a facilitator-guided, self-administered, structured questionnaire, which had been custom-designed and then adjusted after a pilot study on a sample group of 15. The questionnaire contained closed, dichotomous or rating questions that did not provide respondents with opportunities to elaborate their answers with qualitative material. The researchers distributed questionnaires to different sectors (i.e. public and private organizations) depending on the number of staff or customers that were present at the study location at the time of survey. Ethics approval was taken in this survey and informed consent was signed by the participants prior to the survey. Confidentiality was maintained by not collecting any information whatsoever on the identity of the respondents, which was also an attempt to reduce social desirability bias. The inclusion criteria was that participants needed to be above the age of 10 years and voluntarily participate in the research.

**Study Sample**

A non-probability convenience sampling survey was conducted in two major commercial locations in Fiji – Suva and Nausori. Suva city is the most populous urban conglomerate in Fiji, representing approximately 9% of Fiji’s total population, while Nausori town represents 3% of Fiji’s population (Bureau of Statistics, 2017). The sample of adults were chosen in a convenient manner due to time and budgetary constraints. For this study, the researchers targeted a sample of 200 people working within private-sector business firms (such as hardware stores and boutiques) and public-service organizations or government agencies, as well as people visiting internet cafes and gymnasiums. Prior to data collection, an informed consent was obtained from human resource managers and shop supervisors. In some instances, the HR managers and shop supervisors agreed to act as gatekeepers in the distribution and collection of questionnaires. Apart from ease of access to respondents, convenience sampling technique ensured that we had a good, random mix of participants in the sample. However, this strategy is limited in the sense that only tentative generalizations can be made (Bouma & Ling, 2004).
The response rate for this research was 68.5 percent (137/200). Table 1 provides an overview of the demographical characteristics of our respondents. The study sample was represented by 53 percent males and 47 percent females. The median age category of respondents was 26–30 years ($SD = 1.85$). Single and married people were equally represented in this study (47.4% single and 46.7% married, while 1.5% of the sample were divorced and 2.9% were in a relationship). The two major ethnic groups were also fairly distributed: 52 percent i-Taukei; 44.5 percent Indo-Fijians (a little higher than the national figure for this group); and 4 percent others. The majority of the respondents were employed (72%) and approximately 54% of the sample had tertiary-level qualifications.

Table 1. Demographic Characteristics of Survey Participants ($n = 137$)

<table>
<thead>
<tr>
<th>Variable</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>72</td>
<td>52.6</td>
</tr>
<tr>
<td>Female</td>
<td>64</td>
<td>46.7</td>
</tr>
<tr>
<td>N/A</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 – 15 years</td>
<td>7</td>
<td>5.6</td>
</tr>
<tr>
<td>16 – 20 years</td>
<td>13</td>
<td>10.3</td>
</tr>
<tr>
<td>21 – 25 years</td>
<td>42</td>
<td>33.3</td>
</tr>
<tr>
<td>26 – 30 years</td>
<td>27</td>
<td>21.4</td>
</tr>
<tr>
<td>31 – 35 years</td>
<td>14</td>
<td>11.1</td>
</tr>
<tr>
<td>36 – 40 years</td>
<td>8</td>
<td>6.3</td>
</tr>
<tr>
<td>41 – 45 years</td>
<td>7</td>
<td>5.6</td>
</tr>
<tr>
<td>46 – 50 years</td>
<td>4</td>
<td>3.2</td>
</tr>
<tr>
<td>50+ years</td>
<td>4</td>
<td>3.2</td>
</tr>
<tr>
<td>N/A</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>65</td>
<td>47.4</td>
</tr>
<tr>
<td>Married</td>
<td>64</td>
<td>46.7</td>
</tr>
<tr>
<td>Divorced</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td>In a relationship</td>
<td>3</td>
<td>2.9</td>
</tr>
<tr>
<td>De facto union</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td>N/A</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fijian</td>
<td>71</td>
<td>51.8</td>
</tr>
<tr>
<td>Indo-Fijian</td>
<td>61</td>
<td>44.5</td>
</tr>
<tr>
<td>Others</td>
<td>5</td>
<td>3.6</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>30</td>
<td>21.9</td>
</tr>
<tr>
<td>Unemployed</td>
<td>8</td>
<td>5.8</td>
</tr>
</tbody>
</table>
Study Questionnaire

Knowledge

To assess participants’ awareness about HIV, we utilized questions such as "Have you heard of HIV and AIDS?" and "Please provide definitions of HIV". Comprehensive, HIV-related knowledge was measured through questions about HIV symptoms, modes of transmission and prevention techniques. An overall knowledge (K) score was calculated from 13 true–false questions related to HIV transmission. A low score (1–4 points) would indicate very little knowledge about HIV transmission, whereas well-informed individuals would be characterized by scores of 9 points or higher. Further to individual knowledge, we wanted to examine information-seeking behaviour (i.e. efforts and eagerness to learn more about HIV) and determine gender disparities within this aspect of behaviour.

Risk Perception

Social studies in the field of HIV commonly examine HIV risk perception levels of the target groups being investigated. In the present case, participants were asked whether they considered themselves to be at risk of contracting HIV. Further questions explored whether respondents had previously undergone a HIV test, would have any interest in having an HIV test in the future, and knew where to get tested.

Sexual Attitudes

Nine statements pertaining to sexual partners, infidelity, sex before marriage and condom use were used to ascertain aspects of participants’ sexual attitudes (A). A 5-point Likert scale (ranging from strongly disagree [low] to strongly agree [high]) was used to record responses, which were analyzed through independent samples t-test analysis to identify differences in male and female responses.

Self-reported Sexual Behaviour

Current sexual behaviour (B) of participants was ascertained through questions like

<table>
<thead>
<tr>
<th>Highest Level of Education</th>
<th>99</th>
<th>72.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never educated</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td>Primary school</td>
<td>4</td>
<td>2.9</td>
</tr>
<tr>
<td>High school</td>
<td>58</td>
<td>42.3</td>
</tr>
<tr>
<td>Tertiary</td>
<td>74</td>
<td>54.0</td>
</tr>
</tbody>
</table>

Source: Authors
"Have you ever had sexual relations?", "Have you had sex with more than one partner?" and "Have you ever practised risky sex (sex without condoms)"

Additional questions touched on associated variables, such as condom affordability, rate of condom use, partners’ willingness to use condoms, and overall condom use. In the only concession to qualitative explanation, reasons behind individual condom use and non-use were invited. Chi-square analysis was used for all responses, apart from reasons for condom use or non-use.

**Data Analysis**

In light of the quantitative nature of the data collected, SPSS software (V.16) was used to perform basic and inferential statistical analyses. Cross-tabulations, chi-square analysis and independent samples $t$-test were used to generate desired results and identify significant values.

**Results**

**HIV-Related Knowledge, Attitude, and Risk Perception**

Survey results indicated no disparities in HIV and AIDS awareness by gender (Table 1). Although 98.5 per cent of the sample had heard of HIV and AIDS, very few respondents were aware of the definition of HIV and AIDS. Results showed that fewer than 25 per cent of the sample could accurately define HIV and fewer than 50 per cent, AIDS, or identify the symptoms of HIV. However, knowledge about modes of HIV transmission was reportedly high amongst overall study participants. In general, almost three-quarters of the sample received high knowledge scores. Using Chi-square tests for independence, it was established that slight gender variations were present with regard to detailed knowledge about it. For instance, males appeared to be less informed about the use of sterilized instruments, such as needles, to prevent the spread of HIV ($p < 0.05$, odds ratio = 0.41). Thus, compared to females, the males have 0.41 odds of knowing that using sterilized instruments prevent HIV.
Table 2. Gender Differences in HIV-related Knowledge, Discussion, and Risk Perception (%)

<table>
<thead>
<tr>
<th>Responses to knowledge-related questions</th>
<th>Males (n = 72) (%)</th>
<th>Females (n = 64) (%)</th>
<th>Total (n = 136) (%)</th>
<th>p-value</th>
<th>Chi-Square Statistic</th>
<th>Odds Ratio (95% C.I.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has heard of HIV and AIDS</td>
<td>52.2</td>
<td>46.3</td>
<td>98.5</td>
<td>0.933</td>
<td>0.007</td>
<td>1.13 (0.07 to 18.39)</td>
</tr>
<tr>
<td>Provided correct definition for HIV</td>
<td>21.8</td>
<td>26.3</td>
<td>48.1</td>
<td>0.072</td>
<td>3.229</td>
<td>0.53 (0.27 to 1.06)</td>
</tr>
<tr>
<td>Provided correct definition for AIDS</td>
<td>24.8</td>
<td>27.1</td>
<td>51.9</td>
<td>0.182</td>
<td>1.780</td>
<td>0.63 (0.32 to 1.25)</td>
</tr>
<tr>
<td>Knowledge of HIV and AIDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aware of symptoms of HIV and AIDS</td>
<td>22.8</td>
<td>24.4</td>
<td>47.2</td>
<td>0.345</td>
<td>0.893</td>
<td>0.71 (0.36 to 1.44)</td>
</tr>
<tr>
<td>Know of ways to prevent HIV and AIDS:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Abstain from sex</td>
<td>18.7</td>
<td>17.2</td>
<td>35.8</td>
<td>0.876</td>
<td>0.024</td>
<td>0.95 (0.47 to 1.92)</td>
</tr>
<tr>
<td>- Have one sexual partner</td>
<td>39.6</td>
<td>35.1</td>
<td>74.6</td>
<td>0.995</td>
<td>0.000</td>
<td>1.00 (0.46 to 2.19)</td>
</tr>
<tr>
<td>- Use condoms</td>
<td>42.5</td>
<td>34.3</td>
<td>76.9</td>
<td>0.319</td>
<td>0.991</td>
<td>1.51 (0.67 to 3.37)</td>
</tr>
<tr>
<td>- Use sterilised instruments (e.g. needles)</td>
<td>11.9</td>
<td>19.4</td>
<td>31.3</td>
<td><strong>0.020</strong></td>
<td>5.444</td>
<td>0.41 (0.20 to 0.88)</td>
</tr>
<tr>
<td>Overall Knowledge Score (13 T/F statements):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Low (1–4)</td>
<td>2.2</td>
<td>3.7</td>
<td>6</td>
<td>0.653</td>
<td>0.854</td>
<td></td>
</tr>
<tr>
<td>- Moderate (5–8)</td>
<td>11.2</td>
<td>9</td>
<td>20.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- High (&gt;9)</td>
<td>39.6</td>
<td>34.3</td>
<td>73.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efforts to learn and discuss</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attempted to know more about HIV and AIDS</td>
<td>46.3</td>
<td>41.8</td>
<td>88.1</td>
<td>0.780</td>
<td>0.078</td>
<td>0.86 (0.30 to 2.47)</td>
</tr>
<tr>
<td>Discussion about HIV and AIDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- All the time</td>
<td>4.5</td>
<td>1.5</td>
<td>6.1</td>
<td>0.208</td>
<td>4.553</td>
<td></td>
</tr>
<tr>
<td>- Sometimes</td>
<td>32.6</td>
<td>25</td>
<td>57.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Hardly</td>
<td>13.6</td>
<td>15.2</td>
<td>28.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Never</td>
<td>2.3</td>
<td>5.3</td>
<td>7.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talk with friends about HIV and AIDS</td>
<td>35.6</td>
<td>22</td>
<td>57.6</td>
<td><strong>0.018</strong></td>
<td>5.585</td>
<td>2.33 (1.15 to 4.71)</td>
</tr>
<tr>
<td>Talk with family about HIV &amp; AIDS</td>
<td>25</td>
<td>19.7</td>
<td>44.7</td>
<td>0.548</td>
<td>0.361</td>
<td>1.24 (0.62 to 2.46)</td>
</tr>
<tr>
<td>Would like to receive HIV-related information:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>All the time</td>
<td>Sometimes</td>
<td>Hardly</td>
<td>Never</td>
<td>Risk perception</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>-----------</td>
<td>--------</td>
<td>-------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>29.5</td>
<td>16.4</td>
<td>45.9</td>
<td>0.138</td>
<td>0.618</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.1</td>
<td>23.8</td>
<td>45.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>3.3</td>
<td>6.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>1.6</td>
<td>1.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Risk perception</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consider yourself at risk of contracting HIV?</td>
<td>17.2</td>
<td>6.3</td>
<td>23.4</td>
<td>0.019 *</td>
<td>5.497</td>
<td>2.87 (1.16 to 7.05)</td>
</tr>
<tr>
<td>Has received HIV test before</td>
<td>13.6</td>
<td>14.4</td>
<td>28</td>
<td>0.482</td>
<td>0.494</td>
<td>0.76 (0.35 to 1.65)</td>
</tr>
<tr>
<td>Is interested in getting HIV test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Yes</td>
<td>35.8</td>
<td>15.6</td>
<td>51.4</td>
<td>0.002 *</td>
<td>9.917</td>
<td>3.50 (1.58 to 7.72)</td>
</tr>
<tr>
<td>- No</td>
<td>19.3</td>
<td>29.4</td>
<td>48.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knows where to get HIV test</td>
<td>32.3</td>
<td>29.8</td>
<td>62.1</td>
<td>0.408</td>
<td>0.685</td>
<td>0.73 (0.35 to 1.53)</td>
</tr>
</tbody>
</table>

* indicates p-value <0.05

Source: Author's own estimation

Results showed that 92 per cent of the sample wanted to receive HIV-related information "all the time" (45.9%) or "sometimes" (45.9%). While 88 per cent of the sample claimed to have tried to be better informed about the disease, there was no statistical evidence to suggest that either gender had made a greater effort than the other. Even the frequency with which the sample discussed HIV and AIDS did not vary significantly between males and females. However, a slight variation was noted in the responses received for discussion about HIV and AIDS with friends. It appeared that males were 2.33 times more likely than females to discuss HIV-related issues with their friends ($p < 0.05$, odds ratio $= 2.33$). In the prevailing social ethos, males may be more comfortable handling such issues in public, and could prove to be better advocates than females. The analysis, however, did not present any significant variation between the male and female responses regarding discussion about HIV and AIDS with family members. Researchers like Kaitani (2000) had also observed that the family contributes little to the education of Fijian men about sexual health.

This study presents some notable findings with regard to risk perception differences between male and female respondents. Results indicate that males were 2.87 times more likely to consider themselves at high risk of contracting HIV than females ($p = 0.019$, odds ratio $= 2.87$). Results also show that more than half (59.4%) of respondents did not consider themselves as being at risk of contracting HIV and AIDS; but a significant number of respondents who stated that they were at risk of
contracting this disease were males. Further investigation on whether respondents had undertaken any HIV tests before produced no statistical evidence to suggest that either one of the gender groups contained a greater number of respondents who had. However, we noted that male respondents were 3.5 times more likely than females to take an HIV test in the future \( (p = 0.002, \text{ odds ratio} = 3.5) \). Therefore, men could easily be convinced through health interventions to agree to be tested. Women, on the other hand, may be reluctant to be tested, disclose a positive diagnosis or access treatment, for fear of a violent reaction from an intimate partner (USAID, 2009).

This study also explored the attitudes of survey respondents towards sexual statements listed in Table 2. Upon conducting the non-parametric Mann-Whitney U-tests for such ordinal data, there were significant differences detected in five out of the nine items between the responses of male and female respondents. It is worthwhile to highlight the five statements that produced significant results. As an example, Table 2 reveals that males tended to “disagree” with the statement, "OK to experiment with more than 1 partner” \( [\text{mean} = 2.132] \), while females identified with more "strongly disagree" opinions \( [\text{mean} = 1.578] \), a clear suggestion that women are significantly \( (p\text{-value}=0.022, \text{Mann-Whitney U Statistic} = 1515.0) \) more resistant (on average, a mean difference [Males-Females] of 0.553 with C.I. of 0.151 to 0.956) to the idea of experimenting with multiple partners than men. Similar results are observed with the statement concerning sex before marriage.

The differences in the mean response values between male and female groups suggest a milder tendency among males to disagree with the statement, "OK to have sex before marriage". Such attitudinal results would be consistent with the claim that men may be more likely than women to experiment with multiple partners and have sex before marriage.

Table 3. Sexual Attitudes of Survey Respondents

<table>
<thead>
<tr>
<th>Attitudinal Statements*</th>
<th>Males</th>
<th>Females</th>
<th>p-value</th>
<th>Mann-Whitney U Statistic</th>
<th>Mean Difference (95% C.I.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>St. Dev</td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>Prefer one sexual partner</td>
<td>70</td>
<td>4.257</td>
<td>0.988</td>
<td>59</td>
<td>4.373</td>
</tr>
<tr>
<td>Prefer 1 sexual partner for a lifetime</td>
<td>70</td>
<td>4.200</td>
<td>0.987</td>
<td>60</td>
<td>4.483</td>
</tr>
<tr>
<td>People need a variety of sexual partners</td>
<td>69</td>
<td>2.044</td>
<td>1.322</td>
<td>59</td>
<td>1.627</td>
</tr>
</tbody>
</table>
### Table 4

<table>
<thead>
<tr>
<th>Attitudinal Statement</th>
<th>OK</th>
<th>OK to experiment with more than 1 partner</th>
<th>OK to have sex before marriage</th>
<th>OK to have sex in casual relationships</th>
<th>Condoms are very important during sex</th>
<th>It’s OK to have sex without condoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>One partner is impossible</td>
<td>68</td>
<td>2.118</td>
<td>2.132</td>
<td>2.275</td>
<td>3.824</td>
<td>2.239</td>
</tr>
<tr>
<td>OK to experiment with more than 1 partner</td>
<td>68</td>
<td>2.118</td>
<td>2.132</td>
<td>2.275</td>
<td>3.824</td>
<td>2.239</td>
</tr>
<tr>
<td>OK to have sex before marriage</td>
<td>68</td>
<td>2.118</td>
<td>2.132</td>
<td>2.275</td>
<td>3.824</td>
<td>2.239</td>
</tr>
<tr>
<td>OK to have sex in casual relationships</td>
<td>68</td>
<td>2.118</td>
<td>2.132</td>
<td>2.275</td>
<td>3.824</td>
<td>2.239</td>
</tr>
<tr>
<td>Condoms are very important during sex</td>
<td>68</td>
<td>2.118</td>
<td>2.132</td>
<td>2.275</td>
<td>3.824</td>
<td>2.239</td>
</tr>
<tr>
<td>It’s OK to have sex without condoms</td>
<td>67</td>
<td>2.118</td>
<td>2.132</td>
<td>2.275</td>
<td>3.824</td>
<td>2.239</td>
</tr>
</tbody>
</table>

**Notes:**  *Attitudinal statements were ranked according to 5-point Likert scale: (1 = strongly disagreed; 3 = undecided; 5 = strongly agreed). - Cronbach’s Alpha (9 items) = 0.501.

Source: Authors’ own estimation

### Sexual Behaviour and Condom Use

The enquiries about current sexual behaviour patterns and self-assessments of condom use also produced noteworthy results, presented in Table 4. Nearly 80 percent of the sample reported being sexually active. The demographic information given earlier indicated an almost equal distribution by marital status in the study sample (represented by 47.4% single and 46.7% married people; whilst 1.5% were divorced, 2.9% in a relationship, 0.7% were de-facto relationship, and 0.7% were others). Hence, primary results appear to suggest that single people are engaging in sexual relations. Another significant finding is that males had a 3.21 times higher likelihood of engaging in sexual relations than females ($p = 0.011$, odds ratio $= 3.21$). Of the 80% that reported having engaged in sexual relations, 48% were males, while only 32% were females. This is consistent with the data presented in the second-generation survey (2008) report, wherein 63 per cent of male tertiary students ($n = 180$) aged between 15 and 24 years had already had sex, while only 25 per cent of female tertiary students ($n = 61$) reported ever having sex (UNGASS, 2010). In addition, the report highlighted that male STI Clinic attendees, aged between 15 and 25 years, had the highest reported level of first sex before the age of 15 years; whereas female STI Clinic attendees had the lowest reported level of sex before 15 years, followed by antenatal clinic (ANC) attendees (UNGASS, 2010).

Indications are that men are 5.33 times more likely to have multiple sexual partners than women ($p = 0.000$, odds ratio $= 5.33$). Many male respondents (42% of 136 respondents) reported that they had multiple partners, while only 13 percent of the
sample females self-reported having engaged in sexual behaviour with multiple partners - a clear basis for the inference that men tend to experiment with multiple partners more than women. In fact, similar findings have been reported in the 2008 second-generation survey report, which reported that the mean number of sexual partners in the past 12 months was highest among male tertiary students (3.8), followed by male STI Clinic attendees (3.6), followed by seafarers (3), uniformed services personnel (2.7), female STI Clinic attendees (1.8), female tertiary students (1.5), and a mean value of 1.1 amongst antenatal clinic attendees (UNGASS, 2010).

Table 4. Differences in Male and Female Response towards Sexual Behaviour and Condom Use

<table>
<thead>
<tr>
<th>Variable</th>
<th>Males (n = 72) (%)</th>
<th>Females (n = 64) (%)</th>
<th>Total (%)</th>
<th>p-value</th>
<th>Chi-Square Statistic</th>
<th>Odds Ratio (95% C.I.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current behaviour of respondents</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had sexual relations</td>
<td>48.4</td>
<td>32</td>
<td>80.5</td>
<td>0.011**</td>
<td>6.453</td>
<td>3.21 (1.27 to 8.13)</td>
</tr>
<tr>
<td>Had multiple sexual partners</td>
<td>41.7</td>
<td>12.6</td>
<td>54.4</td>
<td>0.000****</td>
<td>15.674</td>
<td>5.33 (2.27 to 12.53)</td>
</tr>
<tr>
<td>Had practised risky sex (sex without condoms)</td>
<td>31.3</td>
<td>5.1</td>
<td>36.4</td>
<td>0.000****</td>
<td>17.667</td>
<td>8.27 (2.84 to 24.06)</td>
</tr>
<tr>
<td><strong>Rate of condom use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finds condom affordable</td>
<td>34.6</td>
<td>19.2</td>
<td>53.8</td>
<td>0.307</td>
<td>1.045</td>
<td>0.600 (0.22 to 1.60)</td>
</tr>
<tr>
<td>Use condoms with Partner:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- All the time</td>
<td>8.2</td>
<td>0</td>
<td>8.2</td>
<td>0.052*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sometimes</td>
<td>23.5</td>
<td>13.3</td>
<td>36.7</td>
<td>7.733</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Hardly</td>
<td>8.2</td>
<td>8.2</td>
<td>16.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Never</td>
<td>19.4</td>
<td>19.4</td>
<td>38.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When does partner want to use condoms?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- All the time</td>
<td>8.8</td>
<td>2.2</td>
<td>11</td>
<td>0.144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sometimes</td>
<td>24.2</td>
<td>9.9</td>
<td>34.1</td>
<td>5.416</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Hardly</td>
<td>8.8</td>
<td>7.7</td>
<td>16.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Never</td>
<td>18.7</td>
<td>19.8</td>
<td>38.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall condom use:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- None</td>
<td>16</td>
<td>22.3</td>
<td>38.3</td>
<td>0.005***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Low</td>
<td>30.9</td>
<td>14.9</td>
<td>45.7</td>
<td>10.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- High</td>
<td>13.8</td>
<td>2.1</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: *p-value <0.10; **p-value <0.05; ***p-value <0.01; ****p-value <0.001.

Source: Authors’ own estimation

A significantly larger proportion of males than females in this survey reported having practised risky sex or sex without condoms (p = 0.000, odds ratio = 8.27). When our study asked respondents about the rate of condom use with their partner, a higher
number of males indicated that they used condoms with their partners "all the time" or "sometimes" ($p = 0.052$). A significantly higher number of males also responded to questions regarding overall condom use. The data indicate that men have a higher tendency to report the use of condoms than females ($p = 0.005$). Previous research elsewhere suggests that boys tend to report using condoms more than girls, while girls are more likely to use female methods such as injectables or oral contraceptives (Varga, 2001). Research by Zeng et al (2015) in China also found that, although health education intervention improved people’s knowledge and attitudes about HIV infection, and increased self-reported HIV testing, it did not decrease risky sex (that is, sex without condoms).

Discussion

This study highlighted several important aspects of sexual behaviour of men and women living in two urban areas of Fiji. First, findings showed that men are more likely than women to talk about HIV-related issues with their friends. This has huge implications for health interventions to use male peer-educators and role models to raise awareness and initiate discussions about HIV and AIDS. Moreover, men can be trained to become advocates for HIV and AIDS awareness within their community, workplace, and their social groups. It would be helpful to develop male advocates from diverse backgrounds who can act as role models and encourage other men in their communities to change their sexual patterns, practice safe sex, and go for HIV testing. Our survey results showed that male respondents were more willing than women to get tested for HIV in the future. These findings imply that investing in the development of male advocates would prove to be a worthy initiative.

Another significant finding is that men are more open than women to the idea of experimenting with multiple partners and having sex before marriage. It was observed that men recorded only slight disagreement with statements suggesting, “it is OK to have sex before marriage and to experiment with more than one partner”. Such attitudes are then reflected in their sexual behaviour – meaning that males had a higher tendency to engage in sexual relations before marriage and were more likely to have multiple sexual partners than women. Previous research by Kaitani (2003) reported that, while individuals and formal precept disapprove of premarital sex, a large proportion of unmarried people are involved in sexual relationships. It is a global trend that men have more sex partners than women (CPHA, 2001; Henderson, Lieb, McKinley-Beach, & LaLota, 2009), which eventually places them and their sex partners at increased risk of sexually transmitted infections (Varga, 2001). In
addition, men initiate sexual activity earlier than women. It has been highlighted that young men in Fiji initiate sex between the ages of 9 and 13 years, due to peer pressure and social norms that push them take unnecessary risks (Kaitani, 2003). In other areas, such as Sub-Saharan Africa for instance, studies have found that boys and young men initiate sex earlier than girls, have more sexual partners and engage in intercourse more often, and are more likely to report having an STD infection (Varga, 2001).

Our results also show that nearly one in every three men had practised sex without condoms. While a higher number of male respondents reported the use of condoms with their partner, the overall use of condoms among men was low, or none at all. Findings from this survey are consistent with the 2008 second-generation survey that found that over fifty per cent of respondents from each sub-population that had been surveyed (including ANC attendees, seafarers, and uniformed service respondents) reported "never using condoms" in the previous 12 months (UNGASS, 2010). A study by McMillan and Worth (2010) additionally states that many clients of sex workers often do not want to use condoms, pressurise sex workers into having intercourse without condoms, or offer more money for sex without a condom. The use of condoms is also reportedly low among minority groups such as gay, bisexual, and transgender people. A recent report launched by the United Nations Development Programme in Fiji reported that, despite high levels of HIV knowledge among marginalised groups, only 14.8% of 212 study participants reported frequent condom use when having sex with straight male partners, while only one-third of respondents revealed that they frequently used condoms with gay or transgender partners (Bavinton et al., 2011). A separate study conducted in Fiji by Hammar et al. (2011) among marginalised groups, taxi drivers, sex workers, university students, health care workers, and Christian pastors reported that only 25% (18 out of 73) of respondents had used a condom at last sexual encounter. A survey on re-infected patients at Suva STI Clinic showed that 88% of individuals knew that condoms prevent STI, but only 5% had used condoms at their last sexual encounter (Hotchin et al., 1995, as cited in Kaitani, 2003).

It is evident that young men in Fiji engage in risky sexual behaviour. Our survey shows that men’s reasons for not using condoms include factors such as inconsistent supply, dislike for the product, and moral reasons. Local researchers have highlighted barriers such as prevailing myths around condom use that creates a negative impression of contraceptive use amongst youths (MSIP, 2007). Furthermore, social taboos (code of silence on sexual and reproductive health) restrict open discussions around sex and condom use in Fiji and most Pacific Island countries (MSIP, 2007;
Ratu & Kumar, 2008). Ratu and Kumar (2008) further reported that excessive yaqona\(^2\) (or kava) consumption often led to intoxication and resulted in risky behaviour among men. It is also not uncommon for men to engage in unsafe sex due to alcohol intoxication, substance abuse (e.g. marijuana), social norms around masculinity and virility, peer pressure, and personal ignorance of sexually transmitted diseases (FRCS, 2010; Jenkins & Buchanan-Aruwafu, 2007; Lukere, 2002). Other modern factors, as observed by Hammar et al. (2011), include declining traditions and moral values among the younger generation; breakdown of the family; sexualisation of female youths; high levels of movement; influence of western-derived music, adult movies, and X-rated magazines; as well as greater accessibility of the internet through widely available broadband modems and cell phones, allowing people to access social networking sites and pornography. It is possible for factors such as actual or perceived disadvantages of condom use, prior negative use, inexperience, or gender or social inequalities (Warner, Gallo, & Macaluso, 2012) to act as barriers to effective condom use among sexually active men in Fiji. Further research is required to ascertain the extent of the impact of the different risk factors on men’s sexual behaviour.

**Study Limitations**

Since the survey area was confined to the two central, highly urbanised regions of Fiji, it may be inapt to generalise the study findings to youth living in less populous urban areas, rural areas or remote locations. Young people residing in rural areas may not have the same amount of exposure to resources that are usually available in urban areas (for example, education & communication materials on sexual and reproductive health, computers that provide access to internet or limited mobile internet data, or other information sources such as newspapers and television). Family, community and peer pressures are also exerted differently in rural areas. In addition, responses collected in this survey were mostly from young people who were working; thus, there is little representation of tertiary students and unemployed youth. Moreover, the strategy of using HR managers and shop supervisors to distribute questionnaires among the target group may have involved managers’ personal bias in distributing questionnaires to people based on familiarity, availability, age group, or status within the organisation. Although such bias may not significantly influence the overall sample, there is often a risk of response bias when questionnaires are self-completed by respondents in their own time and space. There is no way to tell if participants provided their own answers or consulted other sources,

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\(^2\) Yaqona drink is prepared from the pulverized root of *Piper Methysticum* plant, and it is consumed during traditional ceremonies and/or during leisure time with friends or relatives.
such as friends and/or the internet, to answer HIV-related questions. Lastly, the study acknowledges the absence of data regarding sexual preference of respondents, which would have provided additional behavioural insights.

Future KAPB studies (targeting knowledge, attitude, risk perceptions, and behaviour regarding HIV) could focus on larger, more geographically diverse sample groups, with some emphasis on rural areas. Enquiry beyond these areas and among workers in the informal sector and the civil service, as well as the unemployed, remains for the future. It needs also to be noted that the constraints also governed the decision to employ only an instrument amenable to quantitative analysis. Formal measures of HIV knowledge and attitude can be utilized by future studies to increase data validity and reliability.

**Implications for Health Policy, Research and Practice**

Given that some gender variations are observed in HIV knowledge, although not significant, it is necessary to continue with advocacy work, as well as offer advanced education workshops to disseminate accurate and timely information among individuals of reproductive age. This could be ideally implemented by recruiting more males as peer educators, as the study showed that males are more comfortable in discussing HIV-related topics and also able to address knowledge gaps, such as that related to injectables, which is more common amongst males. The finding that males are more comfortable discussing HIV-related topics may also imply that females need particularly more training to discuss and share knowledge amongst their peers on this issue.

Females' reluctance for the uptake of HIV testing is significant and suggests professional counselling in health practice to increase its uptake and that they need to be educated on its importance. Sexuality education should be high on the agenda of education ministry, with support from health ministry, and contraceptives should be readily accessible and affordable, particularly to improve access to male condoms, noting male’s higher odds of engaging in sexual relations and multiplicity of partners. Finally, data suggest that contraceptive methods utilized by females rarely protect them against HIV or STI, and thus females should be made aware and give due regard to protection and not contraception alone.

Further research is needed to examine attitudes and sexual behaviour among young people living in rural areas, unemployed youth, as well as youths working in the informal sector. Another potential area of study is the examination of multiple dimensions of male and female sexual behaviour: for instance, sexual partner
preference, sexual practices, underlying motives for sex, attitudes towards sex, and individual perception of contracting sexually transmitted infections. This study opted to investigate the differences in HIV risk perception between males and females, but the findings on these matters were only marginally significant.

**Conclusion**

In a developing country such as Fiji, differences exist in the way men and women calculate their risk of contracting HIV, their tendency to discuss HIV-related issues with their peers, their attitudes towards moral sexual behaviour, and their actual sexual practices. The present study concentrated on only some of these areas. More importantly, it was an initial quantitative survey rather than an in-depth qualitative study. Such gender differences in sexual attitudes and behaviour, especially when understood in greater depth, must be taken into account when developing HIV prevention programmes, because they highlight areas that require intervention. This study found that although men engage in risky sexual practices with multiple partners, they are more likely than women to discuss the topic of HIV amongst their peers and they are also becoming keener to contemplate being tested for HIV. These findings can be interpreted as a positive sign that men are contemplating change and interventions must be developed accordingly to facilitate positive behaviour change. In particular, male-specific HIV prevention programmes may be required to address the specific needs of young boys and men and to enable them to adopt appropriate attitudes and behaviours that will safeguard their sexual health and that of their partners.

An integrative approach that encompasses effective communication messages, service delivery, and supply mechanisms will be necessary to address multiple barriers to behaviour change. This study notes that one of the reasons why male respondents do not use condoms is that they are not always available. In order to promote consistent use of condoms among sexually active men, health authorities will need to ensure widespread availability, consistent supply, and adequate marketing of the product and its distribution sites. In Fiji, some NGOs train youth peer-educators to conduct workshops and advocacy programmes that disseminate information on sexual and reproductive health. This is the right step forward, but greater efforts should be directed towards developing gender-specific and transformative approaches that can address multiple issues of HIV. Men need to be increasingly considered as part of the solution and engaged as partners in prevention efforts.
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Tourism and Residents’ Quality of Life: A Critical Examination

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Abstract

This academic paper aims at increasing awareness and understanding of extant knowledge relating to empirical research undertaken on how residents’ quality of life (QOL) is impacted by tourism activities. The paper will deliberate related definitions, critically examine selected theoretical frameworks and main themes of extant empirical research in relation to tourism and residents’ QOL, with a focus on Pacific context. Strengths and weaknesses of selected theoretical frameworks discussed include social exchange theory, social representations theory and bottom up spillover theory. It also scrutinizes concepts related to how the actions of tourists and the activities of tourism businesses affect indigenous host communities in relation to impacts on residents’ QOL. It concludes with an overview of current limitations and future research opportunities encompassing tourism activities and residents’ QOL scholarship. Future research opportunities highlighted include an expansion of ontological and epistemological issues in relation to research related to resident attitudes to tourism and quality of life in indigenous communities.

Keywords: indigenous communities; quality of life; resident perceptions; tourism; tourism activities

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Introduction

The global focus of rising overtourism makes it imperative for tourism research to focus on the quality of life of local residents and how it is impacted by tourism activities. Subsequently, an area gaining increased attention in tourism scholarship is the link between tourism activities, and its impacts on the quality of life of residents who live in tourism-active communities (Ouyang, Gursoy, & Chen, 2019; Gursoy, Ouyang, Nunkoo, & Wei, 2019; Movono & Becken, 2018). A tourist destination that delivers a rich QOL for its residents can sustain offering high-quality tourism experiences, while a destination that delivers poor QOL for its residents may offer an inadequate tourism experience (Uysal, Perdue, & Sirgy, 2012). Tourism academics have explored the contribution that tourism makes to various aspects of QOL of residents of tourism-active communities (Ma & Kaplanidou, 2017; Moscardo, 2009). The concept of QOL “is concerned with understanding people’s perceived satisfaction with the circumstances in which they live” (Moscardo, 2009, p. 162). As a term, it is difficult to define and “is considerably value laden and values differ across individuals and cultures” (Lloyd & Little, 2005, p. 150). The study of QOL dates back to early twentieth-century research carried out in the United States, which sought to evaluate standards of living. Expanding beyond the social sciences in the 1970s, the study of QOL provides a basis for understanding the ways in which various factors in a person’s situation influences that person’s sense of wellbeing (Orange, 1995; Suntikul et al., 2016).

QOL research studies ways in which factors in a person’s social environment contribute to or detract from the quality of people’s lives. QOL measurement refers to a scale that differentiates between “better” and “worse” perceived states. These factors are either subjective – related to one’s perceptions and feelings – or objective – related to measurable or tangible aspects of the possibilities and resources a person has access to (Campbell, 1974).

Based on desk research and a systematic literature review, this paper reviews definitions and conceptualizations of tourism and QOL and critically examines selected theoretical frameworks and main themes of extant empirical research, with a focus on Pacific context.

Tourism and Quality of Life

Tourism activities can affect the QOL of a community that has embraced tourism development by way of social, economic, cultural, and environmental impacts (Moscardo, 2009; Cecil, Fu, Wang, & Avgoustis, 2010; Khizindar, 2012; Kim,
Uysal, & Sirgy, 2013; Nunkoo, Smith, & Ramkissoon, 2013; Sharpley & Telfer, 2014). A community embraces tourism based on the premise that an increase in income from tourists will improve the community’s QOL (Andereck & Jurowski, 2006). Kim (2002) undertook one of the first studies that linked tourism impacts and QOL. The result of her study indicated that residents perceived tourism impacts and these in turn influenced their sense of well-being in both subjective and objective terms.

As a multidimensional concept, resident QOL is impacted by tourism activities (Sharpley & Telfer, 2014). These impacts are both negative and positive and they have significant implications for tourism policy makers and practitioners. More importantly, these impacts come at a cost, in particular on the local people who act as “hosts” to tourists (Wall & Mathieson, 2006). Positive resident perceptions of tourism is a critical factor in tourist satisfaction and is vital for a successful tourism industry (Andriotis & Vaughan, 2003).

A “happy host” or the goodwill of local residents is a critical component for a sustainable tourism industry (Jurowski & Gursoy, 2004). Two key tourism development models, Doxey’s Irridex Model and Butler’s Tourist Area Lifecycle model outline the extrinsic dimension that closely relate to tourism development and community reactions. Doxey’s (1975) Irridex model suggests that resident attitudes towards tourism may pass through a series of stages, from euphoria, through apathy and irritation to antagonism as perceived costs of tourism exceed benefits. These progressive stages and Butler’s (1980) tourist area life cycle model are closely linked. There is a close parallel to adverse community reactions to tourism development in line with the growth of mass tourism in destinations. It is therefore imperative that academic research continue to play a pivotal role in improving QOL for residents, tourists, and other major stakeholders in terms of measurement, policy and direction frameworks.

Kim (2002) undertook one of the first studies that tried to link tourism impacts and QOL. She experimented with a model that links community residents’ perceptions of tourism impacts (social, cultural economic, environmental) with resident satisfaction with particular life domains (including material, community, emotional, health and safety wellbeing) and life satisfaction. The results from her study indicated that residents perceived tourism impacts and these in turn influenced their sense of well-being in various life domains, which in turn affect overall QOL.

The positive and negative impacts of tourism is an area that has been widely
researched in tourism studies (Andereck, Valentine, Knopf, & Vogt, 2005; Pizam, 1978). Wall and Mathieson’s (2006) pioneering work on tourism impacts showed that tourism impacts, both positive and negative, can be seen from several different perspectives: economic, social, cultural and environmental. In relation to positive economic impacts, literature shows tourism helps improve standard of living (Belisle & Hoy, 1980), increases investment (Liu & Var, 1986), increases business opportunities (Prentice, 1993). Negative economic impacts of tourism, as shown by the literature, include inflated property taxes (Perdue & Gustke, 1991), inflated prices of goods and services (Weaver & Lawton, 2001), and land price increases (Lundberg, 1980). Social impacts of tourism can be both positive and negative. Negative social problems cited in extant literature include traffic congestion problems, overcrowding of public spaces, and littering. Social problems also include gambling, prostitution, begging, cultural deterioration, and drug trafficking (Andereck et al., 2005).

Literature also highlights that tourism can have positive and negative influences on culture. Tourism has often been criticized for disrupting or weakening traditional cultural practices, to some extent exploiting culture for commercial purposes (Pearce, Moscardo, & Ross, 1996). On the positive side, tourism is viewed as a major force for rejuvenating cultural practices (Wall & Mathieson, 2006). For example, tourism activities have led to transformational change and contributed to the upgrading of public facilities like outdoor recreation facilities, parks, and roads (Liu & Var, 1986; Perdue & Gustke, 1991).

Tourism activities can also have positive and negative impacts on the environment. The literature points out that tourism boosts a greater awareness of the need to preserve the physical environment for tourist purposes and increasing investment into the tourism infrastructure of the host country (Var & Kim, 1989). Often touted by environmentalists as a clean industry, tourism is also seen to reduce pollution and improve the physical appearance of communities (Perdue & Gustke, 1991). On the other hand, tourism is also seen as a major contributor to environmental problems like pollution, destruction of natural resources, and depletion of wildlife (Var & Kim, 1989).

Definitions of Quality of Life

QOL, as a universal concept, appears in academic literature dating back to Plato and Aristotle, and grew out of a concern that economic indicators were not sufficient to adequately measure the QOL of populations (Rapley, 2003). Researchers have articulated different meanings to the term, “quality of life”, and also pointed out that
the term itself was used interchangeably with words like “happiness”, “life satisfaction”, “well-being”, “welfare”, which were quite similar in terms of interpreting human values and virtues (Easterlin, 2003; Veenhoven, 2000). Literature shows that there are many existing definitions of QOL, and there is no consensus on an industry standard definition. QOL is also multidimensional in nature (Moscardo, 2009; Schuessler & Fisher, 1985; Uysal, Sirgy, Woo, & Kim, 2016). Nobel laureate Amartya Sen (Sen, 1999) argued that the definition of QOL should move beyond economic indicators.

**Definitions Used by International Organisations**

We will now briefly look at several definitions that are being used by major international organizations to assist us in this discussion. The World Health Organization (WHO, 2019) defines QOL as:

> individual perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person’s physical health, psychological state, level of independence, social relationships, and their relationships to salient features of their environment.

In relation to the above definition, the dominant measuring instrument widely used by the WHO is called the World Health Organization Quality of Life Instrument (WHO-QOL), which references six main broad domains of QOL: physical, psychological, level of independence, social relationships, environment, economic and spiritual domains (Pukeliene & Starkauskiene, 2011). As the leading global authority on health, the WHO’s definition revolves around health-related QOL issues to encompass a multi-dimensional construct that includes physical, mental and social domains. These include measurements in relation to living standards, life expectancy, literacy rates, and socio-economic status (Saxena et al., 1997). However, recent research has questioned the efficacy of this definition as lacking the scope to include other elements that are deemed important by communities. For example, McCabe and Johnson (2013) discuss the fact that there is more to life than satisfaction, and suggested the inclusion of personal development into the framework of the existing definition to make it more relevant to today’s QOL landscape. It may also be argued that the WHO definition is based on developed countries understanding of QOL, and this may be quite different from how communities in less developed countries perceive QOL (Buzinde, Kalavar, & Melubo, 2014; Usher & Kerstetter, 2014). For example, recent research on indigenous communities on tourism and quality of life
in Tanzania show that these communities place a high priority on land, cattle, and children in terms of QOL measures that may suggest that the values or priorities of these communities are quite different from those of the developed world.

The Organization for the Economic Cooperation and Development defines QOL as “the notion of human welfare (well-being) measured by social indicators rather than by quantitative measures of income and production” (OECD, 2007, p. 6340). When compared to the World Health Organization definition, it is clear that the OECD definition focuses on the values of things over and above income and production. At an individual level, Hagerty et al. (2001) define QOL as a term that implies the quality of a person’s whole life, not just a separate component part. Cummins (1997) defines QOL as being both objective and subjective, each axis being the aggregate of seven domains: material wellbeing, health, productivity, intimacy, safety, community, and emotional wellbeing. Objective domains include culturally relevant measures of objective wellbeing, while subjective domains cover domain satisfaction weighted by the importance to the individual.

The United Nations refers to the Human Development Index (HDI) covering three specific dimensions: a long and healthy life, knowledge, and a decent standard of living (Massam, 2002). The HDI was developed in response to the recognition that GDP, as a measure of a country’s wealth, was not representative, or a holistic measure of a country’s well-being. Other macro-economic measures included by the HDI index include not only economic variables (GDP), but also education (literacy and student enrolment) and health (life expectancy, mortality rates), in order to provide a better understanding of “wellbeing”. A study situated in Nicaragua used the HDI index in the context of tourism, and found that tourism development triggered human development (health, education, living standards), which subsequently further develops tourism (Croes, 2012).

At this point, it is appropriate to point out that recent research on QOL has focused on two main measurement methodologies: subjective well-being and objective well-being. Subjective wellbeing, focusing on attitudes and feelings, centres on issues like happiness, pleasure and fulfilment (Diener & Lucas, 1999; Easterlin, 2003). Objective wellbeing focuses on measurable or quantifiable elements of QOL, like food and shelter, and can include indices of economic production, e.g. Gross Domestic Product, literacy rates, and life expectancy (Constanza et al., 2008). The literature also notes that there is a move to integrate or combine objective and subjective approaches, as there is widespread belief that there is an overlap between each domain (Andereck & Jurowski, 2006). Moscardo (2009) posits that even though
there is no consensus on a common definition, there is considerable agreement on the key elements of QOL. These include basic physiological needs (food, water, good health, physical protection from harm), security (including a stable place to live and work), belongingness (including links to supportive social networks and opportunities to participate in social, cultural and political activities), and self-esteem (including knowledge and confidence, and the ability and freedom to make choices).

**Key Domains**

Academic scholars have highlighted key domains when investigating QOL, including material, health, productivity, intimacy, safety, community, and emotional well-being (Kim et al., 2013). Cummins (1997) also looked at studies that covered 173 descriptors of life satisfaction that covered each of the domains in detail. Kim et al. (2013), in examining the concept of overall QOL, also looked at four key domains: material wellbeing, community wellbeing, emotional wellbeing and health and safety wellbeing. In their study, standard of living, income, and employment were covered under the wellbeing domain, while leisure activity and spiritual activity were covered under the emotional wellbeing domain.

So, what is QOL, and which domains are more important than others? Angus Campbell, widely considered the father of QOL research, talks about the term as being similar to the word, “ecotourism”, in the sense that everyone uses it but no one clearly knows what it means; he refers to it as an ambiguous and ethereal entity (Campbell, 1974). Perhaps this refers to the fact that QOL is inherently abstract concept that has to be made concrete to be clearly understood. This is further complicated by the proliferation of various models, scales, domains and frameworks.

**Universal Definition Elusive**

It is clear from the above discussion of definitions of QOL that achieving a common or united platform to define QOL remains elusive, particularly in terms of measurement, definition and policy. As with all academic research, it is critical to have definitions so that the scope and boundaries of debate is clear. Perhaps, given the broad, multidisciplinary and multidimensional nature of the concept, as well as the objective and subjective scopes of meanings, this elusive issue may take time to be addressed by both academics and practitioners alike. Perhaps an integrated approach that uses a multidisciplinary approach that considers the values of the residents, tourism development needs, and sustainable principles could arrive at a new position that caters for all related players and priorities. This paper suggests that within the process of coming to a widely-accepted definition of QOL, care should be
taken to ensure that each person is treated as an individual and their individual values, perceptions, and priorities in relation to their environment, economy and society.

A very simple diagram (Figure 1) below shows the key elements that represent the main domains of QOL. The diagram illustrates that QOL is divided into four domains: material wellbeing, health and safety wellbeing, community wellbeing, and emotional wellbeing. Income and employment, and costs of living are elements that are included in the material wellbeing domain. The provision of community service and facilities, and resident wellbeing are included under the community wellbeing domain. Emotional wellbeing covers issues that include quality of leisure time and activities, and richness of cultural life. Health and safety wellbeing covers issues like air and water quality, in addition to safety and security considerations (Kim et al., 2013; Sirgy, Widgery, Lee, & Grace, 2010).

Figure 1. The Effect of Tourism on Quality of Life

![Diagram of Quality of Life](image)

Source: Sirgy, 2011

Examining Selected Theories of QOL

The literature suggests that several theoretical frameworks dominate the discussions on tourism activities and QOL. For the purpose of our discussions, three major theoretical frameworks are highlighted for dialogue. They include social exchange theory, social representations theory, and Bottom up spillover theory.
Social Exchange Theory

Social exchange theory, adapting principles from behavioral psychology theory and utilitarian economics, is based on the central idea that the exchange of social and material resources is a very basic form of human interaction (Ap, 1992). When related to tourism, it views the social interaction between tourists and local residents as a process of negotiation or exchange and considers it as a sequential process, the first stage involving the tourist and the resident being motivated to enter into an exchange (Ap, 1992). For the second stage to be successful, the exchange must be based on fairness, reciprocity, rationality, and satisfactory outcomes. Social exchange theory posits that if the exchange is somewhat unbalanced, or unfair, or benefits do not materialize, then no exchange will occur as the process will be evaluated negatively (Sharpley & Telfer, 2014). As a case in point, an empirical study used social exchange theory to examine resident reactions to tourism in West Virginia, United States (Gursoy, Jurowski, & Uysal, 2002). Results showed that the perception of tourism impacts is a result of assessing benefits and costs and that this evaluation is clearly influenced by issues that residents value. Similarly, an empirical study by Jurowski and Gursoy (2004) of residents in Virginia, USA, using social exchange theory, found that residents supported tourism development as it was seen to provide benefits to their community.

Several drawbacks or criticisms of social exchange theory are discussed here. A glaring gap is the lack of cultural context in the norms and rules that regulate social exchange. Social exchange theory is based on the concept of rewards, but cultures are different and in some cultures, its members do not seek a reward for a relationship. The theory is criticized as being too narrow to explain complex social relations (Moscovici, 1981). For example, in the case of Fijian villages, it is considered a duty to commit to village obligations, and no reward is sought when village members are asked by the village headman or turaga ni koro to sit in the community hall and welcome tourists (Cropanzano & Mitchell, 2005). In addition, the reference to economic models reduce social exchange theory to a set of market-like exchanges of material objects driven by extrinsic motivations like gain – assuming that people are all individualistic – and reward seeking. This may become challenging when applied to the Fijian social context, where the lifestyle is generally a communal and not an individualistic one (Ravuvu, 1983). A major criticism of this theory relates to its lack of theoretical precision, which limits its applicability. There is a lack of information on various exchange rules – for example altruism, group gain, status and competition (Cropanzano & Mitchell, 2005). Lastly, the theory assumes that human beings act rationally when deciding on an exchange, as per economic
theory assumptions. This rational behaviour is not always the case, as can be seen from observed daily behaviour.

**Social Representations Theory**

According to Moscardo (2009), social representations are “the mental constructs which guide us and define reality” (p. 12). They are both concrete and abstract images and are a means for constructing and understanding social reality. Social representations are influences in a particular society, a set of ideas, values, knowledge, and explanations that comprise a social reality (Moscovici, 1981). As such, social representations theory is closely related to the notion of the social construction of reality, which points out that people’s daily realities are maintained through social interactions with family, friends, and strangers (tourists, in this context) (Berger & Luckmann, 1966). Moscardo (2009) posits in her article that a critical examination of tourism research may be limited by social representations that academic researchers hold. For example, many researchers use the adaptancy platform, which reflects a social representation of tourism as good (Jafari, 1987). Perhaps a possible explanation of this view is that it represents the neoliberal approach associated with the travel industry and the travel interests of the academic researchers themselves, combined with a genuine motivation to seek positive outcomes (Moscardo, 2009). This theoretical platform is similar to attitudes used in psychological studies that exemplify this concept as they arrange information for individuals and assist in directing their actions and evaluations.

Social representations theory was used as a theoretical framework in an empirical study of Australia’s Gold Coast Indy Car event, and the study found that, although there is overwhelming support for the event, residents do recognize that there are negative impacts involved as well (Fredline & Faulkner, 2000). Support for the event comes by way of residents recognizing that the event brings about community self-esteem, business, and employment opportunities, and promotional impacts. However, these Gold Coast residents are also fully aware that the Indy Car event also contributes to increased noise levels, traffic congestion, overcrowding, and lifestyle disruptions (Fredline & Faulkner, 2000). This empirical study underlines and reaffirms the fundamental concept of social representations theory in its findings. In this particular case, the residents’ interpretations of the event are based on their own experiences and backgrounds, and this shapes their reality in relation to the Indy Car event.

Social representations theory has several drawbacks in relation to tourism research.
Moscovici, the father of social representations theory, based his theory on Durkheim’s (1989) notion of collective representations. Durkheim’s work presents collective representations as a very general category that includes broad elements like science, ideology, myths, and worldviews. Durkheim does not distinguish between these different forms of organized thought, which leads to a lack of clarity and distinction, or of being too broad and too vague, subsequently one of the weaknesses of Moscovici’s theory (Voelklein & Howarth, 2005). In addition, collective representation does not take into account the mobile and heterogeneous nature of contemporary societies (Howarth, 2001). Another major criticism of social representations theory relates to its overly cognitive phenomenon that does not include adequate reference to social influences (Jahoda, 1988; Semin, 1985). An undue focus on cognitive psychology, and a lack of emphasis on social values, beliefs, and norms leads to the theory becoming overtly focused on the individual (Voelklein & Howarth, 2005).

**Bottom up Spillover Theory**

The basic premise of bottom up spillover theory is that life satisfaction is functionally related to all satisfaction with all of life’s domains and sub domains. Life satisfaction is deemed to be on top of a satisfaction ladder. It recognizes that satisfaction with one’s life is mostly determined by satisfaction with a variety of life domains. For example, one’s overall satisfaction with life is influenced by satisfaction with family, social, leisure, health, work, financial, and travel opportunities (Kruger, 2012). The theory posits that effects within a specific life domain accumulate and vertically spill over to super-ordinate domains (e.g. life in general). It can be said that tourism impacts have an effect on life domain satisfaction, which in turn have an effect on satisfaction with life overall. For example, the more residents perceive economic opportunity from tourism, the more they may feel better about their material wellbeing. Empirical studies that have referenced bottom up spillover theory include Woo, Kim, and Uysal (2015), Kim et al. (2013), and Bimonte and Faralla (2016).

An empirical study undertaken in the Mediterranean town of Follonica utilized the bottom up spillover theory as its major theoretical lens through which to view how residents perceive life satisfaction in relation to tourism. Data analysis showed that residents’ happiness was influenced by a wide range of material elements, including material aspects like income and work, but also by non-material aspects, like health, family, friendships, and sentimental situations. This is a crucial aspect that needs to be understood by policy makers and practitioners alike, as hosts are an indispensable part of any sustainable tourism development within any community (Sharpley, 2008).
The literature reflects that the difference between QOL and attitudes/impacts studies is one that relates to measurement and semantics, given that the studies generally include the same type of measures (Andereck & Jurowski, 2006). Generally, attitude/impact studies focus on the ways people perceive tourism’s influence on communities and the environment, whereas QOL studies deal with the ways that these impacts affect individual or family life satisfaction, including satisfaction with community, neighbourhood, and personal circumstances (Allen, Long, Perdue, & Kieselbach, 1988). It is assumed that there is a link or connection between community characteristics and life satisfaction. Attitude and impact studies have generally asked residents to agree or disagree with statements in relation to tourism’s perceived impacts on their community without specific questions linking these impacts to perceived influences on an individual’s life satisfaction or QOL (Andereck et al., 2005).

**Sustainable Tourism Attitude Scale (SUS-TAS)**

As discussed earlier in this essay, a variety of theories, measurement tools, and frameworks have been used when measuring residents’ QOL impacts resulting from tourism development (Tyrrell, Paris, & Biaett, 2013). Along with the shift from the narrow focus on mainly economic impacts and the individual, to a community-focused approach that considers socio-economic wellbeing, is the need for an integrated measurement model. A highly-innovative, empirical study needs to be highlighted here in relation to tourism and quality of life methodology (Yu, Chancellor, & Cole, 2011). When surveying 649 residents of Orange County, Indiana, USA on the perceived impacts of tourism on quality of life, a pioneering measurement tool called the Sustainable Tourism Attitude Scale (SUS-TAS model) was utilised. This attitude scale is designed to address the shortcomings of existing models, theories and tools that measure perceptions of positive/negative impacts of tourism. One such model is Lankford and Howard’s (1994) Tourism Impact Attitude Scale.

This SUS-TAS model reflects the paradigm shift towards a sustainability platform in QOL measurement categories. The SUS-TAS model aims to capture resident attitudes towards sustainable tourism development by explicitly integrating seven sustainability criteria, namely economic benefits, sociocultural impacts of tourism, community-based benefits, visitor satisfaction, environmental sustainability, long term planning, and community participation. According to Sirakaya-Turk, Ingram, and Harril (2008), the tool not only gauges community sentiments towards sustainable tourism development, but also provides a tool to measure the major
dimensions of resident quality of life.

**Empirical Research**

While it is explicitly understood that tourism provides positive impacts for residents, much less is understood about these types of benefits and costs (Weiermair & Peters, 2012). The pertinent research question being asked is, “how do tourism activities impact residents’ QOL”? In other words, how do tourism activities influence an individual’s QOL? Tourism activities are viewed by residents of tourism-active communities as a form of development that positively and negatively influences community quality of life (Andereck & Nyaupane, 2011; Buzinde et al., 2014; García, Vázquez, & Macías, 2015; Usher & Kerstetter, 2014). Once a community becomes "tourism-active", the lives of residents within that community are affected by tourism in many ways (Gursoy et al., 2002). An empirical study that examined the tourism-active community of Las Salinas, Nicaragua found that tourism activities contributed positively to their QOL, which included meaningful employment, preservation of monuments, increased QOL, and preservation of resident identity and cultural pride (Usher & Kerstetter, 2014). Despite these positive findings, residents lamented about various negative issues that included lack of work, substance abuse, health problems, and environmental degradation.

A similar finding was reported by Andereck and Nyaupane (2011) who found that residents in Arizona perceive both the positive and negative influences of tourism in their communities. Buzinde et al. ‘s, (2014) empirical research also reaffirms this duality by the acknowledgement that the Masai tribes in Tanzania regarded tourism as a form of development that positively but also negatively influenced their wellbeing. Residents do perceive that tourism activities have a positive influence on their QOL, especially with regard to the availability of recreation amenities and feelings of community pride. They also perceive that tourism positively influences the economy, facilitates the preservation of natural and cultural resources, can enhance community wellbeing, and has an overall positive influence on their way of life. On the other hand, residents also recognize that tourism can have negative QOL consequences, such as more crime and urban issues (Andereck & Nyaupane, 2011). The Tanzania study also highlights that definitions of QOL must have an emic approach to ensure that cultural differences are taken into account and avoids western characterization of well-being and QOL issues. This is particularly relevant in indigenous communities who have embraced tourism as a tool for economic and social growth or development.
Resident demographic variables are seen to play a significant role in how QOL was perceived (Garcia et al., 2015). An empirical study undertaken on resident perceptions of tourism development in Spain found that age, marital status, parental status and level of education were strong predictors of positive attitudes towards tourism’s impact on the environment, the economy, and socio-cultural life. The study found that its youngest residents, compared to those aged 45-64, were found to have more favourable perceptions of tourism’s effects on the local economy. Married residents, compared to unmarried residents, showed more positive attitudes towards overall tourism influences on their QOL.

Beyond Impacts

An emerging trend that was identified while reviewing research was the move beyond attitude or perceptions research, and the subsequent focus on directly examining individual or resident perceptions of the impact tourism has on their QOL, and relationships between QOL perceptions and support for tourism in the community (Andereck et al., 2011, Andereck et al., 2005). Andereck and Nyaupane’s work (2011) that examined residents of Arizona represents this new research trend that goes beyond attitude research and explicitly considers tourism’s influence on QOL. The authors suggested a new measurement method for investigating resident perceptions, called the Tourism and Quality of Life Measure. This TQOL measure suggested a subjective approach consistent with that developed in sociology, and they hope that this new TQOL tool will provide a more accurate assessment of the manner in which residents view tourism in their communities, and the way it affects their lives.

Two empirical studies deserve individual attention in relation to our current discussions. The first one concerns an ethnographic case study of Las Salinas, Nicaragua, which looked at understanding resident perceptions of their QOL in the face of tourism development (Usher & Kerstetter, 2014). It stood out as it looked at a developing country and used an ethnographic approach to its study. Three weeks of participant observation and resident interviews with 27 residents focused on different dimensions of QOL – health, prosperity/jobs, social relations, nature and religion. The results showed that residents were positive in their QOL in the face of tourism development. The positive perception was traced back to two dominant issues: the distance of the tourism development from the city centre of La Salinas; and residents still having control of their communal lands. Quite interestingly, residents were not making the link between environmental degradation and tourism impacts. What the study does is address an existing gap in empirical research using
an ethnographic approach to assess perceptions of QOL and tourism development, particularly within the space of less-developed countries.

The second empirical study that provides a compelling viewpoint is the study published recently on a rural Masai tribe community in Tanzania (Buzinde et al., 2014). Using a development theory and sustainable tourism approach, the study explored how tourism influences indigenous perceptions of QOL. For the Masai tribe, QOL priorities are children, livestock, and land resources. Money was rated lower as a priority. Tourism development was perceived to have both positive benefits in terms of employment opportunities, the elevation of the status of women while negative impacts centred on land use conflicts and loss of cultural values. Adopting a bottom up approach to examining indigenous conceptions of QOL and to understand how tourism influences indigenous experiences, the paper reflects the need for more dialogue between externally defined measures of QOL and localized conceptions of wellbeing (Buzinde et al., 2014). It reiterates the point made by McCubbin, McCubbin, Zhang, Kehl, & Strom (2013) that the enhanced understanding and incorporation of indigenous worldviews and knowledge in current indigenous tourism discourse will improve the resilience of these communities. This is not only an ethical imperative but also a pragmatic approach to ensure that the outcomes of academic research facilitate the sustainability of indigenous tourism (Whitford & Ruhanen, 2016).

**Small Island Destinations**

Lately, several case studies have highlighted or focused on small island destinations engaged with tourism development, including Aruba in the Caribbean (Croes et al., 2011); Cyprus in the Mediterranean; Mauritius in the Indian Ocean (Sharpley & Naidoo, 2010); Fiji in the Pacific Ocean (Pratt, McCabe, & Movono, 2016); Sitka in Alaska (Vogt, Jordan, Grewe, & Kruger, 2016); and Magnetic Island in Australia (Pearce et al., 1996). A major theoretical proposition gleaned from the above island case studies is that the relationship between income and happiness of residents in small island destinations is not self-evident. This argument backs up existing evidence in the happiness literature and points to other factors that may be at play in influencing the nature of the relationship between income and happiness. In essence, while tourism development may provide income to households in small island destinations, resident wellbeing is not necessarily improved. Therefore, income may not be an adequate substitution for wellbeing and instead may be insufficient to understand resident wellbeing – in this case transcending culture, history and political status.
Pacific Indigenous Communities

A body of literature has recently emerged on indigenous communities and their tourism and QOL dynamics. Highlighting indigenous worldviews on tourism impacts on their QOL, studies were conducted -- for example, in Tonga (Dyall et al., 1999), Australia (Greiner, Larson, Herr, & Bligh, 2005), Mauritius (Sharpley & Naidoo, 2010), Aruba (Croes et al., 2011), Hawaii (McCubbin et al., 2013), Tanzania (Buzinde et al., 2014), Nicaragua (Usher & Kerstetter, 2014), and Alaska (Vogt, Jordan, Grewe, & Kruger, 2016). The above-mentioned studies reflect significant similarities, as well as differences, which focus on the social, cultural and psychological needs of people, their families, institutions and communities in order to understand the various elements that impact well-being or QOL. The notion of family and community resonates deeply and widely among the majority of the studies mentioned above. The Australian study of the Nywaigi traditional owners cites family and community as priority in their QOL, followed by health and health services (Greiner et al., 2005). Similarly, a study on native Hawaiians (based on 2008 Hawaii Health Survey Data) suggested that Hawaiians valued family commitment and involvement and contribution to one’s community as highly valued in their construct of QOL. The above studies also suggest that extant measures of QOL, which are guided by European values and beliefs, are limiting, and alternative conceptualizations need to be considered to accommodate indigenous worldviews (McCubbins et al., 2013).

South Pacific research suggests that, while most of the earlier work focused on underdevelopment perspectives of tourism (Britton, 1982; Racule, 1995; Varley, 1978), more recent work has emerged in relation to tourism impacts and quality of life of communities, predominantly in Fiji (Kerstetter & Bricker, 2009; King, Pizam, & Milman, 1993; Pratt et al., 2016; Movono & Becken, 2018; Matatolu, 2018). Britton’s (1982) ground breaking work on Fiji tourism deserves special mention as it frames the scope of tourism development discussions within the South Pacific context, which certainly influences contemporary tourism and quality of life. Of particular importance is his quote below:

When a third world country uses tourism as a development strategy, it becomes entrenched in a global system over which it has little control… the international tourism industry is a product of metropolitan capitalist enterprise…. the industry, because of the commercial power held by foreign enterprise, imposes on peripheral destinations a development mode which reinforces dependency on, and vulnerability to, developed
countries. (Britton, 1982 p. 22).

We now focus on recent studies undertaken in the South Pacific region on this area of tourism research. A recent case study of Sautabu village residents’ perceptions of tourism and its impacts on their QOL undertaken by Matatolu (2018) highlighted that the residents’ QOL priorities are culturally informed or closely mirror their cultural values. Sautabu residents highlighted the land (vanua), family (vuvale) and faith (lotu) as key priorities in their QOL. The Vanua, which is at the heart of being Fijian, refers to the interconnectedness of Fijians to their land, environment, culture, relationships, spirit world, beliefs, knowledge systems, values, and God/s. (Nabobo-Baba, 2006). Respondents’ statements included, “without the vanua, we are nothing”; “our land will always continue to be an important part of our identity as indigenous Fijians” (Matatolu, 2018, p. 72). Within the context of indigenous Fijian communities, land becomes more than a physical commodity as normally seen through the western gaze. Often these go into spiritual dimensions and residents may choose not to share spiritual insights with visitors or they may restrict certain areas in the village that are considered sacred (Hollinshead, 1996). The Sautabu tour guide shared that tourists who visit Sautabu village are not allowed to go into the chief’s bure or the burial grounds, as this is considered sacred by the villagers (Matatolu, 2018).

Movono and Becken (2018) explored how tourism development has impacted a Fijian village’s development pathway, and explored how preferential access to tourism benefits has created disparities among residents of the community. The study found that tourism contributed to new behaviours and new ways of life, leading to the collapse of pre-existing systems of social capital. Showing community resilience, residents retreated and regrouped and formed smaller social groups and strengthened their social bonds. Pratt et al.’s (2016) study looked at how tourism contributed to holistic QOL by studying two Fijian villages – one with a high dependency on tourism income and the second considered untouched by tourism or zero benefit from tourism development. This study assessed whether tourism contributes to holistic QOL, or simply phrased in question format, “does tourism make people happy?” Using an adapted version of the Bhutan Gross Happiness Index, the study compared the level of wellbeing of these villages in relation to tourism’s contribution to overall QOL. The Gross Happiness Index is a tool to assess the overall happiness of a community or country. Nine key dimensions are used: psychological wellbeing, time use, community vitality, cultural diversity, ecological resilience, living standards, health, education, and good governance. Results showed that despite the tourism-dependent village being materially wealthier, the non-tourism village residents were
generally happier across a number of life domains. These domains included health, cultural diversity and resilience, good governance, community vitality, and ecological diversity and resilience.

Even though the tourism-villagers benefited financially from tourism in terms of jobs and income, the non-tourism villagers believed they were wealthier in terms of kinship and traditional ties and fewer concerns about money and material wealth. Another possible reason for the more positive response from the non-tourism village could be explained by cultural nuances. Fijians, out of their perceived obligation to please, will be inclined to tell you the more positive responses first, so researchers need to spend more time and dig deeper. Given the fact that this particular example was a case study, the question of how representative this study is to other villages across Fiji remains in question. This paper suggests that more research on villages with varying levels of exposure to tourism can address this criticism. In addition to studying residents, surveying workers in the tourism and hospitality industry would provide rich data to add to the depth and scope of research quality in indigenous community spaces. These innovative studies point to the critical importance of issues that must be considered by policy makers and practitioners in the development of sustainable tourism development policies and plans in small island developing spaces in the South Pacific.

A contemporary empirical research study undertaken in Fiji and using innovative methodology in relation to host perceptions of tourism and QOL also needs to be highlighted here. Kerstetter and Bricker (2009) undertook empirical research in one of Fiji’s most remote and less developed tourism archipelagos, the Yasawa Islands. These remote islands face many challenges in economic development and in the last two decades have seen a growth in backpacker type tourism. This growth is partly the result of the Ministry of Tourism’s efforts to increase visitor arrivals into Fiji (Fiji Visitors Bureau, 2006). Today there are nearly 40 resorts in the Yasawas, with most directly linked to villages or community-based. This means these resorts are managed and maintained by these communities (Gibson, 2012). The Yasawas now host more than 545,000 visitors per year (Ministry of Tourism IVS Report, 2014). This growth has not come without its challenges. Pressure on freshwater supply, lack of sewage treatment facilities, no coordinated solid waste management program, unlicensed properties, and social tension among community members are key issues facing this tourism region in Fiji.

These issues certainly impact the QOL of these communities in many ways. Using photo elicitation as a methodology to give voice or attach meanings to their places,
the researchers found results quite distinct from similar research in western spaces. They found that residents value the Fijian way of life, the culture, the *vanua* and its traditions. *Vanua* is a distinct phenomenon in the Fijian context, where it describes a Fijian’s connection with their environment. It does not only mean land but also refers to its social and cultural systems – the people, their traditions, their beliefs, values, customs, and institutions that play a role in achieving harmony and solidarity within their social context (Ravuvu, 1983). Residents also placed a high value on environmental protection, which they saw as central to both their QOL and also tourism. These meanings comprised major aspects of tourism development, including economic benefits, sociocultural benefits, environmental benefits, tourism accommodation, and facilities. These highlighted issues are important considerations for tourism planners and marketers in Fiji, as they represent critical issues that are important for residents’ QOL who reside in tourism regions in Fiji (Kerstetter & Bricker, 2009). It can be argued that these provide an interesting departure to extant QOL literature, which highlights predominantly western characterization of wellbeing with values like money, income and material wealth considered of paramount importance in western spaces (Kim, *et al.*, 2013).

**Key Gaps**

Given the scope and range of empirical research discussed above, we now highlight key gaps. The majority of the empirical research is situated within developed countries and there is a need to push for similar studies in developing countries and small island spaces, as these spaces have embraced tourism development as an engine of economic growth for their economies (Sharpley & Telfer, 2014). It is no coincidence that in 2014 the top ten countries in which tourism contributed relatively most to GDP were all islands (World Travel and Tourism Council, 2015). Little attention has been made specifically to the implications of tourism development for the wellbeing of the residents of small island states, including the South Pacific region. In addition to being rare, these studies have also neglected to review the types of tourism that are frequently typified in these spaces, such as resort-based tourism, or enclave tourism (Sharpley & Naidoo, 2010).

**Cross Cultural Studies**

There is also a need to develop cross-cultural QOL studies as most communities that embrace tourism now are comprised of diverse cultures, including indigenous and minority cultures, as all relevant groups within a community must have a voice (Andereck & Jurowski, 2006). Effects of tourism development and seasonality may
be different for different types of people (Butler, 1980). In addition, such cross-cultural studies must be in a position to use bi-lingual survey instruments to be able to capture the required depth of understanding required from these qualitative-driven studies (Andereck & Jurowski, 2006). This is especially true of communities for which English is not their mother-tongue or first language.

**Ethnographic Studies**

Lastly, there is a critical gap in using an ethnographic approach to assess QOL perceptions and tourism development, particularly within Less Developed Countries (LDCs). Moscardo (2009) believed that lack of understanding of tourism impacts is a factor for underdevelopment of tourism in third world countries. The case study undertaken by Usher and Kerstetter (2014) of the Las Salinas community in Nicaragua was a classic and rare case of ethnography being used to examine resident perceptions of QOL in relation to tourism development. By living among residents for three weeks and developing a rapport with them, the authors were able to delve deeper and obtained a profound understanding of resident perceptions of QOL. They learned about the importance of jobs, the perceived role of government in QOL, poverty and the need for foreign aid, the impact of social ills like drugs and alcohol, health issues, the importance of family and community, and the role of the environment in resident views of QOL (Usher and Kerstetter, 2014).

**Universal Definition Lacking**

In addition to the above gaps, a lack of an agreed universal definition of QOL lends itself to many challenges in terms of definitions. QOL is not exactly the same as material well-being or standard of living, nor can it be the same as life expectancy, infant mortality, or literacy rates. QOL also has subjective components like happiness, life satisfaction, and recreation opportunities (Lankford & Howard, 1994). It is therefore imperative that future research on resident perceptions and QOL focus both on the objective and subjective components to be able to capture a more all-encompassing and inclusive assessment and measurement of QOL. Resident characteristics should also be considered when undertaking QOL and tourism impacts research. For example, if residents work in the tourism and hospitality industry, they are more likely to positively perceive the impact of tourism as compared to community residents who come from an agricultural-based economy. It is critical that this gap be addressed by future research. Similarly, the scope of perceived value in terms of measurement should be expanded to include functional, social, cultural, emotional and economic value when measuring the perceived value
of tourism development (Woo et al., 2015).

Future Direction

While the global focus of rising overtourism makes it imperative for tourism research to focus on the quality of life of local residents and how it is impacted by tourism, it is noted that there are several limitations of this current research area. The majority of the research undertaken so far has been done in the form of surveys in settings that vary widely in terms of the nature, scale, and stage of tourism development (Andereck & Jurowski, 2006). They also make a point of stating that even when a similar survey methodology is used, results are widely varied. It is also highlighted that most empirical research undertaken is quantitative in nature and there is a subsequent need for more qualitative methods of study to be applied in this research field to ensure that these studies maximize their opportunity to contribute to knowledge long term (Andereck & Jurowski, 2006; Deery, Jago, & Fredline, 2012). Interdisciplinary research in QOL studies is also needed within managerial (policy), behavioural, social, medical, environmental, psychological, and social sciences to enhance the development of knowledge in this critical area. In addition, studies are done in settings where tourism is embedded within the communities, so it’s difficult to isolate tourism’s effects from other wealth-creating activities, such as agriculture (Croes, 2012).

There is also a discrepancy in terms of the location or settings of these empirical studies. While dominated by studies in developed countries (Andereck et al., 2005; Andereck & Nyaupane, 2011; Carmichael, 2000; Lankford & Howard, 1994), very little work has been done in small-island destination spaces, including the South Pacific region (Bastias-Perez & Var, 1995; Gursoy, Chi, & Dyer, 2009). There is also a need to generate more studies with an ethnographic approach, so that a deeper understanding of the key issues is obtained (Andereck & Jurowski, 2006). In addition, there is a dire need to carry out research among indigenous communities and delve deeper into their social and cultural fabric so that the generalizability of findings can be improved (Sirgy et al., 2010). There is also a need to find a consensus in terms of definitions of key terms like QOL and measurement domains within this academic research space for obvious reasons (Andereck & Jurowski, 2006).

Any future research undertaken on the topic of tourism impacts and QOL needs to address the obvious need for a consensus in terms of definitions for QOL, as this will provide the much needed scope and direction within this field (Andereck et al., 2005; Sirgy et al., 2010). Tourists and community residents view or see life through
different gazes, so life domains that are important for tourists will be quite different for community residents. This was brought home very clearly in the empirical study undertaken in Tanzania, where livestock, children and land resources were rated much higher than money (Buzinde et al., 2014). Therefore, it is evident that life domains vary across communities, cultures and contexts. This major area needs to be addressed by future research in terms of the measurement and definitions of life domains. Any future research must also be carried out using different levels of analysis. These different levels include individual, family, community and country levels of analysis (Sirgy, Efraty, Siegel, & Lee, 2001).

Future research should also look at creating life domains by population group and settings. Tourists experiencing wildlife tourism may have different life domain perspectives to tourists on a cruise experience. Medical tourists may consider health life domain as critically important, while adventure tourists may consider leisure life domain as very important (Uysal et al., 2016). Kara, Kim and Uysal (2018) also point out that there is a need to carry out QOL research for employees in the tourism industry, as most of the research has been focused on community residents. A further exploration of QOL constructs in terms of outcomes and variables, along with support for tourism development as a dependent variable (Uysal et al., 2016), is needed as well. Finally, it is generally acknowledged that there should be an inclusion of longitudinal studies as most of the research reviewed earlier focused on the examination of tourism and its impacts on residents’ QOL at one point in time. It is critical to develop longitudinal studies that generate data at different points in time for obvious reasons.

Indigenous communities

Research on indigenous communities must also take centre stage as indigenous people and indigenous tourism is now a major part of global tourism’s fabric. The demand for indigenous tourism products has led to increased contact between non-indigenous people and indigenous communities, driving winds of change in the QOL of these communities. Perhaps the key issue is to ensure that the indigenous hosts play a greater role in controlling and directing the pace and nature of this contact. What is critically needed is the indigenous researcher’s voice to be heard to not only balance the non-indigenous voice, but provide a more accurate range of cultural perspectives. Smith (1999) speaks to the process as one that involves the decolonization of methodologies where western ethnocentric views are replaced by the evolving indigenous research agenda (Smith, 1999).
Conclusion

In summary, research on tourism and resident QOL shows that once a community becomes a tourist place or destination, the lives of the residents or “hosts” are affected at various levels, so the support of the hosts is critical for the sustainability of the tourism development (Jurowski, Uysal, & Williams, 1997). Therefore, the QOL of residents should be a major concern for all stakeholders. A universally applicable definition of QOL that covers major life satisfaction domains over and above the predominantly economic domains is needed. This is particularly important for the need to reflect the interdependent relationship between community QOL and the well-known pillars of sustainability: environmental quality, economic prosperity, and social wellbeing (Rogers & Ryan, 2001). There is also a need for an integrated assessment tool of the impacts of tourism on communities’ QOL that includes the cultural values of a community, measures the performance of the tourism industry, and provides concise information that allows decision makers to make informed decisions about tourism within the greater tourism system (Olsen, Canan, & Hennessy, 1985). More research is also needed in cross-cultural communities, in particular indigenous communities that have embraced tourism as a tool for economic growth. Indigenous communities present a complex interplay of cultures and their unique relationship with the land presents a rich field for research and scholarship within the tourism academy.

References


Explaining Policy Change in Samoa’s Mental Health System

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Abstract

Modern mental health systems are the products of successive waves of policy development and adaptation. This is particularly so in many low to middle income countries that inherited colonial mental health laws, and institutions often followed by legislative shifts at independence. But how otherwise do these systems change? And why do these systems change? This article applies historical institutionalism to consider policy change over time, in a single case study of a small island state, Samoa. In doing so, the article will consider three discrete policy change episodes to argue that national policy change in the area of mental health has been the result of foreign direction or influence. These three critical change events occurred leading to policy change: colonisation, independence and the intervention of an intergovernmental organisation. These findings are instructive for future, domestically-driven policy change initiatives, in providing the importance of historical policy development and the continuing importance of international policy advocates in promoting policy change.

Keywords: Historical Institutionalism; International Organizations; Mental Health; Public Policy; Samoa

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Introduction

Public policy and law in the modern nation-state are seldom novel creations. Instead, what we see rests upon the shifting sands of old and often decaying policies that have preceded them. This is true today for most states, whether they are former colonizers or the colonized. Yet, systematic study of these policies to better understand their unique legacies, a form of excavation, is seldom done. Since the early 1990s, one body of scholarship has sought to explore policy change in a historical context. This literature, known as historical institutionalism, has made great strides in creating a systematic approach to the study of policy movement (Krasner, 1984; Skocpol, 1992; Steinmo, Thelen & Longsreth, 1992). Yet, many of these studies have been conducted with the Organisation for Economic Cooperation and Development (OECD), and have not considered the transfer patterns within former European colonies and other developing and middle-income countries, despite these countries often having their own complex policy contexts and legacies.

This article aims to contribute to this growing literature on historical institutionalism through an examination of the establishment of Samoa’s mental health system, exploring critical historical events in its establishment. The article contributes to the study of public policy development by exploring the interaction and mechanisms between local policy contexts, and international exemplars of policy and law. An additional contribution is made by presenting new research and insights into policy transfer within a non-European and non-North-American context, which has been, to date, under-represented in this literature.

This article will proceed in four parts. First, historical institutionalism is presented as a useful, theoretical framework for organising the study of the movements of public policy, particularly those transfers occurring over time. Second, the article will outline the qualitative methodology employed to consider the empirical circumstances surrounding three waves of policy transfer of mental health policy and law in Samoa. These policy change episodes are then considered before a final discussion, where it is argued that these events occurred due to exogenous factors: the first transfer was a colonial era movement of custodial mental health law, and the second update to the law occurred along with a raft of other law changes during decolonisation. The most recent transfer again occurred at the instigation of foreign actors, but this time enjoyed greater domestic participation in the policy and law-making process. These three policy change episodes are considered together in the final part of this article, where some observations about the increasingly democratic and participatory nature of the transfer process are made.
Historical Institutionalism

Historical institutionalism is a branch of the so-called "new institutionalism" scholarship concerned with the persistence of organisations in changing circumstances. Skocpol (1992) observes that the decisions made to establish particular institutions (or not) have enduring legacies. This phenomenon has been described as the institution, in essence, persisting (institutional stability or "equilibrium") until a sufficient force ("punctuation") is brought to bear on it, forcing change: this phenomenon is called "path dependence". Hence, historical institutionalism might be seen as "an attempt to illuminate how political struggles are mediated by the institutional setting in which they take place" (Steinmo, Thelen & Longsreth 1992).

Krasner in his oft-cited “Review: Approaches to the state: Alternate conceptions and historical dynamics” (1984), extends the historical institutionalism notion of path dependence to broader implications for policy developments in other developing and developed nations (See also, Thelen, Steinmo & Longsreth, 1992; and Cortell & Peterson, 1999). He notes that once community "functions . . . are viewed as proper and legitimate” for state action and “are influenced by general international norms and practices”, they become identified as "best practices", and thus play an agenda-setting role in developing nations (Krasner, 1984, p. 241). The effect is that "these characteristics come to be associated with the essential nature of the 'modern' state and cannot be ignored even by states with very different needs" (1984, p. 241). As an example of this, Krasner mentions the fact that, regardless of the resources needed for proper implementation, most countries have some manner of social security system and have identified education as a state responsibility. These are innovations made at the more developed nation level, yet persist in policy making decisions in developing nations.

In the particular context of the decolonisation following World War II, Krasner (1984) observes that, despite colonies lacking in several key capabilities of the modern nation-state, an aggressive decolonisation policy was pursued because, as he notes, "[t]he triumph of the national state in Europe became a triumph of the national state around the globe" (1984, p. 242). These regions became a part of the historical process of state creation, and the idea of a sovereign nation was transferred from developed nation to developing nation, making that option (independence and

\[^{1}\] Also referred to within the public policy context as "policy trajectories" (see e.g. Thelen, 1999) and "policy feedback” (see e.g. Pierson, 1993).
Mahoney and Thelen (2010) are amongst those scholars attempting to move the historical institutionalism debate beyond the narrow confines of punctuated equilibrium in understanding institutional change. The authors observe that recent research on path dependence (e.g. Pierson, 2000a & 2000b; Thelen, 1999) argues that "path-dependent lock-in . . . is exceedingly rare in actual institutional practice" (Mahoney & Thelen, 2010, p. 3). Instead, the authors suggest that "problems of rule interpretation and enforcement open up space for actors to implement existing rules in new ways" (2010, p. 4). This observation permits greater consideration of agency in the study of institutional change in various contexts, such as Falleti’s (2010) study of health care reforms in Brazil as analogous to the mental health policy context.

Writing on the evolution of health care reforms in Brazil, Falleti finds that the traditional historical institutionalism analysis, with its emphasis on such punctuated equilibria as economic crises or other critical junctures, risks missing the layering or gradualist reforms of the Brazilian health system. She begins with a "crucial opening" that began a gradual process resulting in significant national health care reforms that played on the military regime’s efforts to consolidate authoritarian rule beginning in the 1970s. Falleti’s focus de-emphasises the critical juncture preoccupation in historical institutionalism in favour of a gradualist approach to change.

A more intensive case study approach to research is likely to yield more accurate insight into institutional change. In order to do historical analysis, one must rely on the historical record in toto and not on a selective reading to fit an existing model. However, given the influence of the underlying motivations for health sector reform in Brazil, the overarching ideological context of health systems, and sound public management principles, a question might be posed about what foreshadowed Falleti’s “crucial opening”, thereby making any institutional change possible.

In many ways, Tuohy’s (1999) study of the general health sector as institution brings many of these various institutional strands together. As she observes, from the 1950s onwards a prevailing institutional norm developed encouraging increased access to health services whilst seeking to control the costs of care (1999, p. 18). By the 1990s, health care reforms were atop the policy and political agendas of most advanced industrial countries (1999, p. 3). Tuohy links these health sector reforms to overall neoliberal notions of limited state involvement in what would otherwise be a competitive market. The OECD further advanced these health care reforms by publishing many reports between 1992 and 1995 considering health care reforms
throughout OECD countries, and establishing a best practices model for adopting nations to rely upon in embarking upon their own reform endeavours. These OECD publications and policy ideas would inform World Bank efforts in promoting reform of the developing world’s health systems.

In Tuohy’s construction of health care, it is an institution that, once established, tends to develop a particular "logic" governing both actor behaviour and the trajectory of potential change (1999, p. 7). Given the complexity of health systems, systemic change occurs rarely, and when it does it is highly influenced by prevailing ideas of best practices during what Tuohy calls a "policy episode" (1999, p. 11). These episodes must themselves be significant in order to alter the inertial forces of entrenched institutional interests. A policy episode requires two central factors to make systemic change possible. Firstly, a political system must provide a "consolidated base of authority for political action" (Tuohy 1999, p. 11). Strong party control in the unitary, Westminster-style parliamentary system will typically suffice, but is not itself a prerequisite. Secondly, health care policy reforms, in particular, require high priority amongst key policy actors.

Importantly, Tuohy’s construction of the health care institution isolates it from the broader health policy ideas context regarding health service delivery (1999, p. 12). Ideas about practice can persist for many years, even decades, before being formally adopted. Yet, eventual health reform itself will be highly influenced by such ideas. Success is likely to arise where there is convergence between the "strategy of a proposed change" and the "internal logic of the system" (1999, p. 13). System logics represent the institutional legacies of past events. Between times of acute change, they are shaped by the key actors’ behaviour, which is itself shaped by the institutional context as well as other overlapping institutions. Similarly, Rochefort (1997) observes that mental health policy developments in core countries tend to coincide with changes to the larger health systems within which they were historically located. The health system changes emerged from within each nation-state, but have occurred for different reasons over time, such as fiscal demands on the public health system.

Methodology

This article focuses on a single case study of Samoa. The case study is part of a larger, two-country comparative analysis at the core of the author’s doctoral dissertation. However, this article focuses on qualitative data obtained from a review of historical and contemporary textual sources, including parliamentary records, official
government reports, and other documents. In addition, for the final policy event, 13 key informants participated in semi-structured, in-depth interviews. While qualitative research does not claim to offer generalizable results, its value lies in creating thick descriptions of events to add to our understanding of discrete events, to explore these in a systematic way, and to form the basis for future research.

For the in-depth interviews, this study employed purposive sampling in order to identify those most engaged in the policy reforms in 2006-2007. Participants in this study were recruited using email or telephone to invite them to take part in an in-person interview. The researcher built on the initial core of participants identified in government publications or media reports through the technique of snowballing (Browne, 2005). This approach involves asking respondents to identify other possible, knowledgeable participants.

The respondents consisted of mental health workers and policy professionals employed by the Samoan government, national or community organisations, and international organisations who had been involved in the 2006-2007 policy and law reform process. Documentary sources from the New Zealand national and parliamentary archives were consulted for the first and second transfer events, since there were no living participants identified either in available media or other publications, or mentioned by study participants for the 2006-2007 transfer event. The sample of 13 total consisted of seven who were government officials, including those involved in policy development and mental health service delivery, four from three different domestic organisation representatives (Samoa Umbrella Organisation of Nongovernmental Organisations [SUNGO]; Goshen Trust; and Mapusaga o Aiga), and two from international organisations (World Health Organization, and Pacific Island Mental Health Network [PIMHNet]).

**Case Study: Samoa’s Mental Health System in Historical Perspective**

This section is presented in three parts. Before turning to the most recent policy and law reform in Samoa, two historical policy episodes will be considered in order to provide historical context. First, in the early twentieth century, German institutions were established for the primary benefit of the colonial project in the region. These formed and grounded the institutional framework within which the current health sector, and its mental health sector, would later operate. This was a primary, coercive policy movement that brought not only physical structures (e.g. prisons and hospitals), but also discursive institutions such as medicine and law, and set dual categories of “European” and “Samoan” (and in the case of the hospital, a third,
“Chinese” category). This period marked the transition from disorder and civil war in Samoa. New Zealand’s Samoa Act 1921 is a second brand of coercive policy episode marked by direct legislation for Samoa, though the period between 1921 and 1961 saw a gradual devolution of political responsibility to local institutions. Hence, the official health sector has its roots in the German institutions and the New Zealand regulatory framework provided by the Samoa Act 1921, policies largely turned over to Samoa at the lead-up to independence through numerous ordinances. In particular was the Mental Health Ordinance transferred to Samoa in 1961 along with several other health-related bills, a practice to be repeated in 2006 and 2007.

**Policy Episode One: Colonialism, Mandate and Mental Health: German Colonial Ordinances, Mental Defectives Act (NZ) 1911, and the Samoa Act (NZ) 1920**

While no definitive record apparently exists of any explicit mental health regulations for the German colony of Samoa, German occupation provided the foundation for several institutions integral to the modern mental health system, such as police, prisons, and hospitals, as well as ordinances providing for detention due to health status (quarantine) (New Zealand National Archives, 2011). The law and other institutions imported with the German colonial administration sought to enshrine order through certain liberal economic principles whilst assigning traditional Samoan affairs, such as lands and titles, to specialised judicial institutions.

Amongst these economic developments adopted between 1 March, 1900, and 15 August, 1914 were public order provisions (liquor and opium regulations, theft, police, prison and press regulations, roads); laws on various aspects of agriculture and animal maintenance (plants, poultry, and pig enclosures); public health laws (quarantine, plague, and rats); commercial laws (Samoa Trading Company, Seaman’s Coastal Ordinance, tariffs, transport, weights and measures); and a category of "Samoan Laws", which presumably contained rules designed for the protections for Samoan culture (New Zealand National Archives, 2011). When New Zealand took possession of Samoa during World War I under a League of Nations Mandate, and later under a UN trust relationship, it continued the economic development practices begun under the German administration.

The Mental Defectives Act 1911 (NZ) served as the basis for Samoa’s Mental Health Ordinance 1961. However, the 1911 Act itself was the object of a policy movement from the United Kingdom, and previous New Zealand mental health law was rooted in a transplant from Australia. The provisions of the Mental Defectives Act were first applied to Samoa under the Samoa Act 1921 (NZ). A "mentally defective person" was first defined in the 1911 Act as "a person who, owing to his mental condition,
requires oversight, care, or control for his own good or in the public interest". The law first found its applicability to Samoa under Part XII of the Samoa Act 1921, dealing with "Persons of Unsound Mind", and a separate section for those deemed "Criminal Lunatics". "Persons of Unsound Mind" could be arrested and sent to hospital or "other places" in Samoa (as well as, under certain circumstances, transported to New Zealand), which invariably meant the Upolu prison, where they would be housed alongside "criminal lunatics".

Following the Mental Defective Amendment Act 1921 (NZ) and the Samoa Act of the same year, the New Zealand portion of mental health law changed radically over the years between 1921 and 1961. These changes included at least 11 subsequent Amendment Acts, including the significant 1954 amendments, which changed the more offensive title from "Mental Defectives Act" to "Mental Health Act", the title used in all subsequent amendments and new legislation. The law itself, despite the many amendments, did not undergo a significant redraft until 1969. However, prior to this major overhaul, Samoa became an independent country and the Samoa Act 1921, as amended, ceased to apply in Samoa.

For reasons lost in the intervening decades, the 1961 Ordinance used the older 1911 definition and terminology over the more recent 1954 updates. The statute adopted the definition of "mentally defective person" as found in the 1911 definition, only without the subclasses of individuals found in the initial Act.² Significantly, while the overhauled New Zealand Mental Health Act would go on to be significantly amended, nearly fourteen times through 2007, the Samoa Mental Health Ordinance was not amended until it was repealed and replaced in its entirety by the Samoa Mental Health Act in 2007.

Between 1920-1962, New Zealand employed various policies to further promote Western-style government and institutions in Samoa. One element to this policy and law foundation was the inclusion of Part XII of the Samoa Act 1921, providing orders of medical custody for persons of unsound mind. Similar to the Mental Health Ordinance 1961, Part XII empowers a "chief medical officer" with making applications to the court for civil commitment. This Part requires a medical examination and the production of a certificate to the court that the individual is in fact of "unsound mind", and such custody is necessary "in his own interests or the safety of other persons". The court must find both elements to issue an order of

² For instance, there was a distinction between "persons of unsound mind" who could have a mental disorder at any age, and "mentally infirm" persons, who were those with cognitive problems resulting from age or some other apparently organic condition.
medical custody for a period not to exceed, in the first instance, six months, with the possibility of six-month renewals. Additional provisions in Part XII permit the removal of an individual (presumably a European) who is under an order of medical custody to New Zealand. Arrest without warrant was authorised so long as the individual was brought without delay before a "Judge or Commissioner of the High Court". Most striking is the provision labelled "Criminal Lunatics", dealing with individuals accused of crimes who are thought to have acted as a result of their mental illness. These sections are, with only minor revision, the exact language adopted in the Mental Health Ordinance 1961.

**Policy Episode Two: Decolonisation and Samoa’s Mental Health Ordinance 1961**

In the lead-up to independence, the transitional government enacted a host of laws, known then as "ordinances", since they were pursued under authority of the Samoa Acts (as amended). The Honourable Tufuga Fatu introduced the Mental Health Ordinance 1961, which had its first and second reading and committal all on 14 December, 1961 (Government of Samoa, 1961, pp. 118-24). The Bill had its third reading on 19 December, 1961, and received assent on 29 December, 1961, only three days prior to independence.

During the process, there was an interesting and lively committee debate over a provision that made it a crime to have sexual intercourse with a "mentally defective female", first in the form of a hypothetical using one of the delegate's wives as the unfortunate specimen to have "contacted insanity", and left her husband without recourse to this marital right (Government of Samoa, 1961, pp. 118-24). The comment led to a perceptive response that the provision itself was terribly "one-sided" in that it proposed to protect a woman but not a man, and that the provision might read better as "mentally defective person". Yet, at the time, one would not engage in "sexual intercourse" with a man, and a woman was incapable of performing sexual intercourse on someone, so the language meant exactly what it purported to say and was left alone. At one point in the debate, there must have been the perception that the topic of sexual intercourse had become a bit of a joke: the Speaker admonished the assembled men of title to remember to "speak with respect on this matter as it deals with sick people, the mentally defective person" (Government of Samoa, 1961, p. 120).

Further, as support for leaving the language as it appeared, Fatu offered the

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3The representative from Vaisigano Ward No. 1, the capital of Asau district at the extreme western end of the island of Savai’i
following: "I wish to say that this new Bill was passed on the actual wording of the Samoa Act 1921, Article 127" (Government of Samoa, 1961, pp. 118-24).

Notwithstanding the desire for consistency between the New Zealand law and the proposed ordinance, further arguments on behalf of the "future generations" of unborn children that the wording be changed from "female" to "person" throughout the Bill ensued. Here again, the argument met with resistance because it is not possible to have "sexual intercourse with a person", only for a male to have it with a female; therefore the language should stay as it is. It was at this juncture that another representative referred to a "Mental Health Explanatory Note" that apparently accompanied the proposed legislation provided by its drafters to explain the purpose of each clause of the proposal and how it related to provisions of the Samoa Act 1921. The proposed change from female to person was defeated by only 15 votes (there were 13 in favour and 28 opposed to the proposal). There was no other debate on the Bill, and it was passed on 15 December, 1961, a little over two weeks prior to independence.

The 1961 law did not reflect the best practices on mental health of the time. In effect, the law created the legal mechanism for detention, or "control and treatment", as the ordinance referred to it, of those with mental illness. The ordinance had the early reflection of the need to secure rights by establishing a visiting board entrusted with supervising the personal welfare of individuals kept in medical custody. The ordinance emphasised the primacy of the "medical practitioner" as a qualified medical, and a "mentally defective person" as "a person who owing to his mental condition, requires oversight, care, control of himself or his property for his own good or in the public interest". If a medical practitioner feels an individual is a "mentally defective person", then he can either conduct or cause the individual to be transported to the capital for evaluation. If the person is uncooperative and seemingly dangerous, then a constable is required to transport the individual to Apia, acting on a warrant issued by the medical practitioner. Once at the institution, two medical practitioners must examine the individual and then issue reports to the Director-General of Health. Based on the findings, the Director-General then either discharges the individual or applies to the Supreme Court for an order of medical custody.

The court would determine whether the individual is "mentally defective and [whether] his detention in medical custody is necessary for his own interests or for the safety of other persons". If so, the court ordered the person to be held for up to six months with the possibility of renewal for six months (but could remain in

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4 Unfortunately, this accompaniment has apparently been lost and was unavailable in the Samoan Parliamentary Archive.
custody indefinitely with six-month reviews). Further, the Ordinance provides that "any person believed on reasonable grounds to be of unsound mind and to be dangerous to himself or others may be arrested without warrant by a constable or any other person", provided the individual was brought "forthwith" before a judge or magistrate who could order the individual held pending an application for medical custody and the process outlined above. The Ordinance also contained, unlike its 2007 successor, provisions for determining criminal culpability (which was restated in the criminal law and which are also currently under consideration by Samoa’s Law Reform Commission). In fact, sections 11-15 of the Ordinance deal with this concern. In essence, these provisions create a rebuttal presumption of "sanity" that can be overcome by evidence establishing that the individual is a "natural imbecile", or of similar condition rendering him or her "incapable of understanding the nature or quality of the act", or "knowing that [it] was wrong".

**Policy Episode Three: International Organisations and Policymaking: Mental Health Policy & Act 2007**

Samoa’s health sector reforms, which the Government of Samoa had prioritised since at least 1990, coincided with the broader turn towards market liberalisation and universal suffrage. The World Bank, for instance, credits these reforms with "macroeconomic stabilization and comprehensive structural reforms, which contributed to rapid real economic growth of 4 per cent per annum" between 1993-2006 (World Bank, 2008, p. 1). The political decision to focus on this sector, coupled with the availability of structural funding from international sources to support health sector development, helped to see gains in indicators such as life expectancy; maternal, infant and child mortality rates; reductions in infectious diseases; and the achievement of high immunisation coverage. However, success on these concerns has given rise to new health concerns due to the epidemiologic transition. These include the constant increase in urban population resulting in substandard living conditions and limited access to health services, the rise in NCDs, poor nutrition, the persistence of communicable diseases, and the increasing costs to government of maintaining secondary and tertiary health care brought about by changing disease patterns and demographic profiles. Yet these larger health sector reforms did not by themselves bring about mental health policy change. That change would come by the end of that decade, instigated by a new global health initiative of the World Health Organization.

In 1998, the World Health Assembly reaffirmed the "Health for All" policy in 1998 with an added emphasis on "humanitarian action and human rights" (WHO-WPR,
WHO, in pursuing the overall policy, dedicated itself to a number of goals, amongst which is to "develop an enabling policy and institutional environment in the health sector". It has identified "limited specific priorities", which are based on the "potential for a significant reduction in the burden of diseases using existing cost-effective technologies", and include mental health, along with several others (2003, p. 21). Health for All began to be implemented throughout the various WHO regions of the world in the years that followed its promulgation.

In early 2002, ostensibly at the request of the Government of Samoa, WHO sent a short-term consultant to Samoa to gather information on the nation’s mental health system, with an aim to develop a collaborative approach to establishing a suitable mental health programme in Samoa. The consultant was specifically charged with analysing "the situation with Government and other local people, and recommend the means of achieving and supporting the required change, e.g. advocacy, policy, legislation, programme introduction and evaluation" (WHO, 2004, p. 2). The consultant’s report made several recommendations for Samoa, including to develop a national mental health programme (since there was none) and to "carry out legislative and regulatory reform and enforcement in the areas of alcohol and consumption, anti-discrimination legislation, and mental health legislation" (WHO, 2004, p. 3). The report referenced the move to community-based mental health services that occurred in the 1980s and 1990s, but raised the persistence of several problems, including the lack of a psychiatrist (a situation, which, at least for the time being, has been addressed); limited medication availability; limited nexus with alcohol and drug abuse or dependency matters; and rural transport complexities.

The consultant introduced mental health promotion as a conceptual framework with several key individuals. This framework was adapted from Australia’s Victorian Health Promotion Foundation’s Mental Health Promotion Plan, 1999-2002 (Victorian Health Promotion Foundation [VHPF], 1999) and included "interventions" (policy development, legislative reform, research, monitoring and evaluation, communication and advocacy, project development, and funding). The goal of this framework was to reduce the overall stress, anxiety, and depression levels in the population through these interventions, which would thereby reduce the overall occurrence of certain mental illness, including depression and anxiety. In addition, these reductions, and others, would result in decreased risk behaviours associated with drug abuse and crime, amongst other factors.

Further recommendations included the formation of a "multi-sectoral, multi-disciplinary committee" charged with review of the existing mental health services,
which was not "part of the terms of reference"; that Samoa establish some capacity for basic research and surveillance of mental illness including drug and alcohol abuse; that Samoa engage in project development on such topics as mental health counselling and mental health promotion, support for children with special needs attending schools, and mental health care givers (WHO, 2004, p. 10). In addition, the Government of Samoa should raise the public understanding of the link between suicide and mental ill health, and "explore further assistance [with mental health initiatives including] facilitating support from potential international donor agencies” (WHO, 2004, pp. 10-11).

Following this report, in February 2003 the WHO issued a *Country Cooperation Strategy for Samoa*. This made note of Samoa’s epidemiological transition and the accompanying rise in NCDs. The report notes that, since 1983, Primary Health Care, Health Promotion, and the Healthy Island Principles (all WHO-inspired initiatives) have been behind health sector development (WHO-WPR, 2003, p. 7). Building on these, Samoa’s economic and public sector reforms since 1996 are cited as central to Samoa Ministry of Health planning. In particular, the *Health Sector Strategic Plan 1998-2003* (Government of Samoa, 1999) is referenced for its aims at strengthening health institutions, primary health care, and health promotion on NCDs and women and children’s health, as well as quality improvement through infrastructure and facilities development. Identified needs include specialist medical care (which would include psychological and psychiatric professionals), and the accompanying drain on the economy, since high fees are paid to treat individuals overseas, as well as the professional drain where locally trained professional staff move overseas in search of higher remuneration.

Applying this broad context to Samoa, from 2003-2007 WHO pursued a policy of supporting government work on healthy communities and populations; health sector development; and continuing focus on combating communicable disease (WHO-WPR, 2003, p. 22). It engaged in a "significant shift in roles, functions and modalities of support" to legislative and policy technical advice provision, as well as broadening its training support for health workers and nurturing "multi-sectoral collaboration and partnerships" and "play[ing] an increased role in coordination of donor assistance" and resource mobilisation (WHO-WPR, 2003, p. 23). Under the "building healthy communities and populations" rubric, NCDs are specifically said to include mental health, and WHO will assist "in the (re) drafting and reviewing of existing legislation, policies and strategies to be more in line with present practices in the field of NCDs in general and mental health. . . in particular" (WHO-WPR, 2003, p. 23). Furthermore, the effort will extend to developing "technical guidelines to address
risk factors and to ensure the delivery of quality community-based services for . . . mental disorders", and a mental health promotion framework (WHO-WPR, 2003, p. 23). Within three months of the issuance of this report, a mental health symposium was held in Apia (discussed below), gathering together key actors in Samoa for establishing broad directions and needs in mental health.

**The Mental Health Act 2007**

The need for updating the existing law was well recognised by the respondents in this study. As one former government official framed the problem:

> We inherited a piece of New Zealand legislation that was already 50 years old, so it never in my view, it never was effective or implemented and part of that is because we never had, before the 90s, we never had mental health professionals that could be or could undertake the sort of requirements and the responsibilities under the old act, we still don’t. (SR3, Interview with Author. November 2010).

However, recognising the need to reform did not result in legislation. The health sector reforms, as mentioned above, presented the opportunity for a foreign consultant with extensive expertise in mental health to be embedded in the Samoa Attorney General’s office. This would take some time, but, on the morning of 31 January, 2006, a press release from the Prime Minister’s office announced the Cabinet approval of what was then called the Mental Health Bill 2005, which would provide for:

> The care, support, treatment and protection of persons with mental disorder and for related purposes . . . to minimize the restrictions upon the liberty of persons with a mental disorder and interference in their rights, dignity and self-respect . . . (and) [work] towards eliminating discrimination against, and abuse, mistreatment and neglect of persons with a mental disorder. (Samoa Government Press Secretariat, 2006)

It would take a further 10 months for the Bill to achieve its first parliamentary reading. On 16 November, 2006, the Prime Minister rose to move for a second reading of the Mental Health Bill 2006, a Bill of "39 clauses" and not "much volume" (Government of Samoa, 2006, p. 867). The need for an update was apparent since, as the Prime Minister observed in the proceedings, the original law, the Mental Health Ordinance, had not been amended since its implementation in 1961. He suggested that "up to this hour, it seems that there have not been any specific
conditions for the care of these people and now the Government has prioritised it" (Government of Samoa, 2006, p. 867). The motion was then approved and referred to the Health and Social Services, Internal Affairs, Community and Social Development Committee (Samoa Parliamentary Committee on Health and Social Services, Community & Social Development, 2006, 869). The Bill joined several others related to the health system in Samoa, including the Pharmacy Bill; Healthcare Professions Registration and Standards Bill 2006; and Nursing and Midwifery Bill, which would, upon adoption, constitute a wholesale rewrite of the Samoan health legislation framework.

This Committee was charged with "consider(ing) any bill . . . to examine the policy, administration and expenditure of the ministers and associated government organisations related to matters in Health and Social Services, Internal Affairs, Community and Social Development" (Government of Samoa, 2005). They invited public submissions, and, while there is no record of these proceedings, those who were disclosed as offering testimony include four senior Ministry of Health officials, including the Chief Executive Officer; the Assistant Chief Executive Officer for Strategic Planning and Development; the Assistant Chief Executive Officer for Nursing and Midwifery Services; and the Assistant Chief Executive Officer for Health Promotion and Preventive Services. Despite the efforts undertaken in the policy process to include various policy stakeholders, the legislative process received input only from bureaucrats after the initial vetting process.

The Committee spent "[five] sitting days in considering the Bill", and "noted that [it] provides for care, support, treatment and protection of persons with mental disorders . . . [T]he main objective [is to] help encourage non health care professional [sic] to be responsible in offering care and support to persons with mental disorders" (Government of Samoa, 2006c). Besides clerical adjustments to the Bill, no changes were submitted. The Bill’s committee report occurred on 19 December, 2006, and was adopted without amendment; this was followed by a third reading on 16 January, 2007, at which time it passed the Legislative Assembly (SPDR, 2007, p. 1010). Despite its shortcomings and the resource constraints felt within the sector, the new Mental Health Act was seen as a positive step in its intention. As one respondent noted, the purpose was:

To update the options in terms of mental health and the community. The in-patient or the community treatment order is an attempt to ensure that [....] the role of the community and mental health issues is formalized [to reflect] in some ways what is happening now and I think is an intent
to (sic) bring it into the mainstream health system. (SR3, Interview with author, November 2010).

Occurring contemporaneously with the official law vetting process was the development of Samoa’s written governmental mental health policy. The process of developing this policy will be found to be more participatory in nature, as set forth below.

**The Mental Health Policy**

The international movement of a policy involved in a policy event is, in essence, the practice of taking the international and making it local. In the mental health context, this involves taking international best practice on mental health policy, including scientific bases for mental health diagnoses and human rights claims for the appropriate treatment of individuals suffering from mental illness, and interpreting these central policy components in the indigenous context. Such policy episodes necessitate the involvement of domestic actors engaged in mental health broadly. Respondents indicated the central role the international context played in the localisation of mental health in Samoa. As one respondent suggested, the idea for the formation of an initial policy group of key stakeholders emerged from the influence of international relationships between international organisations (IOs) and the Government of Samoa. The attention to mental health occurred because:

> During the reforms, mental health was an issue, because at the time it was much highlighted at WHO Assemblies governments were attending [them] and then [there were] consultations by the WHO . . . . but when it comes to implementation . . . . I think we are caught in having very limited budgets at the same time. I think it all comes down to the people who are driving the service. (SR4, Interview with author, November 2010).

This context provided the basis for the policy development process. As an initial step, a Mental Health Symposium was organised to bring together key stakeholders for input on forming a mental health policy in Samoa.

**Mental Health Symposium**

Many respondents in the current study cited the "National Symposium on Mental Health Issues in Samoa", held April 2003 in Apia, as one of the originating forums in the process of mental health policy development. The conference that brought
together many key actors from government and civil society for a focused discussion on various aspects of the nation’s mental health situation, context, and needs. Leaders from churches, villages, courts, and international funders participated. Amongst other things, the symposium was designed to attend to Samoa’s mental health services by identifying needs and problems, and proposing a course of action to address them.

The symposium considered six key dimensions, including advocacy; service provision, mental health promotion; policy and legislation; research; and suicide prevention. The policy and legislation prong saw recommendations to prioritise policy and law development. Indeed, many participants recommended the development of a policy as instrumental. The local newspaper, the *Samoa Observer*, covered these proceedings and reported under the headline "Moves to improve mental health care" that the symposium, which was sponsored by the WHO and spearheaded by the Mental Health Unit and the Planning and Policy Division of the Ministry of Health (under local leadership in collaboration with AusAID), identified that the WHO definition of health as "a state of physical, mental and social well-being" was complemented in the Samoan context by including the spiritual dimension (2005). Due in part to the assistance of a WHO consultant, a medical doctor well-travelled in mental health policy development, the symposium produced recommendations that would serve as the basis for the mental health policy. The following principles were also established: mental well-being is grounded in the *aiga* (family) and *nu’u* (community); respect for individual rights; appropriate care without discrimination; and the "recognition that mental, physical, social and spiritual health are indivisible".\(^5\) The overall goal was to develop quality mental health services in Samoa. Again, it is significant that this symposium closely followed the issuance of the WHO *Country Cooperation Strategy for Samoa* in February 2003. The combination of these two well-publicised events firmly placed mental health on the collaborative agenda.

**Policy Development**

The policy development process proceeded with deliberate speed. From its inception with the symposium, the next stage was to form a Mental Health Policy Working Committee, a local stakeholder group who started work in March 2005, and produced a first draft of the policy in December of that year (SMoH, 2006a, p. 3). This draft, crafted in collaboration with the WHO, adopted a typical policy document structure and adopted two definitions of "mental health" – both from international sources. The

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\(^5\) For a more fulsome discussion on these concepts, please see Iati (2000).
first is provided by the WHO and states that mental health is a "state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (WHO, 2001, p. 1), a definition offered repeatedly by research participants. The third paragraph of the draft begins with the notion that "[m]ental health as a concept needs to be considered within the context of the Samoan culture", and affirms the association of "mental disorders" [a term undefined] with physical illness, suicide and social ills such as "violence, criminality, addictions, homelessness and poverty" (SMoH, 2006a, p. 3).

The draft policy sets forth a vision that "all people in Samoa enjoy mental well-being that is grounded in the aiga and nurtured through a multi sectoral approach" (SMoH, 2006a, p. 3), which precedes the "values and principles" portion of the document. These "values and principles" include that “mental well-being is grounded in the aiga and the community”; and that the “Samoan understanding of dignity and self-esteem is collective and relational in nature” (SMoH, 2006a, p. 3). Furthermore:

What is achieved or lost by the individual, is felt by the Aiga. In this context, the aiga is the natural and appropriate health care setting for the promotion of mental health and the management of mental disorders, with the exception of some severe disorders requiring hospitalization or seclusion. (SMoH, 2006a, pp. 3-4)

The document identifies, amongst other areas, the need for the development of institutional structures for the continued, necessary diligence in this policy area, and proposes a mental health board to organise indigenous actors into an institutional arrangement to ensure continued attention. In addition, the need for legislation and human rights and focal areas including suicide prevention; drug and alcohol abuse; sexual abuse/child and adolescent abuse; domestic violence; and dignity of the family are all formally recognised as key areas for action (SMoH, 2006a, p. 4).

The policy also re-asserts the "Samoan context" from a policy perspective under the heading "Mental Health Services in Primary Care", as based on the aiga, and this should be the focus of mental health assessment and management. Thus the preference should be for treatment in the community rather than in hospital or health centres (SMoH, 2006a, p. 6). This is a powerful statement in that the basis for community care is not based on an international best practice (though this is also the international model at the moment), but on a key strength of the Samoan culture. This tracks closely with Enoka’s (2000) introduced informal practices as embodied in
Ministry of Health service models beginning in the mid-1980s to be discussed below. Furthermore, this theme has been continued in recent responses to the marginalisation of Samoan perspectives on mental health in New Zealand (Tamasese, Peteru, Waldegrave & Bush, 2005); 2009 tsunami in Samoa (Radio New Zealand International, 2012); and on developing mental health services in Samoa generally (Enoka, Tenari, Sili, Tago & Blignault, 2012).

The informal mental health sector in Samoa is said to consist of a "wide range... of services... including NGO's, religious organisations and traditional healers" (SMoH, 2006a, p. 7). These groups address issues on suicide awareness and victims of abuse, and alcohol abuse. These services are described as a vital gap-filler between specialist and primary services. Yet, these informal services are not linked to the formal health structure, as reflected in no identifiable referrals coming from the informal sector. In addition, there are no "self-help groups for the mentally ill or their families", and people are left to "wander aimlessly in town and public places" (SR10, Interview with author, May 2011).

Related to this in the draft policy is a separate subsection dedicated to "private services", of which there are few in Samoa; counselling services to women were one type available at the time of this research. However, this section contains the most comprehensive discussion of suicide in the document. It is pointed out that there is no "suicide prevention strategy or program", and this section contains other areas of association with other social ills, including the relationship between mental disorder and substance abuse; domestic violence being associated with "stress related disorders"; and sexual and physical abuse being correlated to mental disorders in victims in their teenage and adult years (SMoH, 2006a). These items read more as fact-statements that would seem to suggest a call to arms, though this is not made explicit. Instead, the section shifted into the matter of stigma and discrimination in the community, noting that:

Current cultural beliefs present a stigmatized view of mental health disorders [that] compromise the dignity of families involved and the individual with a mental health disorder [which in turn] acts as an impediment to treatment as well as producing its own stresses. (SMoH, 2006a, p. 8)

In justifying a mental health policy, the draft policy borrows from many themes

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6The report notes that approximately 16 per cent of mental health admissions have drug-induced psychosis (SMoH, 2006a, p. 9).
advanced in the international literature as influencing the prevalence of mental disorder: urbanisation; economic disadvantage; substance abuse and migration – all of which are related to the Samoan context as factors influencing mental health and wellness there.\(^7\)

This discussion culminates in the draft policy in the identification of mental health system areas of need. Besides the ever-present need for greater financial resources, legislation tops the list of needs, followed by leadership, and expanding specialist services, including the need for "acute psychiatric beds". There is, as mentioned earlier, the need for substance abuse treatment and for the promotion of mental well-being, and for the prevention of the incidence of mental illness. It is in this portion of the draft policy that a second attempt to define mental health is found. The draft notes that:

Mental health should be explained in terms that are acceptable to all communities. Religious, traditional, and western scientific/medical perspectives should all be recognized as having a role in healing people who are mentally unwell or ill. One discipline should not be prioritised over the other. Instead the National Health Sector should develop a collaborative strategy. (SMoH, 2006a, p. 15)

In addition, the document suggests that "research" should be carried out as well as "education and awareness programmes" in the community, including schools, workplaces, health workers, and Parliament, which shall "give equal emphasis to the traditional, religious and western scientific/clinical perspectives" (SMoH, 2006a, p. 15).

Under the heading of "Advocacy", the importance of individuals with mental illness participating in policy and lawmaking processes is affirmed. Anti-discrimination and stigma policies should be adopted throughout government and individuals with mental illness should be "consulted on all drugs brought into the country to treat them", and be supported "within a medium that they feel most comfortable" to ensure that their voice is heard. In addition, these people should receive the "best care and treatment in any facility", and they should not be "penalized as criminals nor should they be incarcerated within the local prisons" (SMoH, 2006a, p. 16).

\(^7\) For a discussion of these concepts within the New Zealand context, see Tamasese, et al. (2005).
The draft policy recognises that:

There is a strong political and organisational commitment in Samoa to develop a mental health policy. A mental health policy needs to be informed by broader policy frameworks and be consistent with the objectives of the Ministry of Health. Changes in the social and economic structures within Samoa appear to contribute to an increased prevalence of mental disorders. Mental health policy should be formulated aiming at reducing the burden of mental disorders in the aiga and the community. (SMoH, 2006a, p. 17)

The section titled "Constraints" formally recognises the dearth of data on mental health in Samoa and that the application of the "abundance" of overseas data to the Samoan situation is either "uncertain or unknown" (SMoH, 2006a, p. 20). It is at this point that a further definition of mental health is offered. This definition is taken from the Pacific Regional Strategy for Mental Health document on mental health and is presented in the draft as the:

Foundation for the well-being and effective functioning of individuals. Mental health is the ability to think and learn and the ability to understand and live with one’s emotions and the reactions of others. It is a state of balance within a person and between a person and the environment. This balance is a product of a number of interrelated factors, including physical, psychological, social, cultural and spiritual. (SMoH, 2006a, p. 20)

The report notes that "mental illness" refers collectively to all mental disorders. It is the second leading cause of disability and "premature mortality" (SMoH, 2006a, p. 20). Mental disorders are, in turn, defined as "health conditions that are characterized by alterations in thinking, mood, behaviour or some combination thereof associated with distress and/or impaired functioning” (SMoH, 2006a, p. 21).

Community Consultation of Policy

This final version of the policy went out for community consultation in February 2006, a process that included the "Samoa Community, government ministries, non-governmental organisations as well as the Ministry of Health staff" (SMoH, 2006b, p. 3). Four consultations were held, two on the main island of Upolu, and two on neighbouring Savai’i. Two of these were public, and two were open only to Samoa Ministry of Health staff. In the latter, presentations were made and small group
sessions held to address a set of questions including the policy’s relevance to Samoa and any omissions or other thoughts on effective implementation and monitoring (SMoH, 2006b, p. 3).

The key findings of this consultation process included public support for a mental health policy in order to "encourage the Samoan people to support and respect the rights of those with mental disorders" (SMoH, 2006b, p. 4). Further, central issues raised by participants related to staff training, making available adequate resources for care, and expanding specialist care (SMoH, 2006b, p. 4). Amongst the issues missing, participants indicated a need to "improve . . . communication and [that] there should be an independent board for Mental Health" (SMoH, 2006b, p. 6) and increased public awareness through trainings for the community and through media campaigns to promote individual rights (SMoH, 2006b, pp. 5-6). From here, the Mental Health Policy Working Committee referred to the consultation outcomes and finalised the draft mental health policy before submitting it to the Cabinet Development Committee, where it was finally adopted in August 2006. There appear to be only minor changes to the draft policy and the final version, as most of the public comments did not appear to any significant degree to form the final product. The policy is only part of the mental health system story; the Mental Health Act 2007 completes the recent mental health policy transformation in Samoa.

**Conclusion**

The data presented above suggests changes in several mental health policy episodes have occurred in Samoa over roughly one century of time. The three episodes can be organised around critical events: the colonisation of the first half of the 20th Century, decolonisation in 1961-62, and an international policy movement around mental health in the early 21st century. The findings here suggest a form of coercive transfer during the colonial period, a later form of relative indifference in the promulgation of the Mental Health Ordinance, and a more participatory, yet largely foreign-inspired, policy and law in the early 2000s. The data suggests that mental health continues to be an area of relative marginal policy importance in Samoa.

At the same time, the conclusion on the different perspectives and constructions of the Samoan context suggests that future transfer events, if following the apparent pattern presented in this article, would benefit from beginning from the Samoan perspective and considering what, if any, international models or exemplars would be beneficial in expanding the Samoan construction of the mental health needs of the people. This shift in perspective would bring policy development in the mental health...
space to a Samoan-initiated form of policy that would more likely secure wide-spread political engagement and lead to policy success. Moreover, such an approach would well serve as a model for grass roots, participatory policy making for use in the Pacific region, as more and more countries experience the epidemiologic transition, and experience increasing incidence of non-communicable disease, such as mental illness.

The findings in this article focus on a single case located within the Pacific region. Small island states and other countries located elsewhere might well have had different experiences with policy transfer events generally, and in the area of mental health in particular. However, all former colonies who experienced decolonisation in the so-called “second wave” of democratisation during the mid-20th century are likely to have experienced the first two waves considered above. The nuance—and indeed opportunity—for future studies would be to conduct larger, systematic examinations of these and other policy areas across many countries in this rather sizeable cohort of nations to identify common and atypical experiences. Such knowledge will help domestic policy makers and international policy champions to better ensure local leadership in making future policy transfer events truly local, grass roots initiatives. Indeed, in many ways, as the world becomes closer through globalisation and its technological change, the final elements of semi-coercive policy transfer will continue to disappear only when the policy making process becomes truly local in character.

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Freshwater Mussel (*Batissa violacea*) Fishery and its Value in Fiji

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**Abstract**

This paper examines the local freshwater mussel, or *kai* (*Batissa violacea*), fishery value chain, its values and contribution to the livelihood of people in Viti Levu, Fiji. The assessment was performed through face-to-face interviews, with the use of semi-structured questionnaires administered to 125 actors. A walk through the value-chain was also conducted that confirmed the sites’ environmental conditions. Results revealed that even though the *kai* fishery is dominated by rural women, men were also employed as *kai* processors, transporting agents and exporters. This fishery generated at least 58 other employments through the 500 *kai* harvesters within the five major provinces understudy. These were drivers, boat builders, retailers, processors, exporters, and harvesters. Three sales pathways were identified that determined the revenues and profits: (i) harvesters sell own harvests directly to the consumer at the municipal markets, (ii) harvesters sell through intermediary traders to consumers, and (iii) harvesters sell through processors to supermarkets, hotels or exporters. When revenues and profits were calculated, harvesters earned much less, compared to intermediary traders, processors, and exporters. Major constraints include continuous reduction in catch size of *kai*, lack of transport, and marketing at the local municipal markets that require improvements.

**Keywords:** *Batissa violacea*; Fiji freshwater mussels; *kai* fishery; marketing; women harvesters

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Introduction

The fisheries sector is vital for the economic development of developing states. Both fisheries and aquaculture remain an important source of food, nutrition, income and livelihoods for hundreds of millions around the world (Kumar, 2017). In 2016, the developing countries accounted for more than half of the fish exports. In other words, the developing countries hold a greater share of the fisheries market as compared to the developed economies. As a result, fish is not just used for human consumption in developing and least developed countries, but also adds to the upstream and downstream values (Kumar, 2017).

In Fiji, freshwater mussels (*Batissa violacea*) or *kai* are one of the major sources of protein, and a revenue earner that contributes to the livelihood of communities that reside along and near the major rivers and their associated tributaries in the two major islands of Viti Levu and Vanua Levu. Some of the major rivers include the Rewa, Navua, Sigatoka, Nadi, and Ba rivers in Viti Levu, while Labasa, Wainikoro, and Dreketi rivers are in Vanua Levu. *Kai* in Fiji grows wild in restricted, lower freshwater reaches of rivers, between the upper limit of salt water penetration, and the upper reaches of the rivers.

There are three distinct shapes of *kai* in Fiji, which are mainly identified by their local names: “*kai buli*”, “*kai bukivula*”, and “*kai dina*”. The *kai* shapes appear to be related to river conditions and ecological factors of the environment (Richards, 1994; Thangavelu et al., 2011). “*Kai buli*” is identified by its fat and mostly round shell shape; “*kai bukivula*” is thin and oval in shell shape with eroded umbo, while “*kai dina*” is the intermediate shell shape between “*kai buli*” and “*kai bukivula*”.

*Kai* is the major inland fishery in Fiji that engages women throughout the supply chain, from harvest to the market (Vunisea, 2004). The local market price for live *kai* is between FJD$3 - $5 per heap depending on sizes. It is harvested from the river bed, depending on the depth of the river. Diving for *kai* is usually carried out in deeper stretches of rivers, while squatting and picking *kai* from river bed is done in shallow waters. Distribution and abundance of *kai* in the Rewa river is estimated at 79 individuals/m$^2$ with the standing crop estimated at 5.9 x 10$^8$ individuals in the 7.5 km$^2$, while the total fishery yield at approximately 130 tons/annum (Naqasima, 1996; Naqasima-Sobey & Roger, 1999). Ledua, Matoto, Sesewa, & Korovulavula (1996) estimated the density of *kai* in the Ba River at 270.38 individual/m$^2$ with the total population estimated at 787,608,829, and a total biomass of 1,993,374.5 kg. Studies have also indicated that the *kai* stock has undergone some changes, especially with
the high volume of harvesting due to pressure for income generation and employment opportunities (Smale, 2013; UNIDO, 2011).

This study examines the kai fishery value chain in Viti Levu, Fiji. This is the first ever research conducted that examined the local freshwater mussels, their value, and contribution to the livelihood of the people in Viti Levu, Fiji.

Methodology

The snowball sampling approach (Kuper, Linggard & Levinson, 2008) was adopted for this research, whereby the Fiji Ministry of Fisheries officers initially identified the major kai fishery stakeholders and the key actors from various villages along the major rivers and at the major municipal markets.

Through the use of semi-structured questionnaires, face-to-face interviews were conducted with a total of 125 kai fishery actors, of which there were 101 harvesters, 11 intermediary traders, two exporters, one processor, one representative for each of four restaurants and hotels, five transporting agents, and one boat builder. The questionnaires adopted Brown et al.’s (2010) approach that gathered information related to frequency and volume of harvest with estimated costs, consumer preference and specifications, processing and value-adding, supply and demand, transportation, marketing, and other related activities. Evidences of information gathered during the interview were checked and confirmed when the interviewers walked through the value chains.

Interview Sites of Key Actors

The key actors identified in this study were the kai harvesters, intermediary traders, processors, exporters, retailers, and other supporting services. They were interviewed in their respective work places or selling sites.

Harvesters

A total of 101 kai harvesters were interviewed. These were individuals who took part in the harvesting of kai from various rivers in Viti Levu. The interview sites for these kai harvesters were categorized into three: villages and/or settlements, municipal markets, and harvest sites, as shown in Figure 1.
A total of twenty-seven villages and two settlements within the three provinces of Nadroga, Rewa, and Naitasiri were visited for the interview. Other harvesters were interviewed at their respective selling sites, mainly at the local municipal markets in Suva, Nausori, Lautoka, Ba, Nadi, Sigatoka, and Navua. Further interviews were conducted at the major harvest sites along the Rewa River, from Kasavu village to Wainasasi (Figure 1).

**Intermediary traders**

Intermediary traders were those that bought *kai* from harvesters and who then resold the mussels at the local municipal markets. A total of eleven intermediary traders
were identified and interviewed, of which 63% were females and 27% males. The female intermediary traders were selling kai at the Nadi market, while male intermediary traders were selling kai mainly in Lautoka, and Navua markets. The kai suppliers to these intermediary traders were harvesters from the villages of Naitasiri province, except the one male intermediary trader who usually buys kai from the Suva market and resells to Warwick, and Naviti resorts.

**Processors**

Kai processors were those who bought kai from the harvesters and processed it following the processing flow chart shown in Figure 5: cleaning, boiling, shucking, packaging, and freezing, prior to reselling to either local supermarkets or to exporters. About four kai processors were identified, but only one was interviewed.

**Exporters**

Only two exporters were identified and interviewed: one based in Bilavou, Navosa, and the other in Wailada, Lami. The Bilavou exporter exports sporadically, while the Wailada exporter exports kai weekly.

**Retailers**

Only four big retailers were identified, and representatives were interviewed. These retailers included two supermarkets in Suva that sell frozen kai, a restaurant in the Coral Coast, and a hotel in Denarau that value-add kai for use in the restaurant and hotel menus.

**Other supporting actors**

Other kai fishery actors identified were the service industry that supported and contributed to the smooth product flow of the kai supply chain. These include the transport industry in Nausori, boat builders in Baulevu, and the law enforcement agency of the Government of Fiji, situated both in Nausori, and Suva.

**Results and Discussion**

Local freshwater mussel, kai (*Batissa violacea*), is Fiji’s largest freshwater fishery that is mainly dominated by women. Although the kai fishery is one of the top three freshwater fisheries in the Pacific, with catches estimated at 4000-7000 tons per annum, this fishery is poorly studied. Hence, the importance of this research.
A total of 500 harvesters were identified from the interview. These *kai* harvesters appeared to have created self-employment as a source of livelihood for their respective communities. The *kai* and its related products are sold to the public, retailers, and processors.

**Value Chain Map for Kai Industry**

Figure 2 shows the value chain map of the *kai* fishery in Viti Levu, and demonstrates the involvement of multiple stakeholders and actors. Apart from the 101 *kai* harvesters interviewed from Nadroga, Rewa, and Naitasiri provinces, a further 399 *kai* harvesters were identified through the interview, providing a total of 500 *kai* harvesters altogether. They harvest approximately 14,162kg *kai/wk* from the five provinces of Naitasiri, Rewa, Nadroga, Ba, and Tailevu. Out of the five provinces, Naitasiri appears to have the highest number of *kai* harvesters, who harvest approximately 78.6% of the national total, or 11,125kg/wk. These are usually sold in the five urban centres in Suva, Nausori, Nadi, Navua, and Lautoka. Sometimes, *kai* are also sold to processors for export, and to local supermarkets and hotels.

Figure 2. Value Chain Map for the *Kai* Fishery in Viti Levu.

Source: Authors
Key Actors in the Kai Industry and Related Activities

The key actors identified for the kai fishery in Viti Levu include harvesters, intermediate or middlemen traders, processors, supermarkets, hotels, restaurants, and consumers from the local markets, as shown in Figure 2 above. A number of other formal and informal employments have been spawned along the supply chain, as shown in Table 6.

Harvesters and Associated Activities

Out of the 500 kai harvesters identified through face-to-face interview, 95% were women, while only 5% were men. The majority of these women were aged 50-55 years, with the ages ranged from 20-70 years. Many of these women have been harvesting kai for over 20 years. These women harvesters are involved in both subsistence and commercial sales of kai, while male harvesters are only involved in the subsistence use of kai, mainly as companionship to the wife, who goes out to harvest. Results further revealed that women have high tolerance to cold water, as evident in the 68% of women spending about three-four hours per day for three-four days per week harvesting kai.

Harvesters travel to harvest sites through various means, either walking on foot, or travelling in public transport or private vehicles, except in Sigatoka where harvesters sometimes travel on horseback. In the province of Naitasiri, a common practice is for males (husbands or sons) to accompany female harvesters for the purpose of carrying harvested kai in sacks. This is because lifting and loading the 80kg heavy sacks full of kai from the river to the transport vehicle, such as van, carrier, or bus, is a laborious activity that females cannot perform.

The transportation of kai within the five provinces, from the harvest sites to the market, is organized based on the level of tides and distance to the market. For example, the Naitasiri province is far from the market, and kai is thus usually harvested and sold a day after harvest, while for those provinces nearer the market, kai is harvested and sold on the same day. Similarly, kai that are harvested at low tides and in the morning are transported to the market on the same afternoon. However, if the harvest was done at low tides and in the afternoon, transportation to the market is done the following day.

Further analysis revealed that most harvesters play dual roles, i.e. both as harvester and vendor, as evident in Figure 3, where 77% of harvesters were also vendors. Approximately 17% of harvesters sold half of their kai to middlemen traders and sold
the other half themselves, 4% sold all their *kai* to middlemen traders, while the rest sold only to the public. The distribution of *kai* being harvested appears to indicate that most harvesters prefer to sell their own harvest at the municipal markets, due to higher returns. Most of these vendors sell *kai* from 8am-4pm until the market closes. Any unsold *kai* inside the markets are further sold outside the markets or returned home and consumed by the family. However, at the Nausori market, unsold *kai* on Saturdays are usually bartered for coconuts or fish with vendors from the coastal areas. The barter system is a traditional practice that usually occurs between the coastal and the inland people where they exchange protein foods with fruits and vegetables.

**Figure 3. Percentage Harvesters and Sales of *Kai*.**

Source: Author

**Intermediary/Middlemen Traders**

Intermediary traders were those that sold live, unprocessed *kai* with shells to the market vendors and to other outlets. Results show that 46% of intermediary traders were females, 36% males, and 18% represented the activities of the husband and wife combined. These traders were mainly from the Naitasiri province, while no intermediary traders were found in Sigatoka or Ba. The age group of intermediary traders range 30-70 years, of which the majority of young traders below age 45 sold *kai* at the Nadi, Lautoka, and Navua markets. Older traders, aged 65-70 years, were all females, and sold *kai* at the Nausori market. In the Naitasiri province, males were
mainly involved in the marketing of the *kai* as intermediary traders, which may be due to the heavy weight involved in carrying the 80kg sack full of *kai*, that requires male strength. This male activity was mainly prevalent in Navua, Nadi and Lautoka markets.

**Processors**

Processors were those that processed or cooked *kai* and then resold to exporters, supermarkets, and hotels that were based in Nausori. A total of five processors were identified, but only one was interviewed. The four processors were reluctant to be interviewed. It may be assumed that fear of being identified for non-compliance to the Food Safety Act (Anon, 2003) and Food Safety Regulation (Fiji Islands Government Gazette Supplement, 2009) may be one of the reasons for their reluctance. Based on information received from supermarkets to which these processors supply processed *kai*, about 20kg of processed *kai* meat per week had been received from these four processors. Hence, it may be assumed that these four processors were perhaps processing *kai* from their respective residential properties or elsewhere without proper license. Similarly, an exporter confirmed receiving 100kg of processed *kai* meat per week. Likewise, a Sigatoka female harvester also processed *kai* meat and sold to three restaurants in the Sigatoka town at $12 per kg of 2kg weekly.

**Local Customers**

Local customers were those that purchased *kai* for sale to supermarkets, hotels, and restaurants, or any other local consumers for home consumption. Interestingly, 95% of the fresh *kai* consumers that purchased *kai* from the municipal markets were Fijians of Indian origin. Apparently, *kai* vendors experience low sales during Hindu prayers, when these customers become vegetarian, as revealed by municipal markets sales section.

While the municipal markets sell fresh *kai* with shells, some supermarkets sell frozen *kai* meat. It was revealed by a supermarket sales department in Suva that, generally, the demand for frozen *kai* at the local market is low. However, increased purchase of *kai* by local Fiji-Indians were observed for relatives abroad. It was also noted that local Fiji-Indians usually consume *kai* as snacks during drinking sessions or parties, so only small portions of *kai* had been purchased for this.

Moreover, only 0.1% of *kai* had been purchased for hotel restaurants use. This was evident in only about 10-14kg/week of processed *kai* meat purchased by all the four
hotels, which may indicate minimal purchase and low demand by the hotels. *Kai* meats that were purchased by the hotels were used in various dishes, such as in *lovo*\(^1\), boiled, and *kokoda*\(^2\), marinated and cooked in coconut milk, and usually sold at FJ$15-FJ$70 per dish. Furthermore, *kai* dishes sold in local restaurants appear to be more popular compared to those served in the hotels. This may be due to high cost and unfamiliarity with the taste of local *kai* for tourists used to imported mussels. *Kai* dishes in local restaurants include *kai* cooked in *lolo*, baked, or cooked with pasta, and sold at FJ$7-FJ$25 per dish.

**Exporters**

*Kai* does not seem to be a popular commodity for export. This was evident by the two exporters that were interviewed, which revealed that they only export frozen *kai* meat as a minor commodity. Low importer demands may have contributed to low exporter supplies. It appears that the export of frozen *kai* meat has not exceeded 100kg per week per exporter. The most regular exporter exports a maximum of 100kg of frozen *kai* meat per week. Therefore, it is estimated that about 7-8% of *kai* that are harvested per week is exported by all the three exporters. Exporters usually purchase at FJ$12-$14/kg and sell overseas at 55%-70% markup, approximately at FJ$21/kg. *Kai* is mainly exported to Australia and New Zealand, where majority of Fijian expatriates reside.

**Volume of Kai**

Figure 4 shows the total percentage volume of *kai* harvested, and its distribution along the value chain. It reveals that about 79% of the total volume of *kai* harvested were sold by the harvesters themselves at the municipal market, while the remaining 21% were sold to intermediary traders, restaurants, hotels, supermarkets, entrepreneurs, and processors. Of the 15% *kai* supplied to the male intermediary traders, about 13.5% were sold directly to consumers at the municipal market, especially in Navua, Nadi, and Lautoka, while the remaining 1.5% was sold to the hotels. The female intermediary traders appear to sell all their products to consumers at the municipal markets only. It appears that only 2% of *kai* harvested are processed, of which 1.6% are exported, while 0.4% are sold locally in supermarkets.

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\(^1\) *Lovo* is a traditional Fijian method of cooking where food is cooked on hot stone buried underground.

\(^2\) *Kokoda* is raw fish or shellfish salad.
Figure 4. The Volume of Kai Harvested and Distributed to Various Outlets and Buyers.

Source: Authors

Processing of Kai

The major processing methods of kai along the value chain are shown in Figure 5. These include sorting of the harvesting, cleaning, shucking, packaging, etc., depending on the market and customer requirements.
Figure 5. Flow Charts of Processing Related Activities of *Kai* along the Supply Chain.

Source: Authors

**Sales Pathways and Profits**

Three sales pathways that appear to determine the revenues and profits received along the supply chain were: (i) harvesters sell own harvests directly to the consumer at the municipal market, (ii) harvesters sell through intermediary traders to consumers, and (iii) harvesters sell through processors to supermarkets/hotels/exporters. The income received by the harvesters, processors, and exporters appears to be different based on market requirements, further processing, and value adding, as shown in Figure 5. It appears that processors obtained the most profit compared to other actors in the chain.

Worth noting is that harvesters usually sell the 83kg bag *kai* with shells at a wholesale price of FJ$50-60 per bag to the processor, while the same 83kg *kai* with shells, when sold at the municipal market in heaps (equivalent to 40-50 heaps), fetches about FJ$120 when all the 40-50 heaps are sold. Furthermore, when the same 83kg *kai* with shells are shucked, it provides an estimated weight of 46kg, which are usually sold to the exporter at FJ$14.00 per kg. This fetches a total revenue of FJ$644 of 46kg meat. The high revenues with good profit margins obtained from shucked *kai* compared to *kai* with shells demonstrates the various processes used and value addition of *kai* products developed. These differences in revenues occur at different
sales pathways of the value chain. The three major sales pathways of *kai* are discussed below.

**Direct Sale by Harvesters to the Municipal Markets**

The major markets for the *kai* harvesters appear to be the municipal markets in the city and towns of Suva, Nausori, Korovou, Sigatoka, Nadi, Lautoka, and Ba. This study reveals that about 96.5% of the *kai* that were harvested were sold at the municipal markets, of which 79% were sold directly by harvesters themselves to consumers at the municipal markets, as shown in Figure 4.

The cost incurred in the harvest of *kai* per day varies, depending on distance travelled to and from harvest sites, and the number of times harvesters travel to the municipal markets to sell. For example, harvesters in the Naitasiri province spent approximately FJ$12.40/day, while the harvesters of Ba and Sigatoka spent about FJ$16-FJ$17/day as shown in Table 1. The Naitasiri harvesters spent a bit less money due to their one-day marketing per week, either on a Friday or Saturday, while the Sigatoka and Ba harvesters go to municipal markets more than once per week, and usually after every harvest.

Table 1 also shows the daily revenue of the sale of fresh *kai* by harvesters as market vendors, which reveals that more revenues were obtained by the Naitasiri harvesters compared to the harvesters of other provinces. A total of 11,125kg of *kai*/wk were sold in five urban centers of Viti Levu, as shown in Figure 2. This may mean that Naitasiri harvesters save cost by gathering and storing *kai* throughout the week, and only travel to the market to sell once per week.

Table 1. Estimated Daily Revenue and Profit Received by Harvesters in the Sale of Fresh *Kai*.

<table>
<thead>
<tr>
<th>Harvesting Site by Province</th>
<th>Total Expenses (FJ$)</th>
<th>Revenue (FJ$)</th>
<th>Profit (FJ$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naitasiri</td>
<td>22.50</td>
<td>120</td>
<td>84</td>
</tr>
<tr>
<td>Ba</td>
<td>16.00</td>
<td>40</td>
<td>24</td>
</tr>
<tr>
<td>Sigatoka</td>
<td>17.00</td>
<td>40</td>
<td>23</td>
</tr>
<tr>
<td>Rewa</td>
<td>17.00</td>
<td>57</td>
<td>40</td>
</tr>
<tr>
<td>Tailevu</td>
<td>21.00</td>
<td>42</td>
<td>21</td>
</tr>
</tbody>
</table>

Source: Authors’ compilation

Based on the revenue earned from the normal sale volume brought to the market per
week: 83 kg kai with shell sold in heaps; 1 heap is equivalent to 2.0 kg sold at $4 per heap.

At the municipal markets, the cost of *kai* is determined by their sizes; small size *kai* are sold at FJD$3/heap, while big sizes are sold at FJD$5/heap. Hence, when all the 83kg *kai* are sold in heaps, the 40-50 heaps could earn around FJ$120- $250. This may be one of the reasons why the majority of harvesters prefer to sell their own harvested *kai* at the municipal markets. Some harvesters could fetch profits up to FJ$99- $229/83kg *kai* with shells.

**Sale of Kai by Harvesters to Intermediary Traders**

Male and female intermediary traders were identified to have collectively resold approximately 19% of the *kai* they bought from harvesters. It appears that there were more male intermediary traders (15%), and fewer female intermediary traders (4%). These male intermediary traders not only resold *kai* at the municipal markets in various towns and in the city, but also to hotels. On the other hand, female intermediary traders resold *kai* only at the municipal markets. It was observed that *kai* vendors were fetching the wholesale price of FJ$84.00/83kg to a high profit, ranging FJ$36-$166 depending on seasonality, especially on high demand seasons.

**Sale of Kai by Harvesters to Processors for Export and Supermarket Retailers**

As stated above, only 2% of *kai* that were harvested were sold to processors, of which 1.6% were processed for export mainly to Australia and New Zealand, while only 0.4% were processed and sold to local supermarket retailers, as shown in Figure 4.

On average, processors’ total operation cost was estimated at FJ$235.69/week, without processing license fee (FJ$800.00/year), as shown in Table 2. Processing license fee of $800/year was excluded from the expenses because most *kai* processors were not licensed and did not pay the license fee. The data exhibited in Table 2 reveals that small scale processors earned only minimal revenue from selling processed *kai*, hence not sufficient to pay for the renewal of their licenses annually. This perhaps did not provide enough revenue to sustain the building and maintenance of a separate processing facility that is expected to be food safety compliant.
Table 2. *Kai* Processors Estimated Expenditure (Weekly) and Profits when Purchased Directly from Harvesters.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Amount in FJ$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue received when bought from villages ($60/83kg <em>kai</em> with shell) and sold to exporter at FJ$14 per kg of meat for 100kg <em>kai</em> meat (equivalent to 83kg x 2.2 bags)</td>
<td>1,400</td>
</tr>
<tr>
<td>Expenses 1: Cost of intermediate inputs and products of 83kg x 2.2 bags and other intermediate inputs such as packaging</td>
<td>150.31</td>
</tr>
<tr>
<td>Expenses 2: Less cost of services and other permits including transportation. Permits and other fees, less FJD800.00 processing fee/annum</td>
<td>85.38</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>235.69</td>
</tr>
<tr>
<td>Profit (Gross revenue received less total expenses)</td>
<td>1,164.31</td>
</tr>
</tbody>
</table>

*Note:* 83kg *kai* with shell x 2.2 bags = 50% meat gives 46 kg of meat sold at $14/kg = approximately FJ$644.00. Therefore, 83kg x 2.2 = 200kg *kai* with shells is equivalent to 100kg *kai* meat.

Source: Authors Compilation

It appears that there is less demand of *kai* meat from importers. This is evident in the export of only about 100kg *kai* meat/shipment, and as the minor export commodity by the exporter. Low importer demand coupled with low profits appear to make *kai* an unattractive commodity business for exporters. The exporter buys at FJ$14/kg locally, and sells abroad at only FJ$21/kg, from which a revenue of FJ$2,100 obtained from 100kg, less expenses of FJ$1,998 as cost of freight, labour, services, permit fees, overhead, etc., with the profit of only around FJ$102/shipment, as shown in Table 3.
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Table 3. Weekly Expenditure and Profits by the Kai Exporter when Purchase from Processor.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Amount in FJ$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross value received on sales of 100 kg kai (FJ$21/kg)</td>
<td>2,100.00</td>
</tr>
<tr>
<td>Cost of Intermediate Inputs</td>
<td></td>
</tr>
<tr>
<td>Cost of product (FJ$14/kg for 100kg from processor)</td>
<td>1,400.06</td>
</tr>
<tr>
<td>Other intermediate inputs e.g. packaging materials, label, etc.</td>
<td></td>
</tr>
<tr>
<td>Less cost of services and other permits including transport and</td>
<td>597.05</td>
</tr>
<tr>
<td>freight to destination</td>
<td></td>
</tr>
<tr>
<td>Permits and other fees such as registration fee, exporting fee</td>
<td></td>
</tr>
<tr>
<td>and processing fee</td>
<td></td>
</tr>
<tr>
<td>Total Expenses</td>
<td>1,997.11</td>
</tr>
<tr>
<td>Profit (Gross value received less total expenses)</td>
<td>102.89</td>
</tr>
</tbody>
</table>

Note: Figure is based on the normal weekly sale.

Source: Authors’ compilation

Employment Generated Along the Kai Value Chain

The kai fishery has generated at least 58 other employments in the form of informal businesses, as well as medium-small microenterprises, through the 500 kai harvesters within the five provinces of Naitasiri, Rewa, Nadroga, Ba, and Tailevu. The employment generated includes drivers, boat builders, retailers, processors, exporters, and harvesters, as shown in Table 6.

Transportation for harvesters, retailers, and processors to the harvesting sites and to the markets appears to open and develop the kai transport business in the area, with some villagers operating mini-bus services to and from Nausori town to their respective villages. This transportation system also created opportunities for boat builders along the value chain. For example, in the Rewa River, there were three boat builders, two wooden boats and one canoe, and two carriers that directly transport vendors to the market on Fridays and Saturdays. These two carriers were usually hired to deliver the produce from the harvest sites to Nadi and Lautoka municipal markets. A total of seven vans were transporting harvesters to the harvesting sites every day, and to the municipal markets on Fridays and Saturdays.
Table 6. Estimated Employment Generated and Actors in the Kai Value Chain.

<table>
<thead>
<tr>
<th>Employment Generated</th>
<th>Number</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boat builder</td>
<td>3</td>
<td>Self employed</td>
</tr>
<tr>
<td>Harvester</td>
<td>500</td>
<td>In 27 villages and 2 settlements</td>
</tr>
<tr>
<td>Transporter</td>
<td>3</td>
<td>Transports harvesters from Naitasiri to selected markets</td>
</tr>
<tr>
<td></td>
<td>3 dedicated truck drivers(3 ton) and 7 drivers of public buses, minibuses</td>
<td></td>
</tr>
<tr>
<td>Retailer/Vendor</td>
<td>10</td>
<td>A number of people employed as retailer or vendor in these industries</td>
</tr>
<tr>
<td></td>
<td>- market vendors in Viti Levu</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13 – kai middlemen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 – supermarkets workers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 – small restaurants workers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 – hotel restaurants workers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 - fulltime processor and exporter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 – processors and part-time exporters</td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ compilation

This research identified a total of 500 harvesters as the core of this kai fishery that generated self-employment that contributes to the livelihood improvement, and poverty eradication within families and communities in Viti Levu.

**Constraints of the Kai Industry in Viti Levu**

As listed in Table 4, one of the major challenges of the kai fishery is the abundance of small catch sizes, while limited big catch sizes of kai, observed especially at the Ba and Sigatoka rivers. Based on harvesters of the Rewa River, bigger catch sizes with mean of 71.30 ± 1.25 mm were only abundant in the deeper parts of the river, while the small catch sizes with mean of 32.22 ± 1.45 mm were readily available, mainly in shallow places, and were sold mainly at the Ba municipal market. Harvesters claimed that dredging of rivers appears to be destroying the breeding grounds of kai, which impacted the health and productivity of the river ecosystem. In the past, only big-catch-sized kai were harvested from what is now the gravel extraction site. Instead, harvesters had moved down the river to the non-dredging site, where there is apparently an abundance of kai. This appears to be the case in the Ba River. Bigger catch sizes of kai above 50.00mm fetched from clean rivers with low microbial counts are preferred.
Table 4. Constraints and Potential Solution for the *Kai* Industry.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Standard</th>
<th>Actor</th>
<th>Constraints</th>
<th>Potential Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvest</td>
<td>High quality and safe <em>kai</em>; big size with acceptable microbiological count. Acceptable water quality, packaging and storage</td>
<td>Harvesters</td>
<td>Frequent flooding, abundance of small sizes and limited big sizes</td>
<td>Agricultural farming to be conducted 100m away from river banks and plant terracing at river banks to reduce washing away of soil for reduction of dredging, avoid pollution, minimal use of pesticides, determination of size limit.</td>
</tr>
<tr>
<td>Transportation</td>
<td>Clean and spacious, provides shade, and readily available</td>
<td>Trucks, carriers and boat builder, owners and drivers</td>
<td>Limited vehicle and boats to transport harvested <em>kai</em> bags to the market</td>
<td>Government to assist</td>
</tr>
<tr>
<td>Marketing</td>
<td>Clean, shaded, spacious with water at the vicinity, heaps to be elevated away from the ground with good drainage system. Licence to sell</td>
<td>Harvesters, intermediate traders and consumers</td>
<td>Unhygienic market condition, inadequate market space, <em>kai</em> exposed to sunlight while selling, limited sales due to excessive supply resulting in tight competition</td>
<td>Liaise with town councils to improve market condition, development of more and new markets, provide business trainings to market vendors</td>
</tr>
<tr>
<td>Processing</td>
<td>Appropriate processing, packaging and storage facilities with trained workers. Proper certificate and licence to process. Food safety compliant</td>
<td>Intermediate traders and consumers</td>
<td>Unhygienic processing space, high cost of food business fee, limited sales due to less demand and excessive supply, lack of food safety knowledge</td>
<td>Conduct training on food hygiene, provision of funding assistance, provide business training, product promotion to create demand, more value adding of current and new demanding products</td>
</tr>
<tr>
<td>Retailing</td>
<td>Proper certification</td>
<td>Intermediate traders and consumers</td>
<td>Lack of promotion, lack of certification from Health authority, lack of food safety awareness</td>
<td>Promotion of product to create demand, liaise with Health Authority on proper requirement and certification</td>
</tr>
<tr>
<td>Export</td>
<td>Proper certificate and licence to export. Food Safety compliant.</td>
<td>Exporters, processors, wholesaler and retailers</td>
<td>Lack of export certification, lack of food safety awareness, limited markets abroad</td>
<td>Provide proper certification, create more market opportunities, promotion of product to create demand</td>
</tr>
</tbody>
</table>

Source: Authors
Nonetheless, it is interesting to note that controlling the catch size of kai may not be possible because there is no regulation available for the kai catch size limit in the Fisheries Act, (Fiji Fisheries Department, Unpublished). Hence, Fisheries Officers could not confiscate the small-catch-size kai. It is therefore recommended that local authority review the current Fisheries policy to include catch size limits.

Furthermore, limited and lack of transport to markets was also one of the biggest constraint faced by the harvesters, especially in the Naitasiri province. It appears that the available public transport and the two carriers that transported all the harvesters still could not accommodate the high numbers and demands of harvesters in the area. Therefore, opportunities for more transport could be organized by the transport industry to assist in the transportation of kai to and from harvest sites to the various markets.

Other constraints faced by the harvesters during the marketing of the product at the major municipal markets include:

- Lack of space to accommodate all the kai vendors
- Unhygienic selling areas that do not comply with the Food Safety Act 2003 and Food Safety Regulation 2009
- No proper shades in some selling area, vendors provided their own shade even though they were paying the market fee
- No proper tables for selling kai, hence vendors sat on the ground and provided their own tarpaulin for the display of kai for sale
- Limited water supplies at some selling areas while some areas are without proper drainage for water that are sprinkled on the kai. These appear to contribute to the slipperiness of the surface areas, resulting in high accident occurrence at the selling areas. Kai needs frequent water to stay alive, and taps are located a distance away from the selling area.
- Low ground space allocated for the selling area for kai frequently collects dust, contributing to high microbial count (Hatha. Christi, Reema and Kumar, 2005)
- Food business licenses were too costly for small processors to have a sustainable business. The cost of the license is about FJ$800.00 per year, and requires compliance with Food Safety Act 2003 and Food Safety Regulation 2009, which are audited by the Health Authority annually. Hence, most of the small-scale processors could not afford to pay, resulting in the processing kai for sale from home kitchens that are not HACCP or Food Safety compliant.
- Limited promotion and development of attractive value-added product from kai, especially to the hotel industry
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- In the supermarket where frozen kai is sold, no proper labelling, including nutrition information and preparation instruction, are provided.
- Lack of knowledge and capacity of kai harvesters to integrate kai into formal value chains

The Way Forward

It is clear that the kai fishery in Fiji could be strengthened through various intervention projects, programmes, and potential solutions listed in Table 6. These may include technical training of harvesters to include resource management and conservation of kai, development of a kai association, and formal registration with the Fiji Crop and Livestock Council, size catch limit, price control, and food safety and quality handling of kai.

Achieving premium quality of kai is expected to fetch higher prices. Premium quality kai in this case refers to low microbial count and big catch sizes, which may warrant the increase in the price of the raw product close to the market value for wholesalers. In such a case, food safety and proper post-harvest handling practices must be monitored and assessed with the issuing of health certificates to wholesalers as evidence of acceptable quality. This may help improve the quality and safety of kai and justify the increase in the price (Russell & Hanoomanjee, 2012).

Likewise, a review of the Fisheries Act by the relevant authority to include kai catch size limit to enable Fisheries officers to confiscate the small catch size kai is recommended. The management of resources and conservation of kai may help harvesters, who are also resource custodians, to take care of their environment and to address the undersized harvest common in the Ba and Sigatoka markets (McLeod, 2013; M4P, 2008). Harvesting of undersized kai may also suggest over-harvesting, which may be addressed by the introduction of a quota system or restrictions for no take (tabu) in certain harvest sites (Pickering, Garcia-Gomez & Sobey, 2013). Perhaps a quota per harvester, especially for the low seasons, could be introduced; this may require thorough consultations with all the stakeholders. Restrictions for tabu of kai to be in place during low seasons could also be an option. These quota systems and restrictions for tabu in certain harvest sites may contribute to the sustainable growth and development of the kai industry, and may allow growth of kai to reasonable catch sizes before harvesters proceed with their usual harvest activity.

Furthermore, we recommend linking harvesters directly to exporters through the Fiji Crop and Livestock Council (FCLC), to encourage harvesters to form the kai
association, and to formally register the association with FCLC. This is because FCLC is mandated by the Ministry of Agriculture to provide assistance and training to farmers and fishers in various areas, including value chain analyses and addressing of bottlenecks and challenges, such as efficiency and quality of the various commodities they deal with, depending on the members’ needs and requirements. This would be an advantage for the kai association, where FCLC will help them achieve premium quality that may attract premium price of kai for the harvesters (De Silva, 2011). It appears that the marketing constraints indicated in Table 6 may have also restricted vendors from earning the full revenue. Some vendors lose around FJ$48.00 revenues per week, equivalent to twelve heaps of kai with shells, or 13.4 kg deshelled kai, especially from unsold kai. If this unsold kai is sold to the exporter at the current price of FJ$14.00 per kg, approximately FJ$185.00 of revenue could be earned in return. Registration with FCLC may be a step in the right direction because FCLC also has the network for providing better access to markets, including international markets, which may resolve their current marketing issues.

Conclusion

This research reveals that the kai fishery is dominated by women. Despite earning much less, they are contributing to more employment generation for the rural people, self-employment, household income, livelihood improvement, and economic benefits of grassroots people. This industry is important to Fiji because it is addressing the sustainable development goals related to the reduction of poverty, hence should be supported by government.

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