

DUAL ECONOMIES OR DUELING ECONOMIES?  
AN ANALYSIS OF THE INTERSECTION OF THE CASH AND SUBSISTENCE  
ECONOMIES FROM THE SOCIAL SUSTAINABILITY PERSPECTIVE.

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## ABSTRACT

### DUAL ECONOMIES OR DUELING ECONOMIES? An Analysis of the Intersection of the Cash and Subsistence Economies From the Social Sustainability Perspective.

Christy Shannon Prescott

The following is a comparative study of two villages at different points along a continuum of reliance on the subsistence and cash economies. Of specific interest are the cultural implications and distributional effects associated with this profound distinction. Are cash and subsistence economies compatible or mutually exclusive? Principles identified in social sustainability literature provide a foundation from which to examine this question. Primary data collected via a Household Income Expenditure Survey (HIES) provide insight regarding distributive properties associated with relative dependence on and access to the cash and subsistence sectors of the economy using simple statistical analysis and content analysis methods. Changing gender ideologies are analyzed using attitudes related to post-marital education (PME) as a proxy. The study found that communities with a greater reliance on the cash economy exhibit a higher degree of economic stratification than communities where the subsistence economy is the predominant method of securing livelihoods. In contrast, the degree of political power among genders in the monetary economy appears to be equalized. In addition, gender ideologies that inform the division of labor appear to be more malleable in communities with a higher reliance on the cash economy.

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Te mauri, te raoi, ao tabomoa!

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## THE PACIFIC PARADOX?

The term Pacific Paradox was coined by development analysts from the World Bank to explain the low levels of economic growth in the face of high levels of public investment and aid, and propitious levels of human and natural capital that characterize economic development in Pacific Islands countries (Toatu 2001). This view has not gone unchallenged. As Langi Kavaliku points out in his article “Culture and Sustainable Development in the Pacific” (2000), the Pacific Paradox is an admission of the western cultural bias underlying development strategies that situate the cultural values of westerners above that of local cultural values and systems of production and distribution. The rationale grounding the phrase “Pacific Paradox” is one that defines development as a process of economic growth rather than as a method of securing social sustainability. In Kavaliku’s (2001) view the Pacific Paradox does not exist, because it is not paradoxically for Pacific Islanders to balance considerations of social, cultural, and environmental impacts against the goal of economic growth. Kavaliku (2000) argues that low economic growth in the face of high levels of aid flows is only paradoxical when viewed from the western perspective.

### A Cursory View of Kiribati’s Political Economy

The Republic of Kiribati is located in the equatorial dry zone of the Pacific Ocean (Figure 1). On July 12, 1979 the Republic of Kiribati gained independence from British colonial rule. This once purely subsistence based society was faced with determining

how to best manage the nation's assets in the context of a mixed economy<sup>1</sup> in order to achieve their goal of economic and political self-reliance (Tabai 1993). Since independence Kiribati's export economy has been declining (Fleming & Hardaker 1993; ADB 2002; Pollard 1987), while rural-to-urban migration has led to an increasing urban population driving up the demand for imported goods and services. Consultants for the Asian Development Bank and AusAID (2002) speculate that if the demand for imported goods and services continues to increase in the face of a decreasing export economy and continued low levels of economic growth, Kiribati will need to take dramatic measures to increase the efficiency of public expenditures and increase investments in the private sector in order to pursue a strong growth economy to sustain its economic viability.

Due to Kiribati's remote location, small population, and limited geophysical capacity to sustain industry the only economic strength Kiribati has is in its subsistence economy, which is the predominant economy in the rural sector (Fisk 1995). Although self-provisioning is the primary mechanism that over half of the Kiribati population uses to secure resources, the subsistence economy has received little attention in development planning (Fleming & Hardaker 1995). As the monetary economy assumes a prevalent role in Kiribati, it is important to understand who will be impacted by these changes, how they will be impacted and at what scale. The point of this study is to explain how the monetary economy distributes power and resources in contrast to the traditional system of allocation, the subsistence economy. In essence, how are power dynamics affected in the household, community and Kiribati society at large?

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<sup>1</sup> Cash-Subsistence Economy

Households in two Kiribati villages, Taborio Village, South Tarawa, Tarawa atoll, and Tabanga Village, Abemama atoll, provide the context in which to evaluate changes associated with the economic and social environment.<sup>2</sup> Statistical analysis of primary data gathered through the administration of a Household Income Expenditure Survey show that Tabanga, a rural Outer Island village, has higher reliance on the subsistence economy for the provision of household goods than do households in Taborio. In contrast Taborio, a relatively urban village, is characterized as having a higher reliance on the monetary economy than Tabanga. The implications associated with the economic environment are found to affect conceptions of gender as they relate to the division of labor within the household, and the distribution of political power within the village. In addition, this study found that by understanding the diverse forms of community capital<sup>3</sup> and how they interact, development aid may be more effectively targeted to generate synergistic outcomes that support Social Sustainability.

What follows is an overview of the social and economic context of Tabanga, and Taborio. The literature supporting the development of this study is taken from a variety of critical perspectives on Modernization Theory, and from Sustainable Development perspectives from the Pacific region. Country-specific information is presented in order to provide a cultural and historically specific perspective in which to inform the discussion of the implications associated with changes in the economic environment.

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<sup>2</sup> Ethnographic information is based on the author's time spent living in Kiribati between the dates of January 18, 2005, and October 18 2005. The Household Income Expenditure Survey was conducted between the dates of July 25, and September 8, 2005.

<sup>3</sup> Community capital refers to social, economic, financial, built, political, cultural, human and natural assets unique to a community.

Following this is a description of the methods, analysis techniques, findings, discussion, and conclusion.



Figure 1: A Global Perspective of Kiribati (World Atlas 2007)

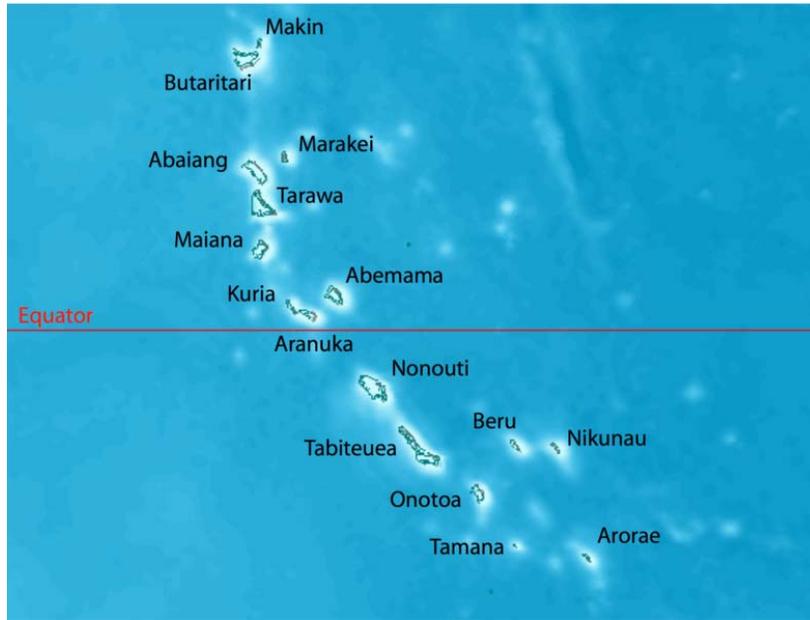


Figure 2: Kiribati's Gilbert Island Group (Wikipedia 2007)

### Taborio, South Tarawa

The most popular way of getting around in South Tarawa is via bus. This is the main source of transport for most people, as very few households own a personal vehicle. A bus in South Tarawa is a minivan typically outfitted with a wooden bench running the length of the cab and perpendicular to the bench seats customarily found in a minivan. There is almost always room on a bus to accommodate one more person, except during the morning rush hour, at which time the buses are packed with children going to school and adults off to work. The bouncing and jarring of the bus due to over-worn shocks, poor road conditions, and the flat bunk seats make a bus ride in Tarawa seem to a westerner more like an amusement ride than public transport. The bus stops only for pick-ups, drop-offs, traffic pile-ups, or to gas-up. At no point does it stop for a red light as there are precisely zero within the country; however it will still take you on average an hour to travel 17 miles as there is only one arterial paved road in the Gilbert island group, the road which you are on.

The people you typically see on the bus may be on their way to the hospital with small children, to work at an office or store, to a family member's house for a visit, to buy or sell goods at the open-air market or one of the grocery outlets, to school, or to a sporting or cultural event. They have deep caramel colored skin with large dark eyes and straight black hair, which the women often grow long and fasten at the top of the head with a locally-made comb.

The dress in South Tarawa is varied, from the traditional Kiribati clothing to 'modern' western styled clothes. Working professionals are expected to wear slacks if a

man, and a skirt if a woman, along with a button down shirt. Children attending school wear uniforms reflecting their school's particular design and colors. The dress of young men and women in South Tarawa reflects the growing influence of western culture. Men in their mid to late teens are sometimes seen wearing long sagging shorts, oversized jerseys, braided hair and piercings, while young women wear tight tees and short shorts or skirts revealing the upper thigh, which is considered taboo in traditional Kiribati culture.

Traveling the main road that runs the length of South Tarawa, the three urban centers, Bikenibeu, Bairiki, and Betio, are easily identifiable; however the boundaries between rural villages are indiscernible to people not from Kiribati. Betio, located on the very western islet, is connected to Bairiki via a four-kilometer causeway that bridges the islets' breach. Betio is the most urbanized area of Kiribati, and is home to Kiribati's international and inter-island shipping port and industrial sector. The Tarawa Biscuit company, copra processing plant, a movie theater, a number of small bars, a handful of restaurants, institutes of higher education such as, the Kiribati Teachers College, the Tarawa Technical Institute and the Marine Training Center, two super markets, and small neighborhood businesses selling freshly made breads are located here as well. The center of Betio is the most congested of the three areas, with some households constructed on platforms between shipping containers and bound by cyclone fencing.

Bairiki is the administrative center of Kiribati, having the majority of government ministries located there, as well the headquarters for the Bank of Kiribati, Kiribati's only bank, which is owned in part by ANZ Bank, which is foreign owned. It is also a cultural

center for Kiribati; national holidays are celebrated on the large events lawn and the stadium seating is filled on these occasions. Many students spend time in Bairiki, as there are two very important resources for them, the Kiribati Library and an Internet café that also allows the free use of computers for word processing. Other services and amenities offered in Bairiki include an open-air market, the government cooperative grocery market, volleyball courts, a soccer field, a large maneaba<sup>4</sup> constructed of permanent material, and Kiribati's only prison.

Bikenibeu is the smallest of the three urban centers. It does not support the same degree of industry or diversity of goods, services, or government investments as Betio or Bairiki. Bikenibeu is, however, home to one of Kiribati's two state-run secondary schools (equivalent to U.S. grades 9-12), King George II, and a state-run junior secondary school (equivalent to U.S. grades 6-8). Bikenibeu has a grocery store, and hosts an open-air market. Events and celebrations are also held in this area. In addition, Bikenibeu has a few small retail stores. My favorite was one no bigger than the average convenience store in the U.S. that sold everything from stereo systems, to pencil sharpeners, to flip-flops, to copy services. Bikenibeu is also home to a branch of the Bank of Kiribati and a few government ministries.

Taborio is a small village you pass through with seemingly no discernable eastern boundary to separate it from the neighboring village. The eastern village boundary is defined individually, based on personal history related to the community. Factors such as length of residency in the village, religious affiliation, level of involvement in village

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<sup>4</sup> The term maneaba (pronounced man E aba) refers to a central meeting house.

organizations, and educational attainment affect personal delimitations of this permeable boundary. For example, a twenty-year resident who lived in the village before Tarawa's villages began to burgeon with people thinks of Taborio's boundaries based on the traditional boundaries he knew when the village was distinct and marked by 'undeveloped' land between them. Today, however, much like suburban sprawl on the American landscape, community boundaries have become physically indistinct. Definitions of the eastern village boundary are subject to cultural interpretation and political jurisdiction. For some villagers, the eastern boundary is just beyond the location of culturally significant places such as churches and the village maneaba. Others refer to the political boundary, which can be validated by government produced maps (MODUK 1979; GUK 1997), to define the village's eastern boundary. The western border, however, escapes this ambiguity as it is geographically distinct in that it is marked by an inter-tidal channel through which ocean waters flood through to the lagoon and recede twice daily. The western end of the village is connected to the rest of Tarawa via a causeway.<sup>5</sup>

Taborio is approximately one kilometer in length and ranges between .25 and .08 kilometers in width. Amenities within the village include four small stores, a gas station, a bible store, and bus service that connects the village to Tarawa's other villages,

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<sup>5</sup> It was necessary to be able to describe Taborio as a geographically definable unit, to conduct the study. As discussed above, this delimitation is arbitrary in respect to defining the eastern boundary and perhaps the basis chosen reveals my western bias. However, the limited coverage of the study was more affected by the limitation of resources, that being time and money, and the perceived need to sample approximately 30 percent of the households within the sample area. For these reasons, Taborio's political boundary, as described by a member of parliament who was also a study participant, and the Tarawa map produced by the United Kingdom (GUK 1997) were used as points of reference in assessing the eastern-most boundary.

markets, parks, educational institutions, government offices, employment centers, and inter-island transit hubs such as the airport and the Betio port.

Traditional property allotments are narrow transects running from the lagoon to the ocean side. The island is bifurcated by a pot-hole ridden road marked by eroding edges and piles of rubbish composed of palm fronds, beverage cans, plastic bags, diapers, breadfruit leaves, tin cans, and styrofoam packaging. Women and children wake up daily before sunrise to sweep their yard clear of the debris that has accumulated since the previous day.

Housing types vary, allowing for a spectrum of different housing situations and styles that range from those that appear to be traditional western style house to those resembling the traditional Kiribati style dwelling. The western styled homes are the most expensive to build and have higher monetary costs to maintain than traditional style homes. Built of cinderblock, they are typically outfitted with jalousie windows covered by screens and 1/8-inch security wire. A ceiling fan in this type of house is essential as the solid walls block the refreshing ocean breeze. However, even in the cinderblock western style home, only a very few households have western style furniture such as couches, chairs, and tables.

Many families living in a cinderblock house will also have a traditional Kiribati-style structure referred to as a buai (pronounced Boo yuh) or a maneaba. These structures are suitably constructed for the equatorial climate with high 'v'-shaped roofs that allow heat to rise above the sitting space and low hanging eaves that allow only early morning and late evening sun rays to penetrate. In Tarawa these structures mimic the traditional

Kiribati design; however, the construction materials are typically imported materials such as corrugated metal or plastic used for roofing, and plywood boards used for buai platforms. In the case of maneaba flooring, typically the bare earth is covered with mats made of palm fronds, while wealthier households have a cement slab for the maneaba floor. The number of structures comprising the household varies depending on the family's availability of land, the amount of money available to invest in materials, the availability of natural products or scavengeable second hand materials, and the availability of human labor to collect and transform materials and construct structures.

#### Tabanga, Abemama

The island of Abemama is located approximately eighty miles to the southeast of Tarawa. Inter-island travel is facilitated through airplane and boat services. Looking out the window as you fly into Abemama on the small plane, the deep blue gradient of the sea softly transitions to a mild aquamarine as the land begins to emerge from the depths of the sea and to the bright wide coral shore. The inter-tidal zone is marked with V-shaped formations built of coral rock pointing out to the ocean that function as passive fish traps, in which fish are caught as the tide retreats. The coral beaches fringe the long thin spit of lush green that is the backbone of the island's cash economy, the coconut tree.

Climbing down the self-contained fold-up stairs located at the back of the plane's compartment, you exit the plane behind the spinning propellers to find the lazy airport consisting of a mid-size thatch maneaba, a small cinderblock building used for checking in, a pole with a windsock, and a dirt runway. Inter-island flights only occur during daylight hours, as the runways are not outfitted with lights. Motorcycles and flat bed

trucks roughly sixteen feet in length often drop off and pick up passengers. Truck rides can cost from ten to twenty Australian Dollars (AUD) depending on the mood of the truck's accountant. Most people on Abemama travel by bicycle, as it is unusual to own a passenger car. Less than a quarter of all households own a motorcycle and almost three quarters of household own at least one bicycle (MOF 2001).

Stores in Abemama are typically only large enough for the attendant to stand in. The items found in a store are of limited variety, which is why there is no reason for many of the stores to be any bigger than they are. Unless there is a short, the stores typically sell rice, flour, sugar, and salt, which are purchased in bulk and many times come replete with ants, small bugs and worms. Other food items include ramen noodles, canned fish and corned beef, generic luncheon meat, Szechwan style canned pork, Milo (a chocolate milk substitute), powdered milk, sweetened and condensed milk, custard mix, curry powder, cooking oil, soy sauce, and candy. Tobacco, bleach, lighters, matches, fabric, diapers, and liquid and bar soap are also commonly available.

The bulk of the imported items in Abemama arrive on cargo ships that service the island on an irregular basis, meaning that there is no standard schedule for the delivery of ordered goods. When imported food shortages occur, people rely solely on locally harvested foods. However, tobacco shortages tax the patience of the most relaxed residents, as there is no local substitute and close to 75 percent of households have members who smoke (MOF 2001). Abemama is one of only three outer islands that allow beer to be imported and sold. However, it is not widely available as only four stores on

the island sold it during the time of my stay. Occasionally items such as onions are available at local stores.

Other inter-island trade occurs on a household level. People traveling from Abemama to Tarawa will often bring local foods abundantly available in Abemama but somewhat scarce in South Tarawa. Items such as salted or fresh fish, breadfruit, and lobster are often brought from Outer Islands to South Tarawa as gifts for family members. Locally made items such as thatch, handicrafts, or sleeping mats made of pandanus are also brought to Tarawa either for the family, a church-based fundraising effort, or for sale in the market. Items people tend to carry back are imported goods not available in Abemama and range from food products, such as apples, oranges, and farm raised chicken, to luxury goods such as TVs and DVD players, motorcycles, and stereo systems, to household and personal items, such as shoes, bicycles, and cookware.

Traditional attire in Abemama is the bee (pronounced bay), also known as the lava lava (Fijian term). Worn by both men and women, it is a colorful, sometimes decorative rectangular piece of fabric roughly 6' by 4' for adults, wrapped around the waist and tucked in place at the top. Women wear shorts underneath to guard against inadvertent 'flashing' however for men this is not the case. Men often wear a t-shirt or collared short-sleeve pull-over, while women typically wear a Tiibuta (pronounced See Boo Tuh), a sleeveless homemade shirt with smocking on the top portion of the front and back of the shirt.

Government services are located in the Island Council village of Kariatebike, which serves as the administrative center of the island. This is where the local branch of

Kiribati government offices is located and where the council workers live. The demographic characteristics of Kariatebike are not representative of the island's twelve other villages, as most of the people who work for the island council are from other islands and have at least one and sometimes two wage earners who work for the government, collecting a regular wage.

Mail is picked up and delivered to Abemama at most, twice weekly by Air Kiribati. All mail sent or received from Abemama is collected through the island council office. Mail is not delivered to households; instead individuals must travel to the Post Office to access this service or ask someone who is going there to pick up or drop off mail. When the plane is out of commission, mail service is essentially discontinued as mail is neither delivered nor picked up.

Communication services on Abemama are some of the most advanced for the outer islands. Most official business carried out by the police and medical communities is over CB radio. Telephone communications are typically reserved for other governmental business and for private calls. Abemama was the first outer island to have Internet services, which were set up in the fall of 2004. The push to develop Internet services has also resulted in an overall investment in the solar power system, which has expanded the hours of operation of the pay phone and increased the continuity and reliability of communication systems in Abemama.

Abemama is unique as an outer island in the type and number of schools located there. Dispersed along the length of Abemama's mainland there are three primary schools that children walk to, one Junior Secondary School (JSS), and three secondary

schools operated by religious organizations. The JSS compound, where I taught class for two terms, had been completed a couple years before through an Australian development grant, and consisted of a central maneaba, four cinderblock buildings housing classrooms, and a volleyball court. As there are not enough textbooks for distribution, students rely on notes copied from the chalkboard and classroom lectures. While some of the classrooms have desks and chairs, others have none.

Tabanga, like many villages in Kiribati, is organized in a linear fashion due to the nature of an atoll's land formation. Tabanga is bordered on the southern end by an intertidal channel while the northern border is unmarked by any geographic or easily discernible cultural feature. Central Tabanga is defined loosely by denser development and includes, property owned by the village, which certain households are granted rights to live on but do not possess ownership rights. In addition, three small general stores, one petrol vendor, the remnants of the old village maneaba, and the Catholic and Kiribati Protestant Churches (KPC) mark Tabanga's village center.

For the purpose of this study, Tabanga's northern border is defined as the same distance to Tabanga's village center as the southern border is, in other words, Tabanga's village center is equidistant from the northern and southern borders. In this respect, Taborio village is dispersed over 2.75 kilometers, ranging from 750 meters to 500 meters in width. Property allotments transect the land from the lagoon to the ocean. By portioning out the land in this manner, households have access to the variety of resources that can be cultivated and harvested, given different ecological conditions dependent on elevation, water table levels, and proximity to the lagoon or ocean.

Homes in Tabanga are much like other homes in Abemama with respect to their construction. Local building materials are primarily derived from the coconut and pandanas trees, with walls made from the center stalk of the palm frond, which are split and then tied to the building's frame using handmade coconut rope. Roofs are thatch made from dried pandanas leaves which are soaked for days in the lagoon to make them soft and pliable and then folded over a palm frond stalk and fastened in place using a thin piece of palm stalk. It is essential for households in Abemama to understand how to cultivate and harvest local materials for food and shelter.

## DEBATING DEVELOPMENT

From Stephen Gudeman's work on the culture of economics, to Dependency Theory, to perspectives on Sustainable Development, to the feminist critique of Development Theory, this investigation is grounded in the critique of modernization theory. These bodies of literature converge on a number of points however they dialogue with different aspects of development theory. By challenging the motivations, the distributional impacts, the scale of analysis, the measures of progress, and in the end the capacity of development to benefit targeted populations, these criticisms provide a platform from which to consider if and how the Universal Development Model has affected gender ideologies, community well-being, and the overall political climate in Kiribati.

### Modernization Theory

Modernization theory was born on the coat tails of the Marshall Plan, instated in the mid 1940's by Harry Truman. In its most altruistic interpretations, Truman's development plan conceived the reduction to social problems, poverty, and desperation through the process of modernization via macro-economic growth (Gibson 1993). Modernization theory's rationale assumes all societies are located on a linear trajectory whose ultimate destination is reflected in that of western society. In that light, it is assumed that if the same conditions are applied to the 'third world' that gave rise to the 'first world', the same results will be achieved (Rapley 2002). Western political leaders adopted this assumption and responsibility with a sense of Manifest Destiny.

### Dependency Theory

Criticism to modernization theory arose in the 1950's. It was argued that international development was but a means of reinforcing global inequalities and expanding western hegemony (Webber 2004; Rapley 2002). Paul Baran, author of *The Political Economy of Growth* (1957) argued that development relied on and reinforced inequities in the local social strata by providing economic benefits to the local bourgeoisie while distributing the costs to marginalized masses, who were further impoverished as international competition crippled local economies (Rapley 2002). This view was taken one step further by André Gunder Frank who saw development and underdevelopment as “two sides of the same coin” (Rapley 2002:17), meaning that the economic prosperity enjoyed by developed nations was dependent on their ability to exploit cheap labor and resources from economically underdeveloped countries. Dependency theorists' most poignant criticism is perhaps that economic development is founded on structural, political, and economic inequities between first and third world countries that cannot be equivocated through modernization, only exacerbated.

### Feminist Critique of Development Theory

Whereas dependency theory challenged the motives behind western led development, the western feminist criticism emergent in the 1960's focused specifically on the lack of consideration of women in the development process. It was argued that since development was conceived primarily as economic growth and measured through macro-economic indicators such as GNP, women's role in the development process was invisible, as much of women's work occurs within the home and beyond the context of

the monetary economy (Prugl 1996). Women in Development (WID) literature sought to bring attention to the role of women, arguing that if development planners failed to recognize women's contribution in development, resource allocation would be inherently inefficient (Razavi 1997). Aid agencies responded through funding female led micro-enterprise schemes (Prugl 1996). While this response achieved the positional objectives of WID, it far from satisfied the feminist criticism.

Perceived largely as a mechanism for fine-tuning the development process, WID's contributions were easily absorbed into the existing development framework. Feminists unsatisfied with the limited scope of WID claimed that it failed to challenge the structural mechanisms inherent in modernization that lead to women's subordination (Prugl 1996). The Gender and Development (GAD) literature answered the criticism surrounding the systemic reproduction of women's subordination by calling for development to shift its focus from women to gender. In order for the impacts of development to be equitably distributed, GAD calls for development planners to craft development projects that take into account the cultural and historical context informing gender ideologies as they relate to household structure and lifecycle patterns in determining the sexual division of labor.

Feminist criticism further challenged the notion of a household possessing a communal, unified self-interest and stated rather that the household is composed of distinct competing multiple interests (Jackson 2002) and takes different structures in different cultures (Ekejiuba 1995). Ann Whitehead's *Conjugal Contract* (1981) theory was instrumental in moving this position forward. It viewed the relationship between

men and women in the household as largely mediated by culturally-specific social norms related to gender and lifecycle stages. Policy implications meant that development planners could no longer rely on a universal development model, but rather needed to address development through a culturally-specific gender sensitive lens, because if not, development was seen as potentially reinforcing pre-existing inequities. Rather, development had to be sensitive to who in the household was affected and how (Jackson 2002).

The irony of GAD is that although it advocated a culturally and historically specific approach to development, critics claimed that it universalized 'third world' women as a subordinate group, thereby objectifying them as helpless victims, which is ultimately disempowering (Prugl 1996). Response to this criticism has been much like the approach taken by WID, which was to bring awareness of women's roles in the development process by documenting the ways that women are active agents of their own well-being. For much like the guiding principles emergent from Sustainable Development literature, empowerment cannot be driven by external forces but must grow from within (Prugl 1996; Overton et al. 1999)

### Sustainable Development

Sustainable Development has been a topic on the lips of development planners for the past two decades. However there is still much debate over what is meant by Sustainable Development (Overton 1999; Kavaliku 2000). The generally accepted definition of Sustainable Development is said to be development that "meets the needs of the present without compromising the ability of future generations to meet their own

needs” (quoted in Overton 1999:3). By addressing issues of environmental conservation and intergenerational well-being, the Sustainable Development discussion broadens the scope of development’s goals and how they are measured (Hackett 2001; Kavaliku 2000).

Interestingly, there has been ample criticism emerging from the Pacific region concerning how Sustainable Development has been conceptualized and essentially co-opted in the interests of developing nations (Overton 1999; Kavaliku 2000). John Overton, a contributing scholar in the field of Sustainable Development in the Pacific notes that Sustainable Development discourse has been largely informed by western perspectives that tend to focus on global environmental issues such as climate change, rather than local environmental issues, such as groundwater contamination.

There are three aspects commonly referred to in Sustainable Development literature: economic, environmental, and social (Hackett 2001; Overton 1999). The social component of sustainability is largely addressed in response to environmental sustainability concerns, wherein the lack of economic development is seen as giving impetus to human-induced environmental degradation (Overton 1999). Following this rationale, Sustainable Economic Development is seen as imperative to achieving environmental sustainability, and social sustainability is an afterthought. Proponents of Sustainable Development in the Pacific region criticize the predominant approach to Sustainable Development for the limited attention given to topics such as poverty and social justice (Kavaliku 2000; Overton 1999; Sahlins 2000). Rather the social approach

to Sustainable Development posits that socio-cultural dimensions are central in conceptualizing what Sustainable Development means and what it looks like.

Although Sustainable Development discourse to date offers little consistent guidance to policy makers, there are two principles that those with divergent perspectives agree on: 1) the environment should be preserved for future generations, and 2) development is necessary (Overton 1999). Following are the key debates and perspectives of Sustainable Development literature as it relates to environmental, economic, and social sustainability. How the gaps between these philosophies are bridged has yet to be fully determined.

#### *Economic Sustainability*

Sustainable economic development is comprised of two potentially divergent perspectives. The first is largely aligned with principles that underline the macro-economic approach to development, which defines a sustainable economy as one that is able to achieve sustained growth, reflected in an ever-rising GNP (Overton 1999). In addition to this perspective is the Ecological-Economic perspective, which provides a framework for considering the relationship between ecological and economic systems. This perspective posits that a change in the economic or ecologic conditions affects a change in the other. The guiding principle of this perspective draws on aligning the rate of consumption with the rate of environmental regeneration (Overton 1999). While the first perspective described here does not challenge the dominant development paradigm, the second allows that development is necessary; however, it limits the level of economic growth allowable to that which would provide for intergenerational economic and

environmental sustainability. In this sense, the Ecological-Economic perspective of economic sustainability is most closely aligned with perspectives discussed below in Environmental Sustainability.

Weak-form and strong-form economic sustainability are approaches couched within the Ecologic-Economic perspective that have profoundly different policy implications. While both recognize the relationship between the economic and environmental systems and address the governing principles of sustainability, they propose to meet those ends in divergent ways. Weak-form sustainability posits that natural capital can be substituted with human made capital (Hackett 2001). This approach, which is largely technocratic, assumes that impacts to natural systems can be mitigated through technology. Given this perspective's assumption, it is believed that economic development should not be overly concerned with detrimental impacts to natural systems, because economic development is instrumental in reconstituting impacted ecosystem services.

Strong-form economic sustainability posits that natural capital cannot be substituted for human-made capital (Hackett 2001). Rather, it rests on the assumption that environmental systems have a limited capacity to deal with environmental stressors and still be able to produce ecosystem goods and services. Therefore, strong-form sustainability argues that natural systems must be protected because there is no substitute for essential ecosystem services such as clean air, water, flood mitigation, and genetic diversity to name a few. Given these assumptions, the belief guiding this perspective is

that economic growth should be limited to ensure the sustained functional integrity of ecosystems and the services they provide (Hackett 2001).

### *Environmental Sustainability*

Two divergent perspectives emerge from the Environmental Sustainability literature. The more moderate of the two perspectives has received popular support from development agencies, largely because it does not call for any radical changes; rather, it presupposes that environmental regeneration and economic development are not mutually exclusive. The assumption here is that economic development is needed to relieve anthropocentric burdens on the natural environment. It also calls for development to be mindful of the relationship between environmental and social systems (Overton 1999). It can be said that this perspective of Environmental Sustainability and the Ecological-Economic perspective of Economic Sustainability are closely related in that they both recognize the relationship between economic and environmental systems. However, this perspective of Environmental Sustainability does not provide guidance on how the two systems should be brought into alignment; rather, it calls for increased awareness of the relationship between environmental, economic, and social systems.

The more radical of the two perspectives, which has received little support from development agencies, calls for the dominant development paradigm, macro-economic growth, to be abandoned. Instead, it calls for a zero-growth economic policy. This perspective is informed largely by the deep ecologist critique, which rests on three assumptions: 1) humans are but one component of the ecosphere, 2) humans are no more important than other components, and 3) humans are largely responsible for

environmental degradation. The resulting perspective is that it is necessary to reduce consumption and focus on attaining zero-growth economies in order to reverse environmental decline (Overton 1999).

### *Social Sustainability*

Whereas economic and environmental sustainability perspectives are conceived as preservation or growth strategies, social sustainability concerns itself largely with the distributional impacts of development on social systems and their related environs. Literature on sustainable societies is predominantly concerned with issues of social equity and justice, particularly how the distributional aspects of development are portioned out, with particular attention given to the impacts on marginalized sectors of the population (Purdie 1999). Given this, social sustainability theorists are concerned with both relative and absolute forms of poverty. Whereas measures of absolute poverty relate to meeting basic human needs, i.e., food, lodging, and health care (Overton 1999; Lockwood 2002), relative poverty speaks to the degree of inequity among a select population (ADB 2002). The principal theme woven throughout social sustainability is the strict adherence to non-exploitive development to promote social and environmental equity in perpetuity.

In some respects, social sustainability perspectives are strongly aligned with the popular sustainable economic development approach, in that both view economic growth as necessary in order to guard against environmental destruction and to protect social sustainability. However, the approaches diverge in that each posits their respective aspects as the focal piece of Sustainable Development (Overton 1999; Purdie 1999).

Advocates of social sustainability maintain that economic growth is but a small component of sustainability; rather development should be informed from the emic perspective to focus on the strategies people and communities employ to meet their livelihood needs (Purdie 1999).

Social sustainability advocates posit that the leading cause of problems and inequities in indigenous societies is due to the imposition of culturally incongruent development models that prioritize economic growth, while discounting indigenous skills, knowledge and value systems (Schevyns 1999). Economic development strategies that fail to take into account the multitude of ways people secure their livelihoods, are ill-informed of the day-to-day reality of the people they are supposed to assist, which, in effect, undermines livelihood strategies (Purdie 1999). While modernization theory frames development as an economic process, Purdie cites that “‘job creation’ strategies only go part way in securing livelihoods, and are based on assumptions that, first, a livelihood is synonymous with employment and second, that people are able to move easily into a particular industry without having a history in that industry, that is they have capabilities which are applicable” (Purdie 1999: 67). Purdie argues that economic development strategies that are insensitive to the diversity of strategies people employ to secure their livelihoods result in a process of marginalization of the masses, which is contradictory to the principles of social sustainability and social justice.

Social sustainability advocates (Purdie 1999; Overton et al 1999) call for a ‘livelihood approach’ to development, meaning an approach that is sensitive to and

supportive of the day-to-day ways people and communities secure their livelihoods.

According to Chambers and Conway,

a livelihood comprises the capabilities, assets (stores and resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with stress and shocks, maintain or enhance its capabilities and assets, and provide livelihood benefits to other livelihoods at the local and global levels and in the short and long term. (cited in Purdie 1999:67)

The livelihood approach requires that development is broadly conceptualized to include social, political, cultural, environmental, and economic systems people use to secure their day-to-day needs and guard against risk. Much of the social sustainability argument stems largely from the work performed by Stephen Gudeman, a cultural anthropologist whose work centered on developing “an anthropological approach to understanding economic patterns” (1986: 29). Gudeman’s work countered modernization theory by noting that modernization theory rested on the notion of a universal development model that prioritized economic growth; however, Gudeman argued that economic models are cultural constructions that are unique to each society. Gudeman saw economic systems as reflections of locally-based values, beliefs and practices that reflect the sum of the multitude of ways livelihoods are constructed in a particular culture (1986).

Guidance to policy makers from the social sustainability perspective calls for development planners to conceptualize development projects that are locally based, meaning that development is participatory in the sense that those who development is aimed at helping become not only consultants of the development process but principal actors that have latitude to control the goals and the process, and the power to decide not

to participate (Overton et al 1999). Advocates argue that development projects that create opportunities for participation and self-defined goals rather than imposing values through programs could truly be a process of empowerment rather than objectification.

Scale is also an issue that is addressed in this perspective. Advocates argue that to maintain a culturally and place sensitive approach, development should be approached on a small scale in order to avoid homogenization. In addition, the temporal scale that development projects are applied and measured by must also be redefined. As the social sustainability perspective points out, sustainability relates to inter-generational timeframes and the project cycle is too short to measure trends towards sustainability. Project cycle timeframes are also criticized for being at odds with empowerment by removing local authority to define the pace of development (Overton et al 1999).

Insights gained from case studies examined in the Overton and Scheyvens' book *Strategies for Sustainable Development: Experiences from the Pacific* (1999) provide further guidance on what Sustainable Development is from the social perspective. Most contentious to development agencies is the view that development should make a strong break from the modernization approach. This view is divergent from the larger body of literature that assumes economic growth is a requirement for social sustainability. Rather, as Overton et al. (1999) put it, "instead of development implying inevitable increases in economic activity and wealth, Sustainable Development must be a more basic and diverse notion of improvement and well-being, even if this involves minimal change and merely the maintenance of existing livelihoods" (Ibid: 264).

In summary, development theory appears to be continually transforming, however most of the changes that have been widely accepted require only minor tweaking to the development model. The underlying assumption driving development theory, which calls for continued macro-economic growth, has continued to provide the underlying rationale through which development is conceptualized. While it has been shown that criticism of modernization theory and applied development have continually challenged development's goals, motives, application, and measures of success, the response that has evolved is reflected in the diverse conceptualization of Sustainability. Although Sustainability is a popularly supported principle, how it is will be actualized has been cause for debate. Of particular interest to this study are principles identified in the Social Sustainability perspective, which directs the focus of development from the global to local, from the economy to livelihoods, and challenges development to facilitate a process of empowerment by handing over the power to control the pace and face of development to those development is designed to help.

## THE COMMUNITY CAPITAL OF KIRIBATI

To present contextual information related to Kiribati I will employ a community self-help development framework developed by Cornelia Flora, Jan Flora and Susan Fey in their book *Rural Communities Legacy and Change* (2003) that is consistent with the philosophy advocated in the livelihood approach to Sustainable Development. The framework outlines seven forms of community capital. It is the view of Flora et al. that a community's ability to make use of their natural, financial, political, built, human, social, and cultural capital determines the level of social equity within the community (2003). In addition, economic capital will also be addressed, as a discussion of Kiribati's mixed-economy is critical to the development of this study and cannot be adequately addressed under the rubric of financial capital. Flora et al.'s (2003) approach aligns with the social perspective of Sustainable Development literature in calling for a participatory empowerment approach. This model assumes that over-reliance on any one of the seven forms of capital inherently devalues the other forms of capital, compromising the community's future. Therefore it calls for a conscious evaluation of these forms of capital by community members and relies on their ability to employ those resources to their own benefit.

### Natural Capital

Natural capital is defined as the attributes and characteristics embodied in the natural landscape and the services offered by it. The Republic of Kiribati is comprised of thirty-three coral atolls with central lagoons and fringing reefs. Situated in the dry belt of

the equatorial oceanic dry zone in the Pacific, Kiribati is geographically dispersed with a geopolitical range that rivals that of the continental United States. It encompasses 313 square miles of land with a sea to land ratio of 4000 to 1 (SPREP 1994) and is geographically organized in three island groups, the Gilbert, the Line, and the Phoenix, plus the island of Banaba, which marks the country's western terrestrial boundary. Mean daily temperatures range from 79° F to 90° F (26° C to 32° C). Within the Gilbert group rainfall ranges from 3000 mm per year on the northern islands to 1000 mm on the southern islands lying south of the equator. The central and southern islands are accustomed to experiencing severe long droughts where as little as 200 mm of rain per year may fall (SPREP 1994).

Kiribati's terrestrial resources within the Gilbert Island group are greatly limited. Three hundred and six plant varieties have been identified; eighty-three of these are thought to be native (SPREP 1994). The narrow variety of plant species is due to the small amount of land, the lack of topographic variation and the limited variety and amounts of micronutrients available in the calcareous limestone soil. The low capacity of atoll soils to retain water means that the only permanent freshwater supply is found roughly two meters below the soil surface, where less dense fresh water is hydrostatically buoyed on top of denser salt water. Periods of extended drought result in increased salinity of ground water resources and depleted water supplies. The shallow ground water table and propensity for toxic leaching through the soil substrate translates into heightened susceptibility of groundwater contamination due to anthropocentric activities.

Although the diversity of flora is limited, species that have adapted to the extreme environmental conditions have done so quite well.

In stark contrast to the limited variety of the terrestrial agricultural resources are the abundant marine resources that define Kiribati. There is a great diversity in habitat types, which translates to a great diversity of marine fauna. To generalize, there are three ecosystem types that define Kiribati's aquatic environments: lagoons; coral reefs; and the pelagic zone, which provide diverse habitats for a variety of mollusks, finfish, sea turtles, and seaweed. For this reason ocean resources are a defining aspect of the Kiribati culture and economy.

### Economic Capital

Economic capital refers to the system of trading goods and services, as well as the system's stability and resilience to perturbation. The market center of Kiribati is located on the southern end of Tarawa, one of sixteen islands within the Gilbert Islands. All other islands within the Gilbert group are referred to as 'Outer Islands'. Ninety percent of the 92,533 people living in Kiribati in 2005 lived within the Gilbert group, while 48 % of people living in the Gilbert group live in South Tarawa (MOF 2006) and depend primarily on the cash economy to access resources. The remaining 52% reside on the rural Outer Islands, relying primarily on the subsistence economy to secure resources.

An accurate reflection of household income is difficult to ascertain due to Kiribati's economic composition as a mixed monetary-subsistence economy (MacDonald 1998). Much of Kiribati's economic activity is not accounted for in macro-economic terms, as a reported 80% of households participate in some level of the subsistence

economy (Fisk 1995; MacDonald 1998). Subsistence and cash based mixed economies are common in Pacific Island countries; however, each is unique in their cultural relationship to the land and the sea.

Mixed economies afford a level of protection to communities against the volatility of the market. In addition, the employment of the subsistence sector is the primary reason why poverty is rare or non-existent in cash poor economies (Fisk 1995; MESD 1997). According to Fisk (1995), the subsistence economy is the only aspect of the economy in which Kiribati has an economic advantage in the production of goods; however, it has not been given adequate consideration in development strategies.

The balance between the two sectors of the economy is largely determined by population distribution due to migration and fertility, and the impact of economic development strategies implemented by foreign aid agencies or the state government. In South Tarawa, the population density coupled with the scarcity of arable land and environmental degradation of inshore fisheries has led urban populations to depend primarily on imported resources (Thomas 2002). However, in the Outer Islands where the population is predominantly declining (MEFD 2004) and the cost of trade is high, the subsistence sector continues to be the primary mode through which households secure resources.

The increasing urban population in the face of fixed resources is a primary concern for Kiribati (MFED 2004), which is growing annually at an average of 3.3%, almost twice that of the national growth rate of 1.9% (ADB 2002). The biophysical capacity of South Tarawa's environmental resources to sustain the growing population

has been largely compromised, while the capacity of the cash economy to sustain the increasing urban population is severely limited. There is little opportunity to expand public sector employment opportunities, as the public sector is already responsible for four out of every five dollars of pay and two out of every three jobs (MFED 2004). The private sector also faces a number of constraints related to geographic, geophysical, socio-demographic and cultural conditions.

### Financial Capital

Financial capital refers to physical or monetary assets that are easily converted to other types of resources capable of generating more resources (Flora et al. 2003).

Financial capital also includes the ability to access such resources through investment and lending institutions. As little information is available concerning micro-economic financial capital pertaining to individuals and households, much of this discussion will focus on the macro-economic dimensions of Kiribati's financial capital.

Kiribati's macro-economic conditions are largely influenced by historical circumstances. Concomitant with Kiribati's independence came dramatic changes in Kiribati's economic composition, as the nation's most lucrative export resource, phosphorous, was exhausted. The portion of the Gross Domestic Product (GDP) occupied by mining dropped from 43% to 0% in one year (Pollard 1987). Since independence, Kiribati's balance of trade has been negative (ADB 2002).

Kiribati is classified a MIRAB economy, meaning an economy based primarily on *m*igration and *r*emittance, foreign *a*id, and *b*ureaucracy (Bertram & Watters 1985). A substantial portion of the country's income comes from foreign countries as remittance

payments from overseas seafarers, international aid, and resource rents sold to Deep Water Fishing Nations (MFED 2004). The importance of these types of financial flows can be evaluated by considering the relationship between Gross National Product (GNP) and Gross Domestic Product (GDP).

Gross Domestic Product figures account for economic productive activity that occurs within the geographic boundary of a country, while GNP figures account for economic productive activity performed by host country nationals, irrespective of their geographic location. Kiribati's GDP is driven largely by government expenditures, and export receipts on copra, seaweed, beche-de-mer, shark fin, and aquarium fish, whereas the GNP also includes incomes earned through foreign investments, resource rents and Kiribati nationals working abroad. The relationship between the GDP and GNP figures reflects the importance of off-shore income in contributing to Kiribati's economic composition, as the GDP accounts for only 56% of the GNP (MFED 2004; ADB 2002).

Although government spending has been largely conservative, when necessary the government draws on interest gained from the Revenue Equalization Reserve Fund (RERF). The RERF is an offshore investment portfolio established in the 1950s in anticipation of the exhaustion of phosphorous resources (Fleming and Hardaker 1995). The RERF has been critical in allowing Kiribati to maintain its political saliency in that Kiribati has not been in a position of debt, which has allowed Kiribati to avoid restrictions placed on government spending and programs imposed through Structural Adjustment Policies on debtor nations. Kiribati must maintain this delicate balance by

guarding against expenditures outpacing GNP and the growth of the interest on the RERF.

The Bank of Kiribati is Kiribati's sole banking institution individuals can use to manage their personal accounts. Ownership of the Bank of Kiribati is through a partnership with ANZ Bank, which owns 75% of the shares, and the Kiribati national government, which owns the remaining 25% of shares. The Small Enterprise Development Act (SEDA), which was passed in 2002 (MFED 2004), was established to expand and improve business training opportunities, expand access to appropriate technology, facilitate access to financial assets, and to provide stability and protection of the credit delivery system (PIFS 1999), among other reasons. The Kiribati National Development Strategies 2004-2007 (MFED 2004) reported that while training in Start Your Own Business had been implemented on all of Kiribati's islands, with an average participant rate of 30 people per class, only two new businesses are known to have started as a result. Other aspects of the SEDA such as the Guarantee Corporation aimed at helping private businesses secure loans from domestic lending institutions had yet to be implemented (MFED 2004).

### Political Capital

Political capital refers to the ability of an individual or group to affect the distribution of resources, set agendas and frame issues. Political structures can concentrate power upwards or distribute it broadly. The degree to which power is distributed is a function of local and national decision-making structures, and is affected by issues of political sovereignty on a national level. Economic self-reliance and political

sovereignty were identified as national goals shortly after independence was gained (Tabai 1992). Kiribati's Development Vision as cited in the National Development Strategy 2004-2007 is "an increase in *kabwaia* – prosperity, well-being – and *tibwatibwaan raoi* – equitably distributed – among the people of Kiribati according to the principles of good governance." (MFED 2004: 9)

High reliance on foreign aid compromises political sovereignty. As noted in the Asian Development Bank's report on *Monetization in an Atoll Society* (2002), "even if Kiribati did not want to address [poverty] issues, international concern would force it to do so. International donors, financial institutions, and NGOs are insisting that developing countries adopt credible policies to alleviate poverty if they wish to continue to receive development assistance" (65). The point here is not that Kiribati is not concerned with decreasing poverty, but rather that aid-receiving countries must respond to the political priorities of donor countries. Therefore, aid-receiving countries' ability to frame their own political issues and agendas is decreased through the increasing reliance on international aid.

Kiribati's political system is a mix of the political structure imposed through colonialism and the traditional systems that predated colonialism (Tetao 1993; Macdonald 1998). The structure of the central government is based on the Westminster system; however, it has been modified to strengthen the connection between the western political structure and the traditional village-based system of governance. There are three distinct levels of government, including the central government's legislative body

referred to as the Maneaba Ni Maungatabu, the Island Council otherwise referred to as the Councilor Maneaba, and the Village Maneaba.<sup>6</sup>

The central government transmits information to and from the village level through the Councilor Maneaba, whose basic function is to connect the local community to the national political body (Kazama 2001). The Councilor Maneaba is composed of representatives from the central government as well as the elder men, referred to as unimane, from all of the island's villages. The unimane dominate the meetings held in the Councilor Maneaba, as central government officials such as the Clark<sup>7</sup> and other officials not originating from the island are viewed as short-term visitors and carry little weight in local politics (Kazama 2001).

Issues and policies brought before the Councilor Maneaba from the national governing body are discussed and then transmitted to villages for further discussion. The Village Maneaba discussions are led by the unimane; male participants are encouraged to voice their opinions, whereas women are expected to keep silent (Macdonald 1998, Kazama 2001). The Village Maneaba is regarded as a terminal administrative unit of governance. Decisions are made by consensus, which means that all the recognized participants of the discussion, i.e., married men, are in agreement. Village decisions and requests are then transmitted back to the Councilor Maneaba through the unimane. The Diet, who is locally elected, is then responsible for transmitting council requests or opposition to policies to the central government (Kazama 2001).

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<sup>6</sup> "Village Maneaba" here refers to the political body operating within the village.

<sup>7</sup> 'Clark' refers to the head administrator of the Kiribati national government's Island Council. Each of the Outer Islands has an Island Council.

The formidable role the village maneaba<sup>8</sup> plays in the everyday lives of the I-Kiribati<sup>9</sup> merits further attention. The village maneaba is the center of social and political life in Kiribati (Tabokai 1993, Kazama 2001). The word maneaba comes from the root words *manea* meaning to accommodate and *te aba*, referring to the land and the people (Tabokai 1993). In the center of every I-Kiribati village is a maneaba. The physical presence and functioning of the maneaba reinforces the I-Kiribati social heritage, values and norms, which rely on group participation and conformity. This is where community discussions, feasts, and visitors are hosted and public hearings are held.

The Village Maneaba interfaces directly with the household. The Inaki seats are the foundation of the Village Maneaba and comprise the most powerful positions in village politics. Those who take an Inaki position do so by right of gender, age, island origin and familial groupings. The aged married male head of a Kaainga or extended family known as a group of two or three mwengas, assumes the Inaki seat. It is the head of the Kaainga's duty to represent the interests of the Kaainga. Mwengas are akin to the nuclear family unit and are united by through a common lineage (Kazama 2001).

Those who hold an Inaki position lead and monitor discussions and public hearings, while married male members of the village are allowed to participate in the discussion. Sons are permitted to sit behind their fathers, until they marry and take a prominent position. Wives are permitted to sit behind their husbands and whisper their thoughts to their husband who are charged with representing them (Kazama 2001).

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<sup>8</sup> "Village maneaba" here refers to the physical structure or meeting house rather than political body.

<sup>9</sup> The term I-Kiribati (pronounced E Kir E baas) refers to the people of Kiribati.

Professional women are permitted to speak in Village Maneaba discussions typically when they are specifically invited to do so concerning an issue or subject that would fall within their area of professional expertise; however, at regular maneaba meetings the same women would be expected to sit behind their husbands and keep quiet (Macdonald 1998). Inaki seats are left vacant when the head of Kaainga is absent, even for long periods of time due to migrant employment status. In rare cases when an Inaki is unfilled because there is not a married man in the Kaainga to take the seat, an elderly woman will fill the position until one of the young men marries (Kazama 2001).

#### Built Capital

Built capital refers to the infrastructural assets a community owns or has access to. This would include public and private investments such as sewer, water, power generation and telecommunication systems, as well as roads and buildings that support the capacity of the state and commercial institutions to provide goods and services. Built capital is required to support macro-economic development as well as the day-to-day functioning of urban populations. Much of Kiribati's investments in infrastructure are concentrated in South Tarawa. The most critical infrastructure assets to Kiribati are: the ports by which international and inter-island trade is facilitated; airport facilities that support international and inter-island transit; water distribution and sanitation systems, which are vital in providing potable water supplies to the urban population; and the electricity generation plant on South Tarawa, responsible for supplying households and, private and public institutions with electricity.

Properly functioning water and sanitation systems appropriately designed to support the urban population are critical. As noted in Kiribati's National Development Strategy, inadequate urban sanitation systems pose one of the biggest public health threats in densely populated areas (MFED 2004). According to UNIFEM, only 54% of the urban population has adequate sanitation facilities as compared with 44% of the rural population (UNIFEM 2002). For those without access to sanitation facilities, the beach is the culturally acceptable place to defecate and urinate (Macdonald 1998, Prescott 2004).

Overcrowded urban areas lacking sanitation systems pose a serious threat to groundwater supplies. According to a survey conducted in South Tarawa (SAPHE 2005), access to clean water was self-identified as the most pressing problem for rural households in South Tarawa followed by insufficient access to clinics and lack of sanitation systems. The survey also found that 54% of rural households in South Tarawa had access to the Public Utility Board's (PUB) piped water supply, while 53% utilized this asset as a drinking water source. Fourteen percent had access to rainwater from a rainwater tank. Lastly 70% of households had access to well water, but only 45% of wells were used as a drinking source (Ibid).

Infrastructure investments in water and sanitation systems are not as extensive on the Outer Islands as on South Tarawa, because overcrowding and related health threats are not problems Outer Islanders face. Infrastructure development related to water supply on the Outer Islands is focused mainly on small scale water delivery systems designed to pipe water from relatively undeveloped areas outside village centers to households within the village whose water supplies may be in some way compromised.

Government and private investments in solar powered technologies are paving the way for the installation of public pay phones and Internet services in council villages on the Outer Islands. Airport and shipping port facilities are maintained on the Outer Islands to support inter-island trade and transit.

### Human Capital

Human capital is defined as the qualities and characteristics of the human population that make it productive. This includes educational levels, and quality of human health. Human capital formation is largely dependent on the availability and quality of other forms of capital (Flora et al. 2004).

#### *Health*

According to Nei Fenue Mareweia, a Lecturer at the Kiribati School of Nursing (Interview 2005), high-income urban populations are subject to a different set of health risks than low-income urban populations. Other sources cite differences in health risks between urban and rural populations (ADB 2002). Differences in health risks stem mainly from economic and environmental conditions, the institutional capacities of health-care facilities and services, and changing cultural values.

High-income urban populations are at a higher risk for developing 'lifestyle' diseases, otherwise referred to as modernization diseases. As Nei Mareweia (2005) mentioned, high-income households experience a greater risk of developing obesity, diabetes, hypertension, and heart disease (ADB 2002), due to their increased access to imported goods such as rice, sugar, flour, and petroleum products, and their decreased level of physical activity. High-income households are less likely to experience digestive

and respiratory diseases, which are the predominant affliction of low-income households whose conditions are often characterized by overcrowding, poor sanitation, and poor water quality.

On the Outer Islands, digestive and respiratory problems pose the largest health threat; however, Outer Island households are not subject to the same degree of environmental threats caused by overcrowding within the home and village as those in South Tarawa. While South Tarawa's urban population has access to twenty-one of Kiribati's twenty-two doctors (ADB 2002) and the Gilbert Islands' only advanced medical facility, Outer Island populations often suffer from lack of preventative and health maintenance medicines. In addition, low incomes on Outer Islands also mean that sanitation within the household may be compromised, as funds to purchase cleaning supplies, such as soap, are limited.

Much like many other social welfare programs in Kiribati, medical services are socialized. A limited degree of medical services is available on the Outer Islands through clinics staffed by nurses, who focus their energies primarily on preventative treatment, health maintenance and emergency medical care. Patients requiring advanced medical treatment are referred to Tungaru Hospital by the Outer Islands' medical assistants, who possess the authority to obtain free air transport for patients in need. However, as air service is limited for some Outer Islands to once a week and at times is out of service for long periods, many people are unable to access these facilities even in dire circumstances.

### *Education*

Access to education has improved over the past decade, as twenty-four state run junior secondary schools have recently been constructed through the Gilbert Group (MFED 2004). The Asian Development Bank (2002) states that total enrollment in junior secondary schools have risen dramatically from 204 in 1992 to 3,665 in 2000. State-run primary and secondary education is free and compulsory for children. However, the quality of educational services is compromised, as classroom supplies to support curriculums are practically non-existent on some islands (ADB 2002). The capacity of state-run secondary schools to absorb junior secondary school graduates is greatly limited as there are only two secondary schools in the Gilbert group; one is located in South Tarawa, while the other is located on the island of Tabiteueau. Church-based secondary schools subsidized by the state help meet the gap in capacity. Three of these schools are located on Abemama, while the fourth is located on the island of Abiang. Although the schools are subsidized, students are required to pay fees to cover room, board and educational services.

Tertiary schooling opportunities in Kiribati are offered through a variety of institutions: Tarawa Technical Institute; Tarawa Teachers College; Marine Training Center; Kiribati School of Nursing and the University of the South Pacific Extension Center. While Kiribati has been criticized in the past due to the gender imbalance and lower representation of women in tertiary education, the Asian Development Bank reported in 2002 that this was no longer the case, citing enrollment statistics at USP which reported 585 males versus 886 female students (2002). Although education has

improved in many respects related to increased classroom capacity and improved access to tertiary education for women, married individuals are still denied access to education. This is a prohibition imposed by the state and supported by local gender and lifecycle ideologies.

### Social Capital

Social capital refers to the norms of reciprocity and trust that is a feature of social organizations (Putnam 1993, Flora et al. 2004). The ability to trust fellow members of a particular community to abide by social norms and adhere to collectively defined goals is an essential component of enhancing the collective capacity of a community. However, there is also a dark side to social capital and that is its exclusionary aspect. Social organizations can and do have narrowly defined parameters when deciding who is part of the group and who is not. Social organizations that unite people based on their similarities on such factors as age, interest or gender, exercise what is called *bonding capital* (Flora et al. 2004). In contrast social networks that link people of different statuses are referred to as bridging capital (Flora et al. 2004).

An interesting aspect of Kiribati's cash economy is that a great portion of foreign income is derived through remittance proceeds. When viewed from the social capital perspective, remittance incomes reflect the importance of social networks and the cultural importance of reciprocity (Hooper 2000; Sahlins 2000). When reflecting on how livelihoods are constructed, Purdie notes that social interactions, often termed leisure activities, play a critical role in developing or maintaining social networks, which are necessary to guard against risk in times of stress (Purdie 1999).

In rural Kiribati society social organizations originating from customary village traditions, as the maneaba system, provide the social framework from which an exclusive and politically powerful community emerges. In this context, the *unimane* or the eldest male members of a village or island community are the heads of community discussion and are granted special privileges in the community decision-making process.

Membership is highly exclusive and rests primarily upon gender, then marital status, age and natal origins (Kazama 2001). The unimane are an example of a social organization based upon the principles of bonding social capital.

Women's organizations are not a traditional feature of Kiribati civil society but rather have emerged since the late 1970s through the leadership of the state, NGOs and the Catholic and Protestant churches. The first national women's group, an umbrella organization known by the acronym AMAK, was formed in 1979 with government funds. By 1982, AMAK was financially supported through monies from international grants and religious organizations (Macdonald 1998). The group's focus was on issues traditionally considered within the woman's realm, addressing health and educational concerns. Such organizations provide a venue for women to build social capital that can contribute to the development of political capital.

### Cultural Capital

Cultural capital is the product of the social, political, cosmological, economic and environmental heritage that shape the way people perceive and interact with the world around them (Flora et al. 2003). One of the key policy issues noted in the National Development Strategy 2004-2007 is the "erosion of cultural identity and traditional

values, which increases the risk of social breakdown under stress of economic change” (2004: 32). The erosion of cultural identity can have tremendous impacts on how societies distribute the costs and benefits associated with economic change. In Kiribati cultural changes is resulting in “unacceptable levels of inequity” (MFED 2004:28). Fairbairn-Dunlop (2000) speaks of the impact of cultural breakdown in the Pacific citing marriage breakdowns, unemployment and incipient poverty, lack of care for the elderly, violence against women and children, and land disputes, as well as the misuse of family lands. However, others such as Sahlins (2000) argue that cultures are dynamic and adaptable; hence change is inherent. With that stated, the following is a brief introduction to some of the defining characteristics of traditional Kiribati culture.

There is much debate over the ancestral lineage of the I-Kiribati; however the I-Kiribati are characterized as Micronesian in ethnicity. The Kiribati culture is patrilineal and patrilocal with land tenure passed through male heirs. Christianity has gained a substantial foothold since the late 1800s. Less than one tenth of 1% of the population reported no religious affiliation in the 2000 census, while 55% reported belonging to the Roman Catholic Church, and 37% reported belonging to the Kiribati Protestant Church. The remaining 8% reported their religious affiliation as Seventh Day Adventist, Bahai, Church of God or the Church of Latter Day Saints (MOF 2001).

To consider other telling aspects of Kiribati culture related to beliefs concerning distribution is to touch on fundamental differences between western and Kiribati cultures. Equality is a prized value in Kiribati society and political discourse. However, it is important to note that equity is valued in relation to nullifying social stratification and is

not equally applied to gender constructions. The high value Kiribati people have for equality is thought to stem from the pre-colonial period when the I-Kiribati lived a strictly subsistence lifestyle at which time it was important that resources were shared equally to ensure the survival of the whole (SPREP 1994). Such cultural systems as the bubuti (pronounced Buh Boo See), still utilized today, act as social equalizers. A bubuti is essentially a favor that cannot be refused (Thomas 2001, Troost 2004). People will often bubuti others for items, services, and even jobs. That being understood, the bubuti system is a disincentive for individuals to strive for personal wealth, as it will often be “bubutied.” The bubuti system has presented a number of challenges to implementing a capitalist culture that is rooted in the social hierarchies and individualism.

Given the extreme environmental conditions of atoll environments, the ability to maintain a subsistence way of life should not be viewed lightly. Culturally-based knowledge of agricultural and fishery resources is essential in sustaining the subsistence economy, for it is necessary to understand how local resources can be employed for the purpose of household or village consumption. Knowledge concerning cultivation, harvesting, fishing methods and how raw materials are converted to products and stored for long periods is essential. Without culturally-specific knowledge, the subsistence sector would falter.

In Charles Flora’s (1994) ethnobotanical survey, he recounts the various ways the coconut tree, which he qualifies as ‘a large part of our life in Kiribati’ (p.149), is employed. He notes nine types of food products, four basic building materials, a number of handicrafts and household items such as sleeping mats, cups, and fishing baskets, and

cooking fuel, in the list of products derived from the coconut tree. The cultivation, harvest and transformation of natural resources into necessary products to support subsistence livelihoods reflect the cultural capital embodied in indigenous skills and knowledge. In subsistence societies, cultural skills and traditional knowledge are inherently necessary for a society to transform the landscape and its resources into subsistence values.

Not only is it important to understand the system of production but also customary tenure mechanisms that are specific to a people, place and time, which function to sustain long-term viability and production of resources. As the fisheries sector is an essential component of Kiribati's subsistence sector (Thomas 2001), I will briefly touch on Customary Marine Tenure (CMT), which is a complex system of marine management that is interwoven in the cultural and social fabric of the I-Kiribati. The effectiveness of CMT in governing the sustainable management of the subsistence fishery has been largely dismissed by western scientists, mainly due to the language used to describe regulatory mechanisms, such as taboos (Hviding 1997). These mechanisms, whether purposefully designed as conservation methods or purely based on superstition, have effectively worked to conserve the subsistence fishery. CMT has evolved over centuries of collective observation, interaction, and dependence on the local marine environment for its provision of protein.

CMT was enforced through a variety of social and cultural mechanisms, such as community disdain, exclusion, and sometimes through violence (Johannes 2001). However, CMT was undermined when the British declared marine resources to be

common pool resources (Thomas 2001). On many islands CMT continued to thrive, as the central government's administrative controls held little weight with village members and the traditional forms of management prevailed. However, in South Tarawa, where the colonial administration had a stronger presence and exercised legal mechanisms for enforcement, traditional property rights were lost and so with them were the traditional management methods. The customary management strategy of marine resources that had governed the marine tenure has been largely compromised, as colonial systems of tenure have been ill fit to deal with marine tenure rights on community scale basis. The result is that the Tarawa fishery has been largely depleted, as individuals have been left to maximize their own gains (Johannes 2001). There is however renewed attention being given to the importance of CMT in sustaining Pacific Island livelihoods. Development Law Officer, Blaise Kuemlangan (2004) recently presented a paper by the Food and Agriculture Organization of the United Nations that assessed the regulatory and legal mechanisms that would need to be addressed to reinstitute CMT in Pacific Island Countries.

#### *Community Capital Summary*

A comprehensive cursory assessment of a community's diverse forms of capital can provide development planners with critical information that can be used to inform development strategies. Livelihood construction relies on the ability to employ social, cultural, political, financial, economic, built, and natural capital, whose composition is unique to a people, place and time. In this case, households in Kiribati's urban sector rely greatly on economic development to secure household incomes and the state's ability

to provide and distribute quality water supplies to secure the quality of human health. Households in Kiribati's rural sector rely predominantly on subsistence resources, which rely greatly on the employment of social, natural and traditional forms of cultural capital. It is in the ability of households to apply these forms of capital for productive purposes that Kiribati finds its strength. The purpose of such an assessment is not to prove economic growth should or should not be sought after, but rather to inform the understanding of development planners concerning the different assets and risks associated with diverse socio-economic environments. It is in this way that development will be more apt to employ community specific assets in order to address issues that present a risk to community well-being.

## HYPOTHESIS

Economy is culture (Gudeman 1986): the nature of the economic system through which individuals secure a livelihood affect conceptions of gender, notions of equity and cultural systems of production. Development strategies applied in Kiribati have been largely grounded in modernization theory and operationalized by applying macro-economic growth strategies. When Sustainable Development strategies have been applied, they have been weak-form economic sustainability, which posits that natural capital is replaceable by other forms of capital. Development in Kiribati is largely divorced in application from Social Sustainability principles. Development planners in the past have given little attention to local livelihood models that reflect culturally-specific values in tailoring development. When an exogenously defined economic system intersects with an indigenously cultivated livelihood system, cultural characteristics will reflect this change. I will investigate how development has affected distributional aspects of Kiribati society and gender ideologies. The questions under investigation reflect the values and theories of an outsider looking in.

Given that the I-Kiribati and western value systems diverge in regard to how resources should be distributed across society, it is my hypothesis that where the monetary economy dominates the way people secure their livelihoods, values and characteristics associated with the monetary economy, such as individualism and hierarchal societies, will be reflected in the distribution of resources among households. The I-Kiribati way is to ensure a relatively high degree of equality among households.

Cultural mechanisms, such as the *bubuti* and those embodied in CMT, guard against the gross accumulation of wealth and extreme deprivation. One of the key aspects I expect to be affected is the distribution of resources among households. Based on this, I would assume that villages that rely predominantly on the subsistence economy to secure livelihoods would be characterized by a higher degree of equality with respect to the distribution of resources among households than that found in villages exhibiting a higher reliance on the cash economy.

As feminist criticism points out, there is a sexual division of labor and when labor is unaccounted for, it is devalued. Following this line of reasoning, I would also argue that subsistence activities, which do not produce a monetary income, are devalued where there is greater reliance on the cash economy to secure livelihoods. The devaluation of productive activities that are not facilitated through the market is important because these are viable, culturally and environmentally specific ways that people construct their livelihoods. When development subsumes and devalues diversity in capital by redefining value in narrow terms, such as that which has the capacity to generate financial capital, the result is a net loss in the capacity of households to secure livelihoods.

I expect the dominant economic model of the community will also influence gender ideologies relating to the division of labor. Measuring such changes has to do with revealing attitudes towards the roles and responsibilities of men and women after marriage. Traditionally, the roles and responsibilities of married people within the household are well-defined and have to do with performing reproductive and productive subsistence labor to support the household. I expect that where the monetary economy is

the dominant way people secure livelihoods, unpaid labor will be devalued. Men and women's contribution to income earning will assume a more important role. Women will receive pressure to reallocate their labor from reproductive activities traditionally performed in the household to income earning activities outside of the home.

## ENGAGING IN FIELD WORK IN KIRIBATI

The relationship between culture, environment and economy is complex. By employing both quantitative and qualitative methods of data collection and analysis, a robust study can be constructed. Quantitative data considered outside of the relevant cultural context has little depth, which limits the researcher's ability to impart meaning to the data. When the collection of qualitative data is constructed to enhance the relevance of quantitative information, meaning can be attributed to quantitative data. Quantitative data, when couched in the appropriate cultural context lends to the construction of a mutually supportive framework in which the two types of information temper one another and allow the researcher to find common ground when there are discrepancies and to identify topics that require further investigation. Qualitative data gives meaning and cultural relevance to the quantitative data (Berg 2004), while qualitative data provides a structural framework for the qualitative information.

To investigate the questions at hand, a simple statistical analysis of information gathered through the Household Income Expenditure Survey (HIES) is used to reveal the changing conditions among households related to distribution of resources. Using information gained through the HIES, an index of the subsistence and monetary resources households have access to or depend upon is developed to provide a comparative assessment of livelihood resources between the rural and urban village. Changing gender ideologies are investigated using Content Analysis methods to reveal changing attitudes, values and beliefs related to post-marital roles of men and women. Attitudes toward

post-marital education were solicited as a proxy of changing gender ideologies, as post-marital education (PME) is traditionally not an acceptable practice.

The qualitative methods applied in this study include ethnography and open-ended questions included in the Household Income Expenditure Survey (HIES). Quantitative data was solicited through the HIES I developed. The HIES tool was developed from secondary data before arriving in Kiribati, while the ethnographic approach helped to refine the HIES, as relationships forged during the first four months of my stay allowed a rudimentary understanding of cultural beliefs. With the help of two of Abemama's Secondary School teachers, the HIES was translated, reviewed and amended for cultural appropriateness and appended with closed and open-ended questions to solicit attitudes concerning gender roles. In this manner such attitudes could be directly linked to demographic and socio-economic information. In this way the quantitative and qualitative methods worked in tandem, informing one another.

Within the rubric of ethnography, the methods applied vary including participant observer, listener, non-participant observer, and conversational interviews (Berg 2004). Information obtained using an ethnographic approach contributed to an understanding of social values and economic circumstances of the I-Kiribati that inform decisions and attitudes. Ethnography allows the researcher to become privy to those issues and informing cultural values that lay outside of the researcher's original scope of inquiry, providing direction and guidance in furthering the investigation.

Administration of a HEIS was the sole means of primary quantitative data collection. The survey tool solicited demographic information including income levels

and sources, spending patterns, household assets including both goods and subsistence-based resources, roles and responsibilities of household members, and attitudes associated with gender-based roles held by the primary respondent.

Problems encountered with gaining an accurate assessment of income and spending patterns has lead other researchers to avoid the procedure entirely (Deaton 1997). One of these issues has to do with attaining a sample population that is reflective of the greater population. As noted by Deaton (1997), market societies tend to distribute resources unequally. If the sample population is skewed, this can affect the validity and ability to generalize research findings. While this issue can be overcome by census surveying, this study did not employ a census survey before administering the HIES due to limited resources available to conduct the study. However, households as units were counted as the HIES was conducted. The HIES captures a relatively large percentage of the households within the study area, reducing the risk of attaining skewed data sets. Approximately 30% of Taborio households were surveyed, while approximately 50% of Tabanga households were surveyed.

The other two issues Deaton noted pertain to attaining an accurate reflection of household consumption patterns. One issue is that wealthy households will often feed their hired help (Deaton 1997), driving up consumption estimates. This study, however, defines households not by kinship but rather by consumption patterns, meaning that people who share a kitchen, prepare and take meals together are considered part of the household. The other issue has to do with accurately assessing foods grown or collected by the household available for consumption. As this study is comparative, it is assumed

that the error rate related to assessment of food production is the same in both villages, so as to allow for the relative valuation of reliance on the cash and subsistence economy.

The HIES used in this survey is similar to the HIES survey conducted on a number of islands in Kiribati in 1996 by the Kiribati Ministry of Finance. The objectives of the survey were: to provide household expenditure data for the purpose of revising the 'weights' of the retail price index; to provide income and expenditure data which could be used in the construction of the households sector account of the 'national accounts system' and to provide estimates of household income and expenditure for use in planning and policy formation purposes (SOMF 1996). The surveys were conducted on five islands within the Gilbert group, including Abemama and South Tarawa.

Unfortunately a copy of the Abemama study could not be located and the Tarawa survey was targeted to capture both rural and urban areas, therefore a comparison of this HIES and the 1996 study is not feasible. Unlike the HIES carried out by the government of Kiribati, the HIES developed for this study appended open-ended questions concerning attitudes towards post-marital education, the role of men and women in the village and their role in the household (Appendix A). The objective of this model of the HIES is to capture a snapshot of existing trends as they relate to household participation in the market and in turn how that translates to changing expectations and roles played in the household based on gender.

## Household Income Expenditure Survey

### *Survey Instrument Development*

The format and topical information solicited in the survey was based on a survey developed by Llyn Smith, Professor of Anthropology at Humboldt State University. The survey was further refined based on secondary information gained from journal articles, books, and web sites describing Kiribati's socio-economic and cultural landscape. After arriving in Kiribati I refined the survey further refined and translated it with the help of I-Kiribati teachers on Abemama, which took into account cultural relevancy and appropriateness. Once the survey was revised and a corresponding response sheet was developed, a survey administrator was located.

Employing an I-Kiribati survey administrator contributed to the success of the survey for a number of reasons. Having an I-Kiribati survey administrator helped me overcome the language barrier with the survey participants. By administering the survey in Gilbertese, it was anticipated that the response rates would be higher, as Gilbertese is the primary language spoken in the household, and my knowledge of the Gilbertese language is largely limited to greetings, pleasantries and salutations and would greatly limit the effectiveness of the survey. In addition, an I-Kiribati administrator helped put the participants at ease. A woman was selected for the position so that our working relationship and the amount of time we would spend together conducting the survey would not be culturally inappropriate. If the administrator was a man, our working relationship would have received much scrutiny and the survey may have suffered from the rumors that may have developed. In addition, using a female administrator versus a

male most likely lead to a higher participation rate, as it is much easier for a woman to gain entrance to an I-Kiribati home than a man if the husband is not present (SOMF 1996).

Qualifying skills and traits that the administrator had to possess were proficiency in reading and speaking English and Gilbertese, a social nature, a perceived personal benefit from administering the survey, punctuality, commitment to the completion of the survey, and the time and freedom to participate in the survey. To compensate the survey administrator for her time and effort, all travel related expenses were paid for by the principal investigator. One hundred and twenty dollars (AUD) was also paid to the survey administrator to cover personal expenses while in Tarawa. Upon completion of the survey, the administrator was presented with a letter of recommendation, a Certificate of Appreciation and a Certificate of Participation in the HEIS survey. Certificates are valuable documents in Kiribati, as these are the primary documents professional resumes are composed of in Kiribati.

The selected administrator also held a full-time position through the Island Council Station of Abemama; however, she had accrued vacation time which she opted to use to conduct the survey. Training involved reviewing the translated survey instrument with the administrator to familiarize her with the structure of the survey and the intent of each question. It was in this way that the survey was further refined and finalized. The administrator was also made aware of the importance of maintaining the confidentiality and privacy of the information collected from households and instructed not to discuss information made available through the surveys with anyone. The importance of being

consistent in how households are initially addressed through the script and reading questions word for word on from the survey was explained as to maintain consistency and to not create a bias. In addition the importance of maintaining a neutral tone when asking questions and when hearing responses so as to not lead the responses of the participant was also addressed.

### *Administration of Surveys*

The surveys were originally scheduled to be administered in Tabanga, Abemama, after which we would fly to South Tarawa to conduct the second set of surveys. Permission from the Island Clark, the head of Abemama's Island Council and from Tabanga's Village Council representative to conduct the survey in Tabanga had been sought and granted. However, due to pressing personal matters, it was necessary that the Tarawa surveys be conducted first. Upon arriving in Tarawa, I secured permission from the Teinainano Urban Council and Taborio's Village Council representative to conduct the household surveys. In Taborio, South Tarawa the surveys were administered between July 25<sup>th</sup> and August 6<sup>th</sup>, while the surveys in Tabanga, Abemama occurred between September 1<sup>st</sup> and September 8<sup>th</sup>. The period of time over which the administration of all of the surveys occurred is one and half months in 2005.

Approximately 30% of the households in Taborio were surveyed. To do this, the total number of households in the Taborio was estimated by defining the village boundaries based on geographic features, through conversations with Peace Corps Volunteers who had lived in the village when the Peace Corps dorm was located there, and by referencing a government map. We walked the section of road the village is

located along. Households that could be seen from that vantage point were counted. The challenges of capturing an accurate assessment are discussed further below.

Once an estimate of the number of households had been attained, a simple random sampling method was applied to select households that would be surveyed. One-inch by one-inch pieces of paper that were folded in half and placed in a small bag. A third of the papers were marked by an 'X' written lightly in pencil, so as it could not be seen through the paper or felt due to indentions from the marking instrument. Beginning from the southern end of the village on the lagoon side we worked our way north, selecting a paper for each house we encountered. If the paper was blank then this house was skipped, however if it was marked this house was surveyed. Once the paper was selected it was removed from the sampling pot. The papers were only redeposited in the bag once all the papers had been selected. The order households were considered in was based on transects that ran from the lagoon to the ocean side. After accounting for all the households from the lagoon to the ocean side, we returned to the lagoon side, moving one household to the north. It was in this fashion that households were selected for Taborio and Tabanga. The same sampling method was applied to Tabanga, although approximately 50% of the households were sampled in Tabanga in an effort to make the sample sizes between the two villages comparable.

To ensure confidentiality, households were assigned numbers and names were not solicited. Only one household of all the households approached in both villages refused to participate. The reason why is unclear, as they refused our request to explain the purpose of our visit. In addition, two other households originally selected were not

surveyed, as there was no one at the house the three times we visited. One household in Taborio was removed from the selection pool as it is a monastery home and the purpose of the survey is to solicit information from traditional households rather than institutions.

When approaching a household, permission was requested to enter. The survey administrator would then explain that the purpose of our visit was to conduct a survey aimed at collecting information about household income, expenditures and the roles and responsibilities of those in the household and that the survey would take approximately an hour to complete. It was further explained that the information was being collected for academic purposes and would be kept confidential. The potential survey participant was then asked if they would participate in the survey. The primary respondent is that person who took the lead role in responding to the interviewer.

To maintain data integrity the definitions needed to be strictly maintained and careful notes taken when an issue arose. For example, in most cases, the primary respondent was the only person participating in the survey; however, in some cases the participant's spouse offered their opinion. In such cases, this was noted and the answer was stricken from the official record. Other issues surrounding the definition of the household are related to the transient nature of households resulting from inter-island migration. While some people were visiting for months, others were visiting for a much shorter period. For this reason, all the people who slept at the house the night before the survey were included in the household.

The survey underwent minor adjustments between the time it was administered in Taborio and Tabanga. For one, when the survey was administered in Taborio,

information related to money spent on bulk items such as rice, sugar, and flour were solicited as dollars spent per month. This meant that respondents were required to convert the quantity of food consumed within the household to the equivalent cost. For example, the participants had to figure out the quantities of food consumed within the household in a month and then multiply the quantity by the price per unit. To reduce complexity and the chance of estimation error, participants in Tabanga were asked how many bags or kilograms of rice, flour, and sugar they purchased in a month. The local prices for each item by the bag or kilogram were recorded and multiplied against the associated quantity per household. It is in this manner that expenditures on food in Tabanga were solicited. Lastly, the Tabanga, survey also captured information about utility costs and, babwai pits (Taro root), an important subsistence resource, however the Taborio, survey fell short in capturing this information.

### Ethnography

From January 18<sup>th</sup> 2005 to October 18<sup>th</sup> 2005 my time was spent primarily on Abemama. During this time I spent four two-week periods in South Tarawa, totaling eight weeks. It was during one of these visits that I had the opportunity to live with an I-Kiribati family for a week, while my field partner (survey administrator) and I conducted the HIES surveys in Taborio. These visits also afforded me the chance to inform various government ministries of my research and to solicit related data. The study could have been more effective in serving the needs of the Kiribati governmental ministries if contact had been initiated earlier in the research. I did, however, make a concentrated effort to coordinate and incorporate project or research needs of a local non-governmental

organization, Foundation of the People of the South Pacific, FSP. Unfortunately, FSP was unable to identify a niche in their organization in which they could use support in the form of research on Abemama; in other words, they were unable provide me with direction in the area of research that would support their needs.

During my visits in Tarawa, a good bit of my time was spent with Peace Corps Volunteers (PCV) and Australian Aid Volunteers. It was in this capacity that I heard of challenges faced on other outer islands as perceived by PCVs, problems with funding and resource availability at the Tungaru Hospital in the prosthetics unit, successes with the AIDS awareness campaign and the challenges faced. It was through these people that I met many professional I-Kiribati women making strides in their professions to resolve the issues of the I-Kiribati, and the differences between the modern, urban Kiribati woman and the traditional Outer Island, agronomist Kiribati woman were presented to me.

On Abemama, I lived with my husband, who was a current PCV in the Island Council village, Kariatebike, roughly two miles to the north of Tabanga. In this context, my husband and I participated in village and island life through a variety of means. During this time, I taught two classes, mathematics and social science, to Form 2 students at the Junior Secondary School (JSS), which provided the opportunity to develop friendships and a working relationship with the Junior Secondary School teachers and the children of the island. This experience led to a first-hand understanding of some of the challenges and assets of the Kiribati school system, as experienced at the JSS on Abemama.

My husband and I also regularly attended the Sunday sermon and related church activities at the Kiribati Protestant Church (KPC) located a few hundred yards from our home. In our daily lives, we found cause to interact with the village storekeepers, council officials, local fishermen and bakers, Abemama's head nurse, our neighbors and, of course, the children of our village who found us to be a continual curiosity. As special guests of the island, we were often invited to cultural celebrations (botakis) by people or organizations in other villages. Through these daily interactions, friendships were forged and a greater insight into Kiribati attitudes and beliefs was gained. The closest relationship I formed was with my field partner (survey administrator), due to the time we spent together conducting the HEIS survey. In this time we found our common ground, which led to a greater understanding of one another's worlds and perspectives. The experience presented more questions than it resolved; however, the perspective gained from the time spent and relationships formed developed a greater understanding of the contributing conditions and cultural perspectives that inform attitudes.

## ANALYSIS TECHNIQUES

### Statistical Analysis

Data gathered through the HIES was analyzed using Microsoft Excel's statistical functions to assess descriptive demographic information concerning:

- People per Household
- Generations per Household
- Dollars per Person per Day
- Expenditures on Food
- Expenditures on Imported and Locally Grown Foods
- Informal and Formal Participation in the Labor Force<sup>10</sup>

### Market-Subsistence Index

The market-subsistence index (SMI) was devised to assess access to and reliance on the monetary and subsistence sectors of the economy, as well as to provide a comparative overview of access to livelihood resources among villages. Access to and dependence of households on market and subsistence resources is measured through data

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<sup>10</sup> Survey participants were asked to identify who works for money within the household and what they do. Responses were categorized by gender and economic sector, formal or informal. The way the information was captured relates only enough detail to discern if at least one person within each gender group participated in the formal or informal economy. In some cases one person may participate in both the formal and informal economy. Those jobs or industries that are licensed by the government were included in the formal sector of the government, while those in the informal sector are often invisible in government audits because they are not directly monitored or licensed. One area that may need clarification is the categorization of copra in the informal economy. Although copra is bought by the government from households, the measures of economic contribution in this sector are by the amount of copra collected by island for macro-economic analysis and by the census survey which enumerates only if a household did or did not participate in the collection and sales of copra, and are therefore not analyzed on the basis of who and how many people in the household are performing the work (MOF 2001).

provided in the HEIS. Indices are composite measures that allow complex or diversified information that is measured in unlike terms to be aggregated and simplified. Indices are composed of multiple indicators that are selected due to their representation of key aspects under study. The main benefit of using composite scores derived from multiple indicators is that errors in measurement are often canceled out, providing for a more reliable overview of the subject (Singleton & Straits 1999). One of the most problematic aspects of constructing indices is ensuring they are unidimensional, meaning they measure one concept consistently (Ibid). Caution must be taken when constructing indices to ensure they are focused on the central concept under study.

The market-subsistence index measures livelihood principles, meaning access to the fundamental aspects of sustaining a livelihood. The economic system through which livelihood resources are secured is assessed to produce a measure of access to and dependence on the two economic systems. In this way, a measure of relative income can be captured. The market-subsistence index is composed of information solicited through the HEIS concerning monetary income, access to subsistence resources (meaning agricultural products and dependence on systems of reciprocity), and what is referred to here as dual resources (meaning access to watercraft resources and the diversity of water sources available to an individual household).

Dual resources are either required for households to engage in productive activities, or affect the ability of households to engage in productive activities. For example, the acquisition of a watercraft requires both the skills and agricultural materials to build a boat, or the monetary assets to purchase a boat. By providing access to the

pelagic fishery, watercraft resources are an important productive resource for generating monetary and subsistence incomes. In the case of water resources, the assumption is that when households are given a greater diversity of water resources to choose from, they will self-select the highest quality water for consumptive purposes. Water quality affects the health and capacity of people in both economic sectors to maintain healthy populations, which is required to maintain systems of production and trade.

Each of the aforementioned types of resources is measured by evaluating reported access to specific resources within each resource category. Binomial coding is used to assign values associated with access to each type of resource. Each resource a household has access to or depends upon is assigned a value of one, while resources a household does not have access to or depend upon are assigned a null value.<sup>11</sup> A complete description of resource categories is located in Appendix B.

#### Attitudes Towards Post-Marital Education (PME)

Content Analysis utilizes both qualitative and quantitative techniques to interpret and analyze qualitative data. Qualitative information is analyzed based on a systematic process of coding based on explicitly defined classes and categories. Content Analysis is an appropriate tool for analyzing social change (Berg 2004; Singleton & Straits 1999). The purpose of Content Analysis is to identify patterns associated with classes. Although

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<sup>11</sup> The HIES did not capture information related to babwai crops grown by households in Taborio (urban). Being that babwai (taro root) is a subsistence crop vital to maintaining subsistence livelihoods in Kiribati, the SMI incorporated data from the Kiribati 2000 census (MOF 2002) to adjust ratings in the agricultural resources category to reflect this contribution. In South Tarawa 1.9% of households reported growing babwai, while 79% of Abemaman household reported growing babwai. This is a conservative measure of households in Abemama growing babwai, as data from captured in the HIES administered in Tabanga shows that 96% of households surveyed reported growing babwai.

Content Analysis is most commonly applied as a research strategy to analyze secondary data documents such as newspapers, diaries, or transcripts, it was applied in this study as a tool to analyze responses to open-ended questions. A weakness of this method, noted by Bruce Berg in his book *Qualitative Research Methods for the Social Sciences* (2004), is locating secondary data that will allow the researcher to fully explore their topic of research. This weakness is minimized when using Content Analysis to analyze responses to open-ended questions or interview data. Content Analysis is inappropriate to assess causal relationships and is better suited towards descriptive or exploratory studies (Berg 2004). The reason this method of analysis was selected is due to its ability to allow for the incorporation of qualitative data in the assessment of attitudes, values, and beliefs. A purely quantitative approach would be ill suited given the type of data solicited.

#### *Attitudes, Values & Beliefs Explored*

Attitudes, values and beliefs, as they relate to PME, are comparatively analyzed based on two classes, village and gender. The HIES survey tool contained a two-part question composed of a close-ended question followed by an open-ended question. The responses are the qualitative data to which the Content Analysis method is applied. The question used to solicit information is as follows:

Do you think a (women/men)\* should return to school  
after they are married and why?

The first part of the question was used to solicit attitudes concerning PME by gender. Attitudes reflect how a person feels about a subject. A person's attitudes are

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\* Respondents were asked the question in for both women and men separately.

inherently biased, as they are rooted in personal beliefs. Beliefs reflect what a person thinks the world should be, based on perceived relationships. Values are those things or ideas a person holds to be good or right. Attitudes are informed by how a person believes those things that they value will be affected. To assess the respondents' levels of commitment to their reported attitude, respondents were allowed to self-identify their answer, in other words they were not given a set of answers to choose from. The variety of responses solicited reflects the varying levels of commitment to reported attitudes, which is further discussed in the section entitled 'Categories' below.

The second half of the question is designed to solicit beliefs and values that affect their attitudes related to PME by gender. The responses reflect their values concerning what they think are right or good and also their beliefs concerning how PME either contributes or does not support their values. In addition, other topics that are not easily categorized within the framework of Attitudes, Values, and Beliefs were also identified through an inductive approach as concerns or factors that one would take into consideration in deciding their attitudes towards PME (Berg 2004). Beliefs are further broken down into Forces, Methods and Strategies subcategories. Within each of subcategory are more detailed categories developed based on responses. Some of the emergent themes are common to both women and men, while others relate only to one gender or another.

Responses were sorted first by village: Taborio versus Tabanga. They were then sorted based on attitudes related to gender categories resulting in four sub-classes: Taborio-Male; Taborio-Female; Tabanga-Male; and Tabanga-Female. Microsoft Excel

spreadsheets were used as the template to maintain and organize data, while graphing and statistical functions were used to analyze and present patterns in the data. The responses were minutely reviewed in the open-coding process to identify themes using 'words' as recording units and the entirety of the response as the context unit. While the recording units allow the researcher to identify frequency in occurrence and establish the preliminary framework of the coding scheme, the words alone, if considered out of context, convey little depth in their meaning. It is the context unit that allows the researcher to weigh the value associated with a word (Singleton & Straits 1999).

Once the initial open-coding was complete, the emergent themes were then analyzed and grouped based on common elements. Themes and categories that respondents identified that symbolized a broad concept were categorized within an overarching concept category (Berg 2004). For example in the following two statements the concept identified is household well-being.

- "It is good to continue, so they can get a job to make money for the family."
- "It is difficult to send women back to school because they have children and much work to do..."

In the first example, getting a job is perceived as a way to contribute to the family. In the second example the family is not specifically mentioned; however, the responsibilities women have to the household are implicit and the opportunity cost of returning to school would be losing household services provided by the woman. What is of value to this discussion is the development of overarching concepts in the coding process. In these examples, each response identifies the well-being of the household as a

primary concern as the basis of their decision-making and is coded as relating to Household Well-Being.

Concepts reflected in a response are classified using binomial coding, where '0' reflects no direct association and '1' means that the theme is reflected in the response. Some responses identified only one category while other responses reflected multiple categories. Only those responses that were not 'Excluded from Analysis' are included in the percent of total responses.

#### *Categories*

One of my main concerns was the level of abstraction involved when developing Overarching Concepts. For this reason categories were defined explicitly, exhaustively and are mutually exclusive (Singleton & Straits 1999). A detailed description of the categories is located in Appendix C.

#### *Charting the Data*

Once the appropriate categories were developed and the information was coded, the data was further organized by Attitude categories and charted by Values and Beliefs categories in order to present patterns related to Attitudes graphically.

## FINDING MEANING IN THE DATA

### People Per Household

Urban households in Taborio, South Tarawa are characterized by having more people per household than those in the Outer Island village of Tabanga, Abemama. Whether comparing the mean, median, lower or upper values between the two villages, this statement holds true. The range of people per household and the difference between the mean and median are also greater in Taborio than Tabanga. Households in Tabanga are more consistent in their number of people per household than Taborio households, which show a higher variability but overall have a greater number of people per household. This is not surprising, as the literature and secondary data from the census has pointed out that South Tarawa is growing in terms of population in large part due to in-country migration. This migration has been at the root of Kiribati's most pressing problems: environmental decline and the breakdown of the subsistence sector in South Tarawa.

Table 1. People per Household by Village

| Village  | People Per Household |        |       |             |             |
|--|----------------------|--------|-------|-------------|-------------|
|  | Mean                 | Median | Range | Lower Value | Upper Value |
| <b>Taborio</b><br><i>n<sub>households</sub>=26</i> | 8                    | 7      | 13    | 3           | 16          |
| <b>Tabanga</b><br><i>n<sub>households</sub>=28</i> | 5.54                 | 5      | 10    | 2           | 12          |

### Generations Per Household

South Tarawa's growing population is also reflected in the number of generations represented in the household. In Taborio, households with three generations are the most common, while in Tabanga households with two generations are the most common. It is surprising that Tabanga had households with only one generation present, as the amount of labor required to maintain a subsistence livelihood is such that multigenerational households are standard in that the diversity of age groups or lifecycle stages across genders ensures that labor is sufficiently distributed. I suspect the reason this data is weighted towards two generations and includes households with only one generation is due to rural-to-urban migration. Another interesting aspect of the data is that close to 25% of households in Taborio have four generations present. I suspect this is due in part to the fact that South Tarawa has the only advanced medical facilities and that older I-Kiribati may have relocated to South Tarawa in order to be closer to these facilities.

*Table 2. Generations per Household by Village*

| Village   | Generations Per Household |     |       |      |       |      |       |      |
|---|---------------------------|-----|-------|------|-------|------|-------|------|
|   | 1                         |     | 2     |      | 3     |      | 4     |      |
|   | Value                     | %   | Value | %    | Value | %    | Value | %    |
| <b>Taborio,</b><br><i>n</i> <sub>households</sub> =26 | 0                         | 0   | 8     | 30.8 | 12    | 46.2 | 6     | 23.1 |
| <b>Tabanga</b><br><i>n</i> <sub>households</sub> =28  | 2                         | 7.1 | 13    | 46.4 | 12    | 42.8 | 1     | 3.6  |

### Formal and Informal Participation in the Labor Force

Participation in the formal and informal economy shows relative reliance by village on the subsistence and cash economies. In urban Taborio, it is rare that a household would not have at least one person engaged in the formal economy; rather, it is most common that households have at least one man and one woman in the household engaged in the formal economy. The opposite is true for Tabanga, as close to 70% of households surveyed do not have at least one person engaged in the formal economy. Rather, it is through the informal economy that most households in Tabanga engage to produce a monetary income. Over 60% of households in Tabanga reported that at least one man and one woman within the household are engaged in the informal sector of the economy. For Taborio, over 60% of households reported that no one in the household works in the informal sector. The relative engagement in the formal and informal sectors of the economy between the two villages reflects the difference in the degree of market development and its role in facilitating the security of livelihoods. In this respect, households in Taborio rely on markets to secure their livelihoods much more than households in Tabanga, where market development is weak.

*Table 3. Formal and Informal Participation in the Labor Force by Village and Gender*

| Labor Force Participation |               | Taborio |           |             |                   | Tabanga |           |             |                   |
|---------------------------|---------------|---------|-----------|-------------|-------------------|---------|-----------|-------------|-------------------|
|                           |               | None    | >/= 1 man | >/= 1 woman | >/= 1 man & woman | None    | >/= 1 man | >/= 1 woman | >/= 1 man & woman |
| Formal                    | Raw #         | 2       | 9         | 5           | 10                | 19      | 5         | 3           | 1                 |
|                           | % Total hshld | 7.7     | 34.6      | 19.2        | 38.5              | 67.9    | 17.9      | 10.7        | 3.6               |
| Informal                  | Raw #         | 17      | 3         | 3           | 3                 | 2       | 3         | 5           | 18                |
|                           | % Total hshld | 65.4    | 11.5      | 11.5        | 11.5              | 7.1     | 10.7      | 17.9        | 64.3              |

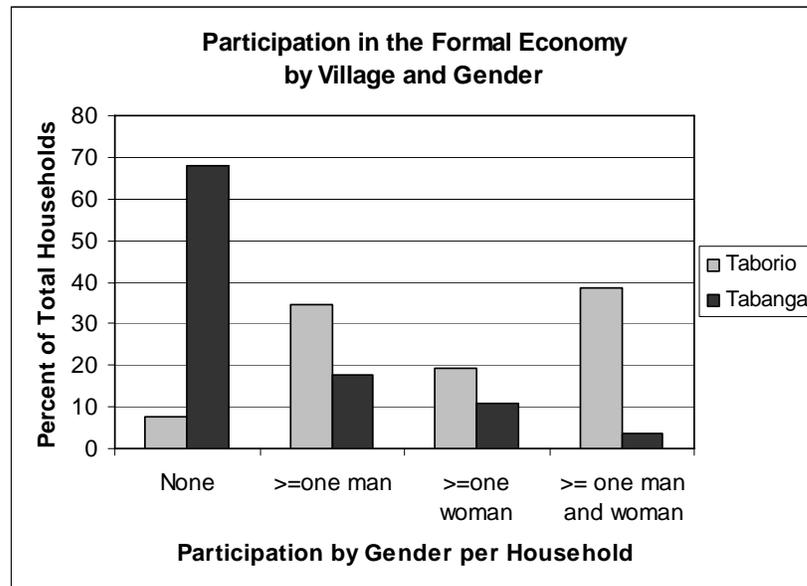
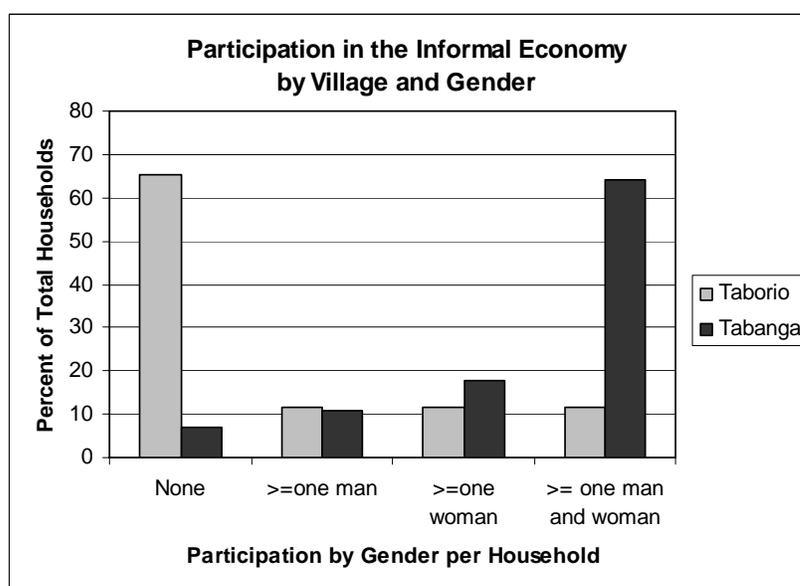


Figure 3: Formal Participation in the Labor Force



*Figure 4: Informal Participation in the Labor Force*

## Expenditures on Food

Income expenditures on food products are used to reflect levels of dependence on the monetary and subsistence sectors. Food security is one of the primary aspects in maintaining a livelihood; understanding relative levels of dependence on the monetary economy is used as a proxy to reveal relative degrees of dependence on the monetary and subsistence economies. While expenditures in real dollars are greater for urban households in Taborio than Outer Island households in Tabanga, incomes are also, on average greater in Taborio than Tabanga. To attain a comparable measure between the villages, percent of total household income expended on local and imported food products is used to gauge subsistence-market reliance.

On average, Taborio's expenditures on all food products as a percent of total household income is 18% higher than Tabanga's expenditures. In both local and imported food expenditure categories, households in Taborio spent approximately 9% more of their total household income than did households in Tabanga. This shows that Taborio households rely on cash incomes to secure food products more than households in Tabanga, whereas households in Tabanga have a greater reliance on the subsistence economy than those households in Taborio.

*Table 4. Expenditures on Food by Village and Source*

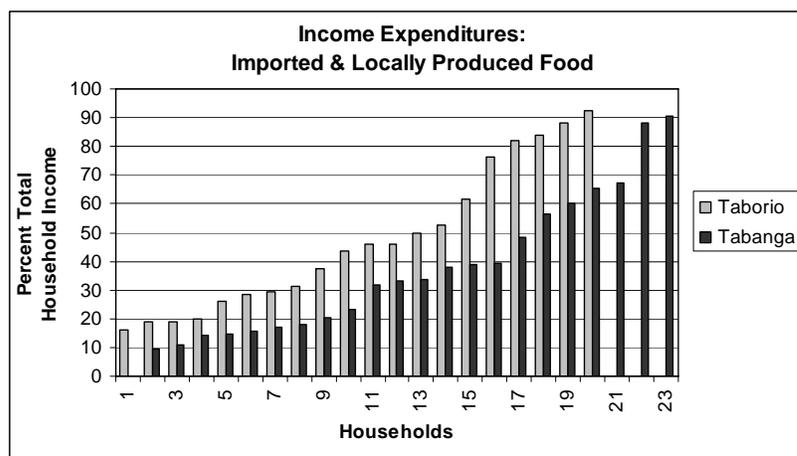
| Village  | Average Percent Total Household Income Spent on Food Products |       |                     |
|--|---|-------|---------------------|
|  | Import  | Local | Total <sup>12</sup> |
| <b>Taborio,</b><br><i>n</i> <sub>households=21</sub> <sup>13</sup> | 37.4  | 10.00 | 47.4                |
| <b>Tabanga</b><br><i>n</i> <sub>households=23</sub> <sup>14</sup>  | 28.4  | 1.1   | 29.4                |

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<sup>12</sup> Due to rounding errors, the sum of imports and exports is not equivalent to the sum total of household income expenditures on food products.

<sup>13</sup> Five of the twenty-six households surveyed did not provide enough information concerning their income and expenditures to derive an estimate of the percentage of their income they spend on imported and exported foods. In addition one household reported expenditures exceeding one hundred percent of household income. Therefore these six households were excluded from the following analysis.

<sup>14</sup> Of the twenty-eight households interviewed in Tabanga, five household results were removed from the following analysis as the reported expenditures exceeded one hundred percent of the household income.



*Figure 5: Expenditures on Food by Village*

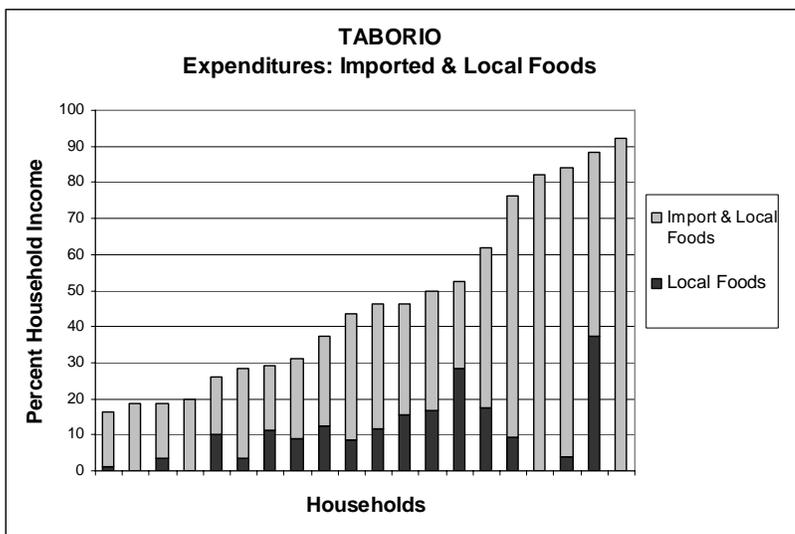


Figure 6: TABORIO—Expenditures on Food by Source

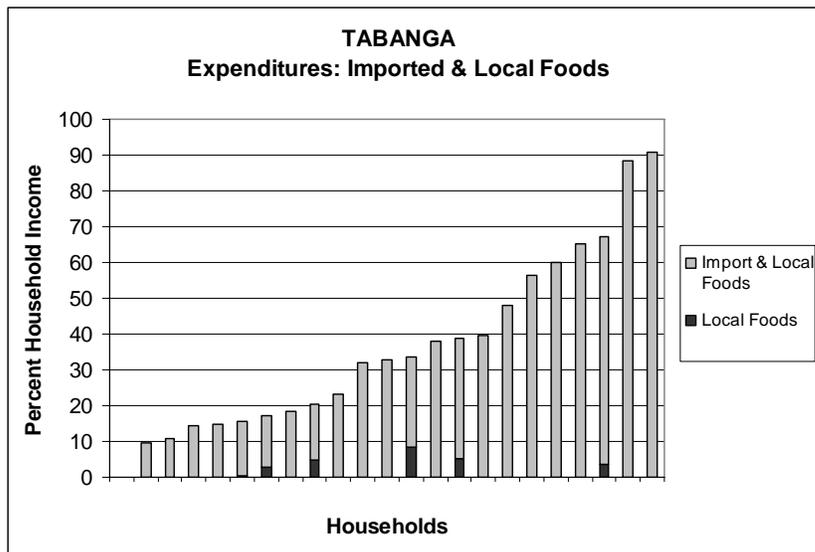


Figure 7: TABANGA—Expenditures on Food by Source

### Dollars Per Person Per Day

Dollars per person per day are averaged at the level of the household. This measure assumes that resources are divided equally among household members. The range of dollars per person per day for households in Tabanga (rural) varies little in comparison to the range of dollars per person per day reported by Taborio (urban) households. Whereas the range of dollars per person per day among households in Tabanga is \$5.67, with a lower end value of \$0.33 and an upper end value of \$6.00, Taborio's range among households is \$16.24, with a lower end value of \$0.43 and an upper end value of \$16.67. When outliers are removed from the data set, Taborio's range was still more than three times as much as Tabanga's range. The data show that households in Tabanga exhibit very little economic stratification when compared to households in Taborio. This suggests that the traditional socio-cultural system of the I-Kiribati that ensures the equitable distribution of resources across households is stronger in Tabanga than Taborio.

Drawing on literature that points to the rarity of poverty in subsistence societies, it is not surprising that the village with a higher reliance on the monetary economy is characterized by a greater degree of economic stratification. The socio-cultural system that promotes distributional equality in the subsistence economy is not a strong value embodied in the monetary economy. It appears that the cultural values associated with the market economy are reflected in a decreased degree of social equality related to the distribution of resources.

*Table 5. Dollars per Person per Day by Village*

| Village |                              | Dollars / Person / Day |        |         |               |               |
|---------|------------------------------|------------------------|--------|---------|---------------|---------------|
|         |                              | Mean                   | Median | Range   | Minimum Value | Maximum Value |
| Taborio | $n_{persons} = 182$          | \$2.32                 | \$1.52 | \$16.24 | \$0.43        | \$16.67       |
|         | $n_{persons-outliers} = 168$ | \$2.09                 | \$1.52 | \$10.14 | \$0.69        | \$10.83       |
| Tabanga | $n_{persons} = 155$          | \$1.41                 | \$1.20 | \$5.67  | \$0.33        | \$6.00        |
|         | $n_{persons-outliers} = 149$ | \$1.37                 | \$1.20 | \$2.85  | \$0.39        | \$3.24        |

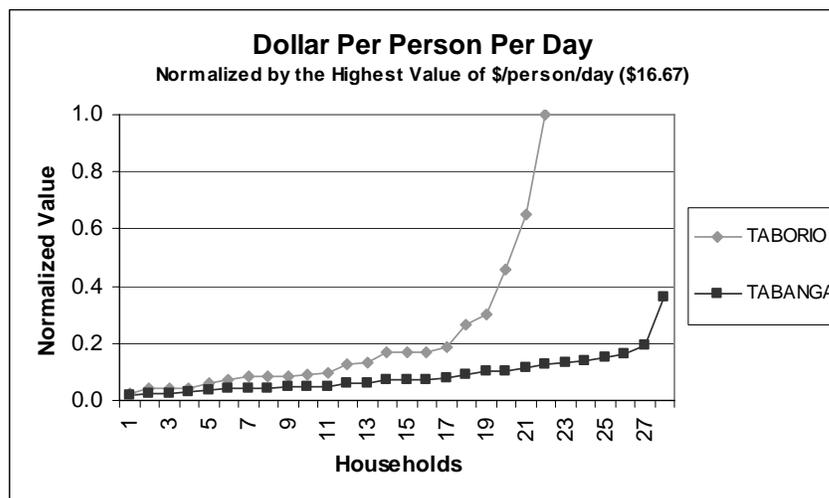


Figure 8. Dollars per Person per Day (normalized)

### Subsistence-Market Access and Dependence Index

If monetary resources are looked at solely, as opposed to in tandem with subsistence and dual resources, the picture of access to resources and the degree of relative poverty are quite different. The analysis points to evidence that Tabanga (rural) has a greater degree of access to and dependence on subsistence resources than does Taborio (urban). The opposite is true when considering monetary and dual resources, where Taborio shows a greater degree of dependence on the monetary resources and a greater degree of access to dual resources than does Tabanga. In the case of monetary resources, Taborio's mean sub-index score is twice that of Tabanga. This greatly affects the composite index score where Taborio shows a slightly higher overall score in access to resources.

Taborio's composite index score would indicate that, overall, households in Taborio have a greater degree of access to resources than do households in Tabanga. However, the data should be considered in the context of the index's limitations. The HIES data used to develop the index reflects presence and absence, rather than quantitative information, about agricultural resources available to households. When considering the environmental and demographic aspects associated with each of the villages, it is likely that subsistence sub-index scores do not accurately reflect the diverse degrees to which agricultural subsistence resources are used to construct livelihoods. Tabanga households would most likely prove to have a greater amount of agricultural resources than would Taborio households. The index shows that when the scope of

resources used to measure relative income is based on a broad definition of income rather than couched in purely monetary terms, the difference of relative income between villages is greatly reduced.

*Table 6. Subsistence-Market Index Results*

| Village | Sub Index              |          |       | Index: All Resources |       |
|---------|------------------------|----------|-------|----------------------|-------|
|         | Sub-sistence           | Monetary | Dual  |                      |       |
|         | <i>Range of Values</i> | 0-1.0    | 0.1.0 | 0.1.0                | 0-1.0 |
| TABORIO | <b>Min</b>             | 0.214    | 0.000 | 0.250                | 0.172 |
|         | <b>Max</b>             | 0.786    | 0.818 | 1.000                | 0.793 |
|         | <b>Range</b>           | 0.571    | 0.818 | 0.750                | 0.621 |
|         | <b>Median</b>          | 0.429    | 0.318 | 0.500                | 0.414 |
|         | <b>Mean</b>            | 0.457    | 0.350 | 0.519                | 0.425 |
| TABANGA | <b>Min</b>             | 0.286    | 0.000 | 0.250                | 0.207 |
|         | <b>Max</b>             | 0.857    | 0.636 | 0.750                | 0.690 |
|         | <b>Range</b>           | 0.571    | 0.636 | 0.500                | 0.483 |
|         | <b>Median</b>          | 0.571    | 0.182 | 0.375                | 0.379 |
|         | <b>Mean</b>            | 0.551    | 0.175 | 0.411                | 0.389 |

### Attitudes Towards Post-Marital Education (PME)

Results from the Content Analysis of attitudes towards post-marital education differ among gender and between villages. The differences in attitudes between the two communities could be due in part to religious orientation. Twenty-three percent of households surveyed in Taborio (urban) reported Catholic affiliation and 65% reported Kiribati Protestant Church (KPC) affiliation. In contrast, the households surveyed in Tabanga (rural) showed that 71% of respondents identified themselves as Catholic, while the KPC represented 25%. The degree to which the data sets are skewed related to religious orientation is greatest in respect to the under-representation of Catholic households and the over-representation of KPC households in Taborio. According to the Kiribati National Census of 2000, 55% belonged to the Catholic church, whereas 37% belonged to the KPC (MOF 2001). The opposite was true for Tabanga, where the sample set is over representative of Catholic households and under-representative of KPC households in relation to that reported in the 2000 census. Religious doctrines can have a great influence on gender ideologies. This is important to note because religious orientation is a variable that is not controlled for in this study, therefore the degree religious orientation will influence the survey results cannot be assessed accurately from the following analysis.

Revealing differences in attitudes towards women and men by village will point to what if any changes in gender ideologies may be taking hold. Twenty-seven percent more Taborio (urban) respondents reported favorable attitudes towards women's PME than did those in Tabanga (rural). Regarding attitudes towards men's PME, four percent

more of Tabanga respondents favored men's PME than did Taborio respondents. The significant change in attitudes regarding women's PME between Tabanga and Taborio, suggest that conceptions of gender ideologies related to women are susceptible to change.

A comparison of findings by village of differences in attitudes related to men versus women's PME could provide insight related to gender ideologies. In Taborio, 81% of respondents support women's PME, while only 72% were supportive of continuing education for men after marriage. The reverse is found in Tabanga where respondents support men's PME over women's PME by a difference of 14%. It is interesting that where support for men's PME changed nominally between villages, for women the change was so dramatic as to outstrip the advantage in favorability of attitudes that men's PME had over women's PME by 9%. What is driving this dramatic change in attitudes towards women's PME, considering that attitudes towards men's PME change very little? To answer this, it is necessary to understanding the values and beliefs that inform attitudes.

*Table 7. Summary of Attitudes Toward PME by Gender and Village*

| Village       | Should men/women go back to school after they marry and why? n = total - excluded | Summary of Attitudes Towards PME |       |                         |            |                       |                       |               |
|---------------|---|----------------------------------|-------|-------------------------|------------|-----------------------|-----------------------|---------------|
|               |   | Should                           | Might | Should & Might Totalled | Should Not | Conditional Undecided | Unidentified Attitude | Does not know |
| <b>Men</b>    |   |                                  |       |                         |            |                       |                       |               |
| TABORIO, n=25 | Sum   | 15                               | 3     | 18                      | 1          | 4                     | 1                     | 1             |
|               | Percent   | 60.0                             | 12.0  | 72.0                    | 4.0        | 16.0                  | 4.0                   | 4.0           |
| TABANGA, n=25 | Sum   | 17                               | 0     | 17                      | 7          | 0                     | 0                     | 1             |
|               | Percent   | 68.0                             | 0.0   | 68.0                    | 28.0       | 0.0                   | 0.0                   | 4.0           |
| <b>Women</b>  |   |                                  |       |                         |            |                       |                       |               |
| TABORIO, n=26 | Sum   | 16                               | 5     | 21                      | 0          | 4                     | 0                     | 1             |
|               | Percent   | 61.5                             | 19.2  | 80.8                    | 0.0        | 15.4                  | 0.0                   | 3.8           |
| TABANGA, n=26 | Sum   | 14.0                             | 0.0   | 14                      | 6.0        | 3.0                   | 1.0                   | 2.0           |
|               | Percent   | 53.8                             | 0.0   | 53.8                    | 23.1       | 11.5                  | 3.8                   | 7.7           |

*Attitude Category: Conditional Undecided*

Answers classified as Conditional Undecided are responses that did not identify an attitude; instead, the responses spoke to the values and beliefs they would refer to in their decision-making process. Eleven and a half percent of responses regarding women's PME in Tabanga (rural) are Conditional Undecided, whereas for men, there are not any reported Conditional Undecided responses. In Taborio, attitudes towards men and women's PME reflect relatively the same rate of conditionality, with 16% of respondents identifying conditionalities related to men's PME, while 15.4% of respondents identified conditionalities related to women's PME. While attitudes towards women's PME are more conditional than attitudes towards men's PME in Tabanga, conditional undecided attitudes towards men's and women's PME are approximately the same in Taborio. What this suggests, in contrast to what was found earlier, is that gender ideologies related to men are changing in this respect. What those conditionalities are and how they compare and contrast to one another may provide insight related to changing gender ideologies and economic culture.

Content Analysis deals with making sense of open-ended answers that can vary greatly between respondents. Attitude categories, such as Conditional Undecided, which are only nominally represented in the Content Analysis results, are considered in more detail if identified by at least three people, which is consistent with what Berg (2004) cites as a rule of thumb for considering a response significant when using the Content Analysis method. While this approach may receive criticism for giving too much importance to a small population, which is unrepresentative of the whole, I find it an

important aspect of the data in that the Conditional Undecided attitude is one of the key areas identified in the study where attitudes toward gender ideologies towards men are changing.

While respondents from both villages identified household well-being as a central concern, how that is secured is debatable. For Conditionally Undecided respondents, the most popularly supported belief across both villages was that household well-being is secured through traditional cultural skills. Differences between the two villages related to women's PME are in regard to who would be deferred to in making a decision. In Taborio, respondents are more likely to defer to that individual's choice, while in Tabanga, respondents are more likely to defer to the husband's attitudes when considering attitudes towards women's PME. This suggests that Taborio respondents perceive a more equitable distribution of decision-making power within the household than do those in Tabanga. Very little at this point can be said about changing attitudes towards gender ideologies related to men; perhaps by taking a more focused look at underlying values and beliefs associated with attitudes, more will be revealed.



*Table 9. Conditional Undecided Attitudes toward Women's PME*

| Village                         | Should WOMEN return to school after marriage? | VALUES               |     |                     |     | Beliefs             |     |                             |     |         |     |   |     |   |     |   |     |
|---------------------------------|---|----------------------|-----|---------------------|-----|---------------------|-----|-----------------------------|-----|---------|-----|---|-----|---|-----|---|-----|
|                                 |   | Household Well Being |     | Personal Enrichment |     | Husband's Attitudes |     | Personal Development Choice |     | Methods |     | Household Well Being is Secured through Education |     | Household Well being is secured through Cultural Skills |     | Village or National Well Being is Secured Through |     |
| Attitude: CONDITIONAL UNDECIDED |   | % of n               | SUM | % of n              | SUM | % of n              | SUM | % of n                      | SUM | % of n  | SUM | % of n  | SUM | % of n  | SUM | % of n  | SUM |
| TABORIO                         | n=4   | 75                   | 3   | 25                  | 1   | 0                   | 0   | 25                          | 1   | 0       | 0   | 25  | 1   | 75  | 3   | 25  | 1   |
| TABANGA                         | n=3   | 100                  | 3   | 0                   | 0   | 33                  | 1   | 0                           | 0   | 33      | 1   | 33  | 1   | 100   | 3   | 0   | 0   |

*Attitude Category: Should and Might*

The most common reported attitude is in support for PME. When considering underlying values and beliefs, only those values and beliefs identified by at least three respondents in at least one of the villages are included in the following discussion.

Values and beliefs associated with support for women's PME show that Taborio (urban) residents identified more strongly with concerns for household well-being than those in Tabanga (rural). The most common belief in Taborio is that PME contributes to household well-being, with 67% of respondents identifying this belief, while only 29% of Tabanga respondents identified this belief. Reported beliefs also differed in that 79% of respondents in Tabanga reported that women's PME would increase income earning potential, whereas only 43% of Taborio respondents identified this belief.

What is interesting is where there are marked differences between villages. Whereas close to 20% of those supporting women's PME in Taborio cited circumstances related to changing economic, environmental, and cultural conditions that necessitated the need for an income, only seven percent of respondents in Tabanga cited this concern. The data suggest that Taborio households perceive a greater need for a monetary income than do those in households Tabanga. In addition, Taborio residents identified perceived benefits to a larger social group beyond the household gained through PME, whereas Tabanga residents did not identify such perceived benefits. Lastly, the Kiribati government policy prohibiting married persons from attending primary and secondary

schools is a concern identified by 21% of Tabanga respondents supportive of women's PME, whereas Taborio respondents did not identify this as an issue.

*Table 10. Values and Beliefs of Respondents Supportive of Women's PME*

| Village                  | Should WOMEN return to school after marriage ? | VALUES               |     |                                |     | Beliefs                          |                                      |  |   |            |     |        |     |
|--------------------------|--|----------------------|-----|--------------------------------|-----|----------------------------------|--------------------------------------|--|---|------------|-----|--------|-----|
|                          |  | Household Well Being |     | Village or National Well Being |     | Forces                           |                                      | Methods                                      |   | Strategies |     |        |     |
| Attitude: SHOULD & MIGHT |  |                      |     |                                |     | Changing Culture, Economy & Land | Governmental Policy Does Not Support | Education Increases Income Earning Potential | Household Well Being is Secured through Education |            |     |        |     |
|                          |  | % of n               | SUM | % of n                         | SUM | % of n                           | SUM                                  | % of n                                       | SUM   | % of n     | SUM | % of n | SUM |
| <b>TABORIO</b>           | <b>n=21</b>                                    | 62                   | 13  | 14                             | 3   | 19                               | 4                                    | 0  | 0   | 43         | 9   | 67     | 14  |
| <b>TABANGA</b>           | <b>n=14</b>                                    | 43                   | 6   | 0                              | 0   | 7                                | 1                                    | 21   | 3   | 79         | 11  | 29     | 4   |

Values and beliefs identified for those supporting men's PME were generally the same; however, the degree of support each received differed. In Tabanga, the three identified categories received approximately the same level of buy-in, whereas in Taborio reported support of beliefs are more variable. In Taborio, 89% of respondents supportive of men's PME reported beliefs that education increases income potential, more than twice that of Tabanga. Nineteen percent more of Taborio respondents reported concern over household well-being and how it is secured than Tabanga respondents when considering attitudes towards men's PME. Much like the findings related to those supporting women's PME, approximately 20% of Taborio's respondents identified changing economic, environmental and cultural circumstances as a concern, whereas this belief was not reported as a consideration driving attitudes towards men's PME in Tabanga.

*Table 11. Values and Beliefs of Respondents Supportive of Men's PME*

| Village                               | Should MEN<br>return to<br>school<br>after<br>marriage<br>? | VALUES                  |     | Beliefs                                |     |  |     |  |     |
|---------------------------------------|---|-------------------------|-----|--|-----|--|-----|--|-----|
|                                       |   |                         |     | Forces                                 |     | Methods  |     | Strategies   |     |
| <i>Attitude:</i><br>SHOULD &<br>MIGHT |   | Household Well<br>Being |     | Changing<br>Culture, Economy<br>& Land |     | Education<br>Increases Income<br>Earning Potential |     | Household Well<br>Being is Secured<br>through<br>Education |     |
|                                       |   | % of n                  | SUM | % of n                                 | SUM | % of n   | SUM | % of n   | SUM |
| <b>TABORIO</b>                        | n=18  | 67                      | 12  | 22                                     | 4   | 89   | 16  | 61   | 11  |
| <b>TABANGA</b>                        | n = 17  | 41                      | 7   | 0                                      | 0   | 41   | 7   | 47   | 8   |

*Attitude Category: Should Not and Might Not*

Since the population of respondents reporting a negative attitude toward men and women's PME is so small, all positive values are included in analysis. In Tabanga, 23% of respondents did not support women's PME, whereas in Taborio there was not a single report of non-support. Values and attitudes of Tabanga show respondents cited overwhelmingly that household well-being is a central concern and that they believe that this is secured through traditional cultural skills. Nominally identified, in addition to this, are concerns that PME is not culturally acceptable, that women's PME is dependent on the husband's attitude, and that government policy does not support it.

Table 12. Values and Beliefs of Respondents Not Supportive of Women's PME

| Village                                     | Should WOMEN return to school after marriage? | VALUES               |     |                                |     | Beliefs                        |     |                     |     |                                      |     |   |     |
|---|---|----------------------|-----|--------------------------------|-----|--------------------------------|-----|---------------------|-----|--------------------------------------|-----|---|-----|
|   |   | Household Well Being |     | Village or National Well Being |     | Forces                         |     |                     |     | Strategy                             |     |   |     |
| <i>Attitude: Should Not &amp; Might Not</i> |   |                      |     |                                |     | PME: Not Culturally Acceptable |     | Husband's Attitudes |     | Governmental Policy Does Not Support |     | Household Well being is secured through Cultural Skills |     |
|   |   | % of n               | SUM | % of n                         | SUM | % of n                         | SUM | % of n              | SUM | % of n                               | SUM | % of n  | SUM |
| TABORIO                                     | n=0   | 0                    | 0   | 0                              | 0   | 0                              | 0   | 0                   | 0   | 0                                    | 0   | 0   | 0   |
| TABANGA                                     | n=6   | 83                   | 5   | 17                             | 1   | 17                             | 1   | 17                  | 1   | 17                                   | 1   | 83  | 5   |

As noted earlier, 28% of Tabanga's respondents are not supportive of men's PME, whereas in Taborio only 4% of respondents are not supportive. This shows a relatively large degree of differences in attitudes. In Tabanga, the reasons cited by respondents are the beliefs that household well-being is secured through traditional cultural skills and that PME is not culturally appropriate, whereas the respondent unsupportive of men's PME in Taborio cited neither of these beliefs. Other reported values and beliefs identified by Tabanga respondents are the identification of household, as well as national or community well-being, and concerns over limited employment opportunities. Regarding the beliefs of the only respondent in Taborio who reported unsupportive attitudes towards men's PME, she/he cited beliefs that cultural skills can be used to earn an income and to attain resources.

*Table 13. Values and Beliefs of Respondents Not Supportive of Men's PME*

| Village                          | Should MEN return to school after marriage? | VALUES               |     |                                |     | Beliefs                        |     |                    |     |  |     |   |     |   |     |
|----------------------------------|---|----------------------|-----|--------------------------------|-----|--------------------------------|-----|--------------------|-----|--|-----|---|-----|---|-----|
|                                  |   | Household Well Being |     | Village or National Well Being |     | Forces                         |     |                    |     | Methods  |     |   |     | Strategy  |     |
| Attitude: Should Not & Might Not |   |                      |     |                                |     | PME: Not Culturally Acceptable |     | Limited Employment |     | Cultural Skills contribute to Income Earning Potential |     | Cultural Skills Can be Employed to Attain Resources |     | Household Well being is secured through Cultural Skills |     |
|                                  |   | % of n               | SUM | % of n                         | SUM | % of n                         | SUM | % of n             | SUM | % of n   | SUM | % of n  | SUM | % of n  | SUM |
| TABORIO                          | n=1   | 0                    | 0   | 0                              | 0   | 0                              | 0   | 0                  | 0   | 100  | 1   | 100   | 1   | 0   | 0   |
| TABANGA                          | n=7   | 29                   | 2   | 14                             | 1   | 43                             | 3   | 14                 | 1   | 0  | 0   | 0   | 0   | 57  | 4   |

*Summary*

In summary, the data show that the largest difference in attitudes regarding men's versus women's continuation of education after marriage was related to women's PME. While respondents from Tabanga and Taborio both cited that PME contributes to increased income earning potential, respondents of Tabanga did not relate this to improved household well-being to nearly the same degree Taborio respondents did. Whereas an identified belief informing attitudes of Taborio residents had to do with perceptions of a changing environment and economy in which livelihoods are secured, for Tabanga, concerns were focused on the legality of PME rather than changing economic and environmental conditions. This may explain why there is a much greater degree of support for women's PME in Taborio than Tabanga.

Whether referring to men's or women's PME the most commonly identified value of respondents is household well-being. However, the method used to secure household well-being differed mainly by village rather than gender. For Taborio the reported belief that education contributes to household well-being in relation to men and women's PME is 67% and 61% respectively, while Tabanga respondents supportive of men and women's PME reported beliefs that education contributes to household well-being are 29% and 47% respectively. In contrast, Tabanga respondents who do not support men and women's PME reported the belief that household well-being is secured through traditional cultural skills at a rate of 57% and 87% respective to attitudes towards men and women's PME.

In Tabanga, women's roles in the household are strongly linked to household well-being, this is less so the case for men. In Taborio, women's and men's contributions to household well-being are strongly linked to their capacity to produce an income for the household. This belief trans-locates women's labor beyond the geographic sphere of the household. From ethnographic experience, I would also posit that the conception of gender ideologies becomes more malleable as households adjust to a different economic culture where the husband at times is the cook, the caretaker of the children, and the one who cleans the house, while the wife works outside the home to produce an income.

There is also evidence that in cash-dominant economic contexts there is a greater level of cultural acceptability of PME than in subsistence-dominant contexts. Legal mandates reinforce cultural unacceptability of PME where the subsistence economy is the primary way livelihoods are secured. Where the monetary economy dominates, policy against PME does not affect perceptions and beliefs as strongly as the recognition of the changing economic reality facing households in the urban sector that can no longer rely on the subsistence economy.

## SHOW DOWN OR SHORE UP?

While the discussion around Sustainable Development has offered new insights in policy direction regarding development, there is a great degree of latitude in Sustainable Development theory as to how sustainability concepts are addressed through development. To date, Sustainable Development has been approached largely as weak-form environmental sustainability, while concepts and approaches advocated through social sustainability perspectives are addressed peripherally. While the divergent perspectives on Sustainable Development all agree that economic development is needed, there is debate regarding how economic development should be employed, at what scale, at what cost, and how success is to be measured.

Social sustainability advocates agree that development projects should: be small in scale; employ a participatory approach that empowers local communities; sustain the construction of inter-generational livelihoods; be culturally and historically specific; give consideration to the distributional aspects of development; and be based on a livelihood approach. In Kiribati, as well as the larger Pacific region, development models have been largely informed by modernization theory, which employs a universal development model aimed at increasing macro-economic growth, and has been largely ignorant to the effects on livelihood construction. To understand how the universal model of development has affected livelihoods in Kiribati, this study compares distributional aspects between villages at a household level and gender ideologies as they relate to household roles and responsibilities among villages.

The study found that the village of Taborio (urban) had a greater reliance on the cash economy than did the residents of Tabanga (rural). This is reflected in a higher reliance on cash incomes to secure food, a greater level of participation across genders in the formal economy, and a greater degree of belief that household well-being is secured through income generation. The comparative analysis of dollars per person per day revealed that the distribution of resources among households is more stratified in Taborio than Tabanga. In addition, the SMI results show that while access to subsistence resources in predominantly cash-based economies does mitigate the level of stratification, there continues to be a greater degree of economic inequality among households in the urban sector than those found in the rural sector. Such findings suggest the traditional system that ensures a relative degree of equality in the distribution of resources among households is strained when adapted to the monetary economic system, which relies on competition among productive units, the household in this case.

In regard to attitudes, values and beliefs surrounding post-marital education, respondents from both Taborio and Tabanga linked their attitudes toward PME to how that would affect valued contributions to household well-being. Given this, it is logical to assume that labor will be allocated within the household based on the perception of the benefit to the household. While household well-being is a central concern, there are differing perspectives of how household well-being is secured related to the division of labor across gender.

Interestingly, the analysis shows that Taborio (urban) respondents favored women's PME over men's PME by 8.8%, while Tabanga (rural) respondents favored

men's PME over women's PME by 14.2%. Given this, it appears that economic context may affect gender ideologies. While Taborio respondents support men's PME by 4% more than in Tabanga respondents did, support for women's PME in Taborio is dramatically higher than Tabanga by 27%. The data indicate that there is little difference in attitudes regarding men's role in contributing to household well-being between villages; however, differences in attitudes towards women's PME are highly contrasted.

Respondents in Tabanga related traditional cultural skills and the roles women play within the household as more vital to household well-being than increasing income earning potential. The opposite was true for Taborio, where women's ability to contribute to household income was widely reported as an important contribution in sustaining the well-being of the household. This suggests that where the monetary economic system is dominant, women's labor will tend to be allocated to activities that produce an income over productive or reproductive activities traditionally performed within the household. Likewise, it is expected that where the subsistence economy dominates, women's labor will tend to be allocated to the productive and reproductive activities traditionally performed within the household. Overall when comparing attitudes in villages between men and women, gender ideologies do not appear to be as strictly defined in the monetary economic context as they do in the subsistence sector.

The transformation of gender ideologies has implications associated with the distribution of political power among genders. Given that gender ideologies regarding the division of labor are malleable depending on the methods used to secure livelihoods, the increased acceptability of women working outside the home has created opportunities for

women to pursue professional positions. Women's participation in the professional field has contributed to the development of social bridging capital in decision-making structures, which has advanced the political empowerment of women in the national and village political structures.

While the development of the monetary economy has offered avenues for increased participation in decision-making structures for women, there are also very serious concerns regarding the growing inequity among households in relation to the distribution of livelihood resources. Results from the SMI indicate that when income is defined in monetary terms, households in Taborio (urban) have twice the income than households in Tabanga (rural). In addition, when income is defined broadly to include subsistence, cash, and dual resources, the mean score of household income by village continues to be higher in Taborio than Tabanga by 8.5%. However, it is likely that if quantitative aspects of subsistence agricultural resources were reflected in the SMI the difference between income levels by village would either be further diminished or the relationship reversed. While the degree of stratification between villages is mitigated when income is defined broadly, there continues to be a greater range of income between households in Taborio than that found in Tabanga. More poignant though is the finding that the most economically disadvantaged households in Tabanga (rural) are better off than the most economically disadvantaged households in Taborio (urban) due to a greater degree of access to subsistence resources in Tabanga.

Important here to note is the contribution of the subsistence economy in the construction of livelihoods. When economic well-being is viewed in purely monetary

terms, the lowest income households in Taborio appear to be equal to households in Tabanga in terms of access to livelihood resources. However, when subsistence resources are integrated in the economic assessment, the lowest income households in Tabanga have a 17% higher income level than households in Taborio (urban). What this means is that not only are the most economically disadvantaged households in the urban sector characterized by the greatest degree of relative poverty, but they are also subject to the greatest amount of risk in experiencing absolute poverty.

The implications associated with a growing reliance on the monetary economy are mixed. Social sustainability theorists would argue that development which marginalizes the well-being of one sector of the population in order to benefit another sector is socially unjust. However, they would look favorably on the increased level of political empowerment women have gained through their participation in the monetary economy. Although the influence of the monetary economy on I-Kiribati culture positively influences political equality among genders, the breakdown of the traditional cultural system that guards against relative and absolute poverty among households is alarming.

## CONCLUSION

To answer the question of whether the subsistence and cash economies are dual or dueling economies, I need first to explain what is meant by the question. Are the two economic systems compatible and if so to what degree, or are they mutually exclusive? While it has been shown that the urban and rural sectors rely predominantly on the cash and subsistence economies respectively, the populations associated with each are subject to a different set of risks and assets. The degree to which risks can be minimized and advantages capitalized provides the context in which to assess the larger question of economic compatibility.

While the monetary economic environment is characterized as offering benefits in terms of increased access to markets, healthcare facilities, tertiary educational institutions, and increased political equality among genders, it is in the face of increasing social inequity and increasing levels of livelihood insecurity. To avert the incidence of absolute poverty, it is necessary for development strategies to be based on culturally cognizant methods of livelihood construction that seek ways to use the subsistence and monetary systems of production and trade to create synergy in their outcomes. Financial capital development is relevant, however it should not be assumed that financial growth is a necessary mechanism of improving social equity and the conditions of those who are worst-off. The aspirations of development should be indigenously defined, as it is against these aspirations that success is to be measured.

Macro-economic development contributes to *one* of a number of ways resources are secured in the day-to-day lives of people in Kiribati. It is in understanding the ways that development can engage in supporting culturally-specific ways livelihoods are constructed that Kiribati will continue to work its goal of equitably distributed prosperity and well-being. This will entail understanding the structural dynamics of community capital operating on multiple social scales to identify assets that can be directed towards mitigating risks and deficiencies.

Although the details are not for me to iron out, I do have some overarching suggestions based on ethnographic experience and the results of this study. Particularly, if Kiribati is to maintain economic self-reliance and political self-determination, then it is critical that national expenditures do not outstrip income from exports, aid, resource rents, investment proceeds and remittance incomes. One way of curbing expenditures is through encouraging the maintenance of the subsistence sector for the provision of livelihood resources. In this way demand for imported goods can be lessened.

Efforts to encourage the maintenance of the subsistence sector relate to expanding the scope of educational curricula in primary and secondary schools in Kiribati to include Kiribati specific skills and knowledge, which is the foundation of livelihood construction in the subsistence sector. This is particularly important in the urban sector, where the limited amount of agricultural resources has hindered the systematic generational reproduction of the subsistence economy. Whereas traditional skills and knowledge are the key to livelihood construction in the rural sector, investment in the reproduction of cultural knowledge increases the likelihood urban-to-rural migration will occur.

Conditions in the rural sector could be improved through investments in human health and targeted subsidies. The weakness of the subsistence economy is in the limited diversity of goods provided, such as medicines. As respiratory and digestive illnesses are the most widely reported health problems in the rural sector, investments in water and sanitation systems, and efforts towards ensuring the continuous supply of preventative and curative medicines would decrease the risk of occurrence of fatal illnesses and improve the quality of human health. In addition, development assistance should be targeted to improve the accessibility of subsistence resources. The fishery plays a large role in sustaining subsistence livelihoods. Such resources as fishing nets and canoes would prove valuable in improving access to the fishery. By creating more culturally-specific avenues of access to agricultural resources, the risk food insecurity is lessened.

Development analysts from the Asian Development Bank argue that the I-Kiribati must aspire to attain increasing levels of financial growth to remain economically salient and politically independent. However, little is said concerning the role that the subsistence economy can and does play in sustaining Kiribati livelihoods. Unless development is informed by a comprehensive assessment of the diverse forms of capital and methods of livelihood construction are recognized, it is likely that the diverse forms of community capital unique to Kiribati will be undermined. As the feminist critique of development has pointed out, when productive contributions to livelihoods are not recognized, they are devalued. It is in the ignorance of the role of culturally-specific ways livelihoods are constructed that valuable methods of livelihood construction are devalued, resulting in a net loss of capacity. In this sense, development strategies that

focus primarily on development of financial capital threaten the maintenance of other forms of capital. Such conditions are that which lead to a state of dueling economies.

I would argue that the subsistence and cash economies have the potential to be both dual and dueling economies at different points in time, depending on the balance that is achieved in terms of the conservation and employment of diverse types of capital. While Kavaliku (2000) argues that the Pacific Paradox is an admission of the western cultural bias in conceiving development, I would agree in that macro-economic development is but one aspect of supporting the construction of livelihoods. The Pacific Paradox assumes that economic growth embodies the attributes by which development success is measured. It in effect positions the development of financial capital above all other forms of capital; however, as was seen in this study, the central values driving livelihood strategies in both the rural and urban sectors of Kiribati is household well-being.

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## APPENDIX A

### Household Income Expenditure Survey

The following survey was administered in a rural village in South Tarawa and on Abemama Island. The Abemama survey has additional questions appended, as well as minor changes to some of the questions themselves, however all the questions administered in the Tarawa surveys have been kept intact in the Abemama surveys to allow for comparative purposes. Additions and changes to the survey appear in italics in their respective places in the survey.

#### Schedule A: Respondent

A: Household ID No.

A: Household ID No.

1a. Who lives in your household, what is their relationship to you and what are their ages?

*Are you married and does your husband/wife live here?*

Do your children live here?

- Repeat ❖ Are they married and do their husband's / wives live here?
- ❖ Do their children live here?

Do you have any brothers / sisters that live here?  
Repeat

Does your husband have any brothers / sister that live here?  
Repeat

Do your parent's live here?

Do your parent's brothers / sisters live here?  
Repeat

Does your husband's / wife's brothers / sisters

live here?  
Repeat

Do any of your friends live here?  
Repeat

Is there anyone else who lives here?  
Repeat

- *Which of your children or people in the household are currently enrolled in school?*
- *Is there anyone in the household involved in the following organizations:*
  - *Youth Group*
  - *Women's Group*
  - *Sports Association*
  - *Religious Group*
  - *Maneaba Association (Village Association)*

2a. Religion

3a. Have you attended school or not?  
Response: Yes/No

3a1. If yes, what is the highest level you have completed?  
Response: No Formal Education, Some Primary, Completed Primary, Some Secondary, Completed Secondary, Some Post Secondary, Completed Post Secondary.

4a. Marital Status

Response: Married, not married, divorced, widowed

4a. *Have you been married before? If so, why was the marriage terminated?*

4a1. If divorced then why?

Response (Mark all that apply): A. Spouse's Drinking  
B. Spouse's battering/ violence  
C. Spouse's infertility  
D. Spouse's laziness  
E. Spouse's relatives interfere, controlling, manipulative  
F. Other reasons

4a2. *After your first marriage did you live with the husband's or wife's family?*

5a. Age at 1<sup>st</sup> Marriage

6a. Did you pick your spouse or was your marriage arranged?

7a. Number of years married

8a. Ideal Family size: How many children are you comfortable with?

9a. Number of Children birthed

10a. Are there children who have passed/died?

Response: Yes/No

10a1. If yes, what was their sex, age *and cause of death*?

### Schedule B: Household Inventory

B: Household ID No.

House Type

Response: A. Local Materials, B. Imported Materials, C. Combination of local and imported materials

Household Property/Assets

1b. Generator (Y/N)

Response: Yes (*How many*)/ No

2b. TV/video

Response: Yes (*How many*) / No

3b. Computer

Response: yes (*How many*) / no

*Add. Sewing Machine*

*Response: yes (How many) / no*

*Add. Radio*

*Response: yes (How many) / no*

*Add. Handcart*

*Response: yes (How many) / no*

4b. Refrigerator

Response: yes (*How many*)/ no

- 5b. Washing Machine  
Response: yes (*How many*) / no
- 6b. What do you cook with?  
Response: Gas, wood, electricity
- 7b. Vehicles & Number of Each  
Response: None, motorcycle, bus, bicycle, truck, car, canoe, boat.
- 8b. What is your bathroom like, an outhouse (no water), a water seal toilet, or none.
- 9b. Water  
Response: Household well, pump water, PUB-centralized water system in Tarawa, Village well
- 10b. What sort of lighting do you use?  
Response:  
A. pressure lamp: kerosene  
B. kerosene lantern  
C. solar lighting  
E. electric lighting  
F. bottle with coconut oil
- 11b. Fishing Equipment
- 11b1. Boat  
Response: none, yes  
11b1a. If yes, how big is the engine?  
Response: no engine, 2horsepower, etc...
- 11b2. Net  
Response: yes (*how many*) /no
- 11b3. Fishing Pole  
Response: yes (*How many*) / no
- 12b. Crops  
A. Breadfruit  
B. Papaya  
C. Pumpkin  
D. Non fruit  
E. Banana  
F. *Bwabwai (taro)*  
G. *Sweet potatoes*

- 13b. Livestock
  - A. pigs
  - B. chickens
  - C. ducks
  - D. *goats (omitted)*

## Schedule C: Household Cash Income

C. Household ID no.

- 1c. Total annual household cash income  
Response: cash amount
- 2c. Wage Earners & occupation (formal & informal employment)
- 3c. Which of the following activities did the family make money from last year?
  - 3c1. Local Business proprietorship
  - 3c2. Government Employment
  - Add. Waged Private Employment*
  - 3c3. Fishing
    - 3c3a. Local market (sell to individuals)
    - 3c3b. National market (sell to company)
  - 3c4. Seaweed Farming
  - 3c5. Copra cutting/collecting
  - 3c6. Handicrafts
  - Add. Sour Toddy sales*
  - Add. Hand-rolled tobacco sales*
  - 3c7. KPF (Kiribati Profit Fund)
  - 3c8. Loans

## 3c9. Allotment/Remittance

## Schedule D: Monthly Household Expenditures

Household ID no.

How much money is spent in a month for:

1d. Imported Foods such as rice, flour, tinned meat, tinned fish, and bread.

Response: average cash

*1d. bags/kilos of rice**1d. bags/kilos of flour**1d. bags/kilos of sugar**1d. tinned food products and noodles*

2d. Local Foods such as coconut toddy, fish, chicken, pig, breadfruit, papaya, banana and moimoto's.

3d. Alcohol

Response: average cash amount

4d. Travel/Transportation

4d1. Gas expenditure

4d2. Bus expenditure

Response: cash amount

*Add. Gas for the stove**Add. Gas for the generator*

5d. House payment

Response: cash amount

6d. Do you own, rent or lease the land you live on?

Response: Own, Rent, Lease, don't know

7d. All the money you spend at botakis, events and occasions.

*Add. What accounts for the family's biggest monthly expenditure?*

*Add (cont). How much of the household's total income is spent on this? i.e., 1/4, 1/2, 3/4, all.*

## Schedule E: Lump sum household expenditures within the last five years

Household ID no.

All the money you spent in the past five years for:

1e. Botakis:

- Funeral
- 1<sup>st</sup> birthday
- 1<sup>st</sup> menses
- Marriage
- 21<sup>st</sup> birthday
- Religious

2e. Transportation/ Vehicles

- Motorcycle
- Bus
- Bicycle
- Truck
- Car
- Wa
- Boat

3e. Television/Video

*Add. Sewing Machine*

4e. Computer

5e. Washing Machine

6e. Refrigerator

7e. Fishing Net

8e. School Fees

9e. Generator

10e. Raintank and plumbing

## Schedule F: Subsistence Economy

Household ID no.

1f. What are the responsibilities in the household of those in the living in the household?

Response Categorization: Male/Female, child, adult, elderly & routine responsibilities

2f. Things the family barter

What do you give and what do you receive from others outside the household?

Food: If yes, what

Services: If yes, what?

Things: If yes, what?

## Schedule G

*Add. What are your favorite foods?*

1. What is the work of women in the village?

2. What is the work of men in the village?

*Add. What do you think are the most important things to teach your children about?*

3. How do you feel about women returning to school after they marry? Why?

4. How do you feel about men returning to school after they marry? Why?

## APPENDIX B

### Market-Subsistence Index Resource Categories

#### *Monetary Resources*

##### *Dollars Per Person Per Day*

To assess a household's access to market resources for the purpose of comparison against access to subsistence resources, raw dollar values are converted to a value ranging from zero to four, which produces a relative assessment of a household's access to market resources. Access to market resources is also reflected in the Household Resources section.

The sum of household monthly income is divided by the reported number of household members and divided by thirty days to derive total dollars per person per day per household.

| Per Capita income/day coded |      | \$ Range Difference by code |
|-----------------------------|------|-----------------------------|
| \$ Range                    | Code |                             |
| 0-0.99                      | 0    | 0.99                        |
| 1.00-2.99                   | 1    | 1.99                        |
| 3.00-5.99                   | 2    | 2.99                        |
| 6.00-9.99                   | 3    | 3.99                        |
| 10.00-15.99                 | 4    | 5.99                        |

The coding system is graduated. Households with less than a dollar a day per person have extremely limited access to market resources and would need to rely heavily on subsistence resources to secure nutritional & household needs were, they are therefore assigned a value of zero, while on the other end of the spectrum households with ten to less than sixteen dollars per day had the greatest accessibility to market resources and would have little need to supplement monetary resources with subsistence resources. A value of four would factor in heavily to the overall index, when values from the different resource categories are summed.

##### *Household Goods*

This category is used to assess a household's access to market resources. It does not infer that members of the household purchased these items as some of the items included in this category were given to the household as gifts. What is important in this section is to determine direct and indirect access to market resources as evidenced by goods owned. Each of the following household resources that were reported as owned by

the household was assigned a value of 1. These values were then totaled to produce a “Household Goods” value to support the Index. These items included an electrical generator, a TV/DVD player, a computer, an icebox, a washing machine, motorized transport, and non-motorized transport (bicycle).

### *Subsistence Resources*

#### *Agricultural Resources*

The items included within this category reflect both resources that are cultivated or harvested by households and those resources that households use to gain access to the aquatic agricultural resources. The logic here is that these are some of the primary resources that households rely on for nutritional needs that they are able to attain without interacting directly in the cash economy. Agricultural resources including the following a fishing net, a fishing pole, a breadfruit tree, a papaya tree, a pumpkin patch, non fruit trees, a banana tree, a pig, a chicken, and a duck. One of the primary subsistence staple food resources, the babwai or taro root was excluded from the Taborio survey and therefore cannot be evaluated in a comparative analysis. This is a shortcoming of this index when applied to the assessment of subsistence resources.

#### *Systems of Reciprocity*

Barter or systems of reciprocity, meaning goods or services traded outside of the monetary economy, are methods applied in the subsistence economy by which trade is facilitated and are therefore included in the household assessment of subsistence resources. The HIES separated this form of trade into three general areas, being the giving or taking of food services or non-consumable items. In addition, if a household reported having received a Large Expenditure Item as a gift in the last five years, this also contributed a point in this area. For example if a family gives out fish for help fishing, and had received a generator as a gift, the value assigned would be three, as they gave out fish, which is interpreted as one point for food given out, received help fishing, which would be assigned one point for services received, and received a large gift for one point, totaling three points for the household in Systems of Reciprocity.

#### *Dual Resources*

When assessing their role in the subsistence-market economy dynamic it is necessary to consider not only how these resources are secured but also how their use can be employed to secure both subsistence and monetary needs of the household.

#### *Watercraft Resources*

Watercrafts provide access to both the subsistence and monetary economies. The pelagic fishery is an important resource for subsistence households, providing a diversity of fresh fish. Watercrafts are needed to gain access to this segment of the fishery. Households are not only able to access subsistence resources but if the catch proves beyond the needs of the household or if cash is needed for the household this also provides an avenue for income generation. For these reasons ownership of a boat or canoe is included in the Dual Resources section.

#### *Water Resources*

Three types of water sources were identified in the HIES, groundwater collected from a well, rainwater collected in a cistern, and piped water originated from the Public Utility Board (PUB) system in Taborio or from a centralized water collection system, which provided homes in the central area of Tabanga with groundwater collected from a relatively undeveloped area. Each type of water resource available to a household was given a value of one. The three potential water resources were then summed to create the household value for water resources. For example a household reporting they collected water from a well and also had a rainwater tank would receive a value of two. Likewise if a household's main source of water were piped that household would be assigned a value of one.

The objective of the of valuing each water source individually and then totaling the values is to create an even playing field to determine access to clean water sources as conditions vary pertaining to the quality of water provided by each source depending on the density of local development, the condition of the piping system, and the level of maintenance provided by each household on their cistern and, or well. Having access to multiple water sources allows households the opportunity to self-determine the highest quality of water to use for drinking and eating, while sources of lesser quality are used for non-consumption purposes such as, washing clothes and dishes.

Because access to water multiple types of water resources is either provided by the state through water improvement projects and through household investment of either labor for the development, maintenance and cleaning of a well, or household monetary investments into a rainwater catchment system it is not easy to pull out if this is strictly a reflection of subsistence or monetary resources. In addition, access to quality potable water supplies effects the quality of human health (capital), which directly affects the capacity of people to carry out productive activities required for the functioning of the subsistence and monetary economies. For these reasons water resources are considered within the Dual Resources category.

## APPENDIX C

### Attitudes Towards Post-Marital Education (PME) Content Analysis Category Explanation

#### *Attitudes*

Categories in this section are developed based on the semantics used to reflect the level of commitment of the respondent to their reported attitude pertaining to PME by gender. It is in this context that the aspect of analysis referred to as intensity, meaning level of commitment, is fleshed out.

A consideration of this type of analysis given that the interviews were conducted in I-Kiribati and translated directly to the researcher at the time of the interview relates to concerns about literal translations and the ability to apply a semantic filter to the analysis process. This inherent weakness is minimized by maintaining consistency pertaining to the survey administrator and the recorder (myself) who completed the entirety of the surveys as a team without interruption. In addition, the language skills of the survey administrator were deemed apt to deal with the challenges of translation and consistency before being asked to participate in the administration of the survey.

#### *Should*

The language in this category reflects a high level of commitment to their attitudes. Those respondents who used language such as ‘good to’, ‘should’, ‘suppose to’, and ‘need to’ in when referring to men or women’s PME are included in this category.

#### *Should Not*

The language used in this category concerning attitudes towards PME is reflective of respondents’ strong commitment to their attitude in not supporting PME. Responses in this category are those that used language such as ‘should not’, ‘no’, or ‘not supposed to’.

#### *Might and Might Not*

Those respondents who used language such as ‘might return’ or ‘might not return’ reflect a less stolid commitment to their attitudes and will most likely consider the particular forces and considerations noted in making decisions concerning PME. In addition one-sided conditional responses such as ‘if..., then it is OK’, that showed support but not a strong commitment to the attitude are included in this category. Responses that do not indicate strong support through the use of language, such as

‘Should’ but do however indicate support towards PME are included in this category due to showing of general support, however the level of commitment to this attitude is not assumed to be strong rather the assumption made here is that the level of commitment is relatively weak.

#### *Conditional Undecided*

Responses in this category include those that offer insights about values, beliefs and considerations but do not directly identify a person’s attitude related to PME. Respondents who said that men/women ‘should’ *and* ‘should not’ or ‘might’ *and* ‘might not’ or any combination of the above in which the response explicitly stated contradictory attitudes towards PME are considered in this category. Those who reported ‘Do not know’ or ‘no answer’ are evaluated in the “Do Not Know” category *if* their answers were not substantiated with the factors that would weigh into their decision.

#### *Unidentified*

Responses that did not directly identify their attitudes are couched in this category. This category differs from the conditional undecided in that the respondent did not state explicit support or nonsupport but rather provided commentary such as value statements, strategies, or other related information.

#### *Do Not Know*

Respondents answering ‘Do not know’ or ‘No Answer’ that did not offer any further substantiating commentary are considered in this category. However those that answered, ‘do not know’ and followed up with an associated attitude and, or reasons for the basis of their response are excluded from this category and incorporated into the appropriate category associated with their response.

#### *Excluded From Analysis*

Those responses that are invalid due to response errors such as another member of the household answered the question rather than the primary respondent, or the answer solicited contained opinions from which attitudes could not be clearly identified from are included in this category.

#### *Values*

Values are those things or ideas people believe to be ‘good’ or ‘right’ that individuals or social units base their goals on. Values in this section are identified in responses as the higher goal in which they weigh their decision against and how it will affect the achievement of that goal. All responses did not include value statements.

### *The Well Being of the Household and Family*

Responses included in this category reflect the need to perform cash, subsistence or household labor to benefit of the ‘household’, ‘family’ or components of the household such as ‘children’ or ‘babies’. Any mention of the responsibility to the husband or wife or a state of being that is the result of their relationship in the marriage, such as pregnancy is included in this category. Perceived indirect effects to the household from a particular action are also couched in this category. Examples of how the respective criteria areas are operationalized are as follows.

- ‘...because they have children and much work to do.’, ‘women have a lot more work at home (wtabanga#4), ‘to get a good job for the family’, ‘they need to take care of children and family’, “...so they can get a good job for the family.”, “...if they are busy with children then...””, “...but if they have a lot of children then...””, “...If they have children, they should stay and take care of them”, “...because the families rely on cash now”, “...need to take care of their wives”, “need to take care of the family.”, “...because they are the head of the household...””, “...they can also work in other ways for the family.” “...he is the head of the family...”
- ‘...because they love their husband.’, ‘...because some of them are pregnant...’
- “...they could fall in love with another and cause a divorce”, “... in order to raise their children in a good environment...”, “They bring their education home benefiting the whole family...”, “If they don’t go to school then they will be drinking and going around and they will not get enough money for the family.”

### *The Well Being of the Village or Nation*

This category is composed of responses that identify the well being of a larger social community beyond the household or family as a value. Examples of responses within this category include:

- ‘educated women are the strength of Kiribati...’,
- “need to participate in community as well...”
- ‘...if they don’t they are still useful for the village’,
- ‘they shouldn’t [return to school], it’s the law.’

### *Personal Enrichment*

This category includes perceived intangible benefits to individuals beyond getting a job. Responses that included ‘getting a job’ or ‘making money’ without the identification of further personal enrichment benefits are not included here, as those goals, such as ‘getting a job’ are closely related in many responses as a strategy to benefit the family or household primarily rather than the individual. Responses included in this category must explicitly state some perceived intangible improvement in an individual’s attributes or skills, such as the following responses:

- ‘It is good to use and improve your talents...’ ‘Education encourages thinking and good decision making, opening up opportunities.’, ‘so they can get a good education and a good job, or get a scholarship.’

### *Beliefs*

Beliefs reflect the way people think the world should be. Beliefs are defined against existing conditions in the environmental, political, economic and cultural sphere and the pressures associated with each. Strategies to meet goals attached to overarching values are affected based on beliefs and metered by existing conditions or forces that constrain the range of methodological opportunity. Based on how people relate to these forces and perceive the range of methods to be employed to achieve goals, strategies are developed to bring people’s world in to closer in alignment with their values.

### *Forces*

These are existing conditions and associated pressures as described by respondents that contribute to define constraints and opportunities in developing strategies.

#### *Changing Culture, Economy & Land*

Included in this category are responses that relate pressures of a changing cultural, environmental and economic landscape, which have precluded the ability to rely predominantly on subsistence labor or resources to secure the needs of the household or individual. Responses in this category are evaluated based on their expressed relative dependency or need to earn an income to secure needs. Responses that related the concept of required levels of income to sustain the family such as expressed in one response as “If you don’t go to school...they will not make *enough* money for the family”(emphasis added) is implied through the use of the qualifying term ‘enough’, meaning there is a base level of income needed, and would be classified within this category. Other responses however more directly reflect these emerging pressures affecting households as in the following response: “now a days you need money to attain the things you need.” These statements reflect conditions where access to subsistence resources is insufficient to provide for the households needs.

#### *PME is Not Culturally Acceptable*

This category reflects responses that speak to the cultural norms associated with a person’s role after marriage. Cultural norms are dynamic and the product of many factors, including religious affiliation, commonly accepted roles associated with gender and lifecycle stage, economic circumstance, and political and environmental context to name a few. Included in this category are those responses that explicitly link their

attitudes towards PME with one's marital status. Contributing factors affecting expectations concerning married persons were not explained further in all cases. Because the contributing factors affecting expectations associated with married people is not further explored, this category is framed in the larger context of expectations associated with cultural norms. Also included in this category are direct statements about the conflict of PME with cultural norms. Responses that fit within this category include:

- “No, they are not going back to school because they are married”
- “women from the south are forbidden to be separated from their husbands<sup>15</sup>”

#### *Husband's Attitudes*

This category includes those responses that note that the attitudes or permission of the husband must be sought and granted pertaining to women's PME, or note the perceived repercussions of women's PME which some women noted would cause the husband to be jealous. Women's attitudes concerning men's PME were not mentioned as a concern. Responses in this category include:

- ‘sometimes the husband is jealous’, ‘husband will be jealous’, ‘it is difficult because they love their husbands’, ‘if their husband or family agrees that it would be good for her to return’, ‘maybe if their husband agreed’, ‘They can't go back if their husband is jealous. The problem is he may be jealous of her seeing other boys’, and ‘If the husband agrees it is OK’.

#### *Limited Employment*

A consideration affecting the strategy taken by households is the feasibility of attaining paid employment. Noted in some responses is the acute awareness of the limited amount of employment opportunities, which affects attitudes concerning the utility of education as a strategy to meet goals, associated with values.

- “if they can't go back to school or *find a job* in Tarawa”,
- “Kiribati only has so many jobs available”

#### *Government Policy Does Not Support*

Responses in this category relate political constraints perceived by respondents that contribute to their attitudes towards PME. Political constraints include restrictive policy concerning the right of married people to attain a formal education at the primary and secondary levels and the restricted provision of associated investments in resources needed to support PME. Restrictive policy towards PME is enforced and affected on a macro-economic level by the state, which does not provide resources needed to support PME and on the individual level through a teacher's attitude and leniency pertaining to

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<sup>15</sup> Should you explain the context of availability of school facilities for secondary school/or present this in the introduction and refer back to it here.

the situation. Examples of responses identifying these contributing factors are included in this category and are as follows.

- ❑ “there are not any schools for married people”
- ❑ “if the teacher allows them to go back”
- ❑ “if they are allowed by the school”
- ❑ “they shouldn’t, it’s the law”
- ❑ “it is forbidden by married women to go to school”

#### *Personal Development Choice*

Some respondents specifically identified the person’s personal choice or willingness to pursue education that should be taken into consideration in determining attitudes concerning PME. Responses such as the following are included in this category.

- ❑ “if she wants to finish”
- ❑ “if they really want to”

#### *Methods*

Methods are techniques that are applied in strategies. Strategies may apply multiple methods systematically towards attaining a goal. For example, to build a home you would need to assimilate the needed resources such as materials, labor and land. How those resources would be attained could be through various methods, such as buying or harvesting the raw materials, hiring labor or having those within the household perform the labor, and buying land or building on a family members property. The compilation of methods employed to gain access to the required resources to build the house is the strategy. Therefore, a method is an approach used to affect a strategy that contributes towards an end goal or product.

#### *Education Increases Income Earning Potential*

One method identified in responses to increase future employment and income earning opportunities is through investing in education. Respondents that identified education as a means of getting a job or making money are classified in this category. Such responses are as follows:

- ❑ “They should return so they can complete their school and get a job”
- ❑ “Continue [in school] to get a good job...”
- ❑ “Should continue school, nowadays you need money...”

#### *Cultural Skills Contribute to Income Earning Potential*

This category reflects the ability to work in the informal sector of the economy through employing traditional skills and knowledge for the purpose of income generation.

- ❑ ‘People can also make money using their cultural skills...’

- ‘Should not go back. They are strong enough to cut toddy and do other agricultural work for money...’

*May Perform Traditional Work*

In this response category the traditional labor is not tied to income generation but rather as a means of accessing and allocating needed resources outside of the market. Responses in this category include:

- “They can also use [their cultural] skills to fill their own needs...”
- “they should go back to the Outer Islands and do Kiribati work-cutting copra, fishing, etc..”

*Strategies*

Strategies speak to how households allocate human resources to contribute to living in alignment with their values as expressed as goals, such as those explicitly mention pertaining to household, village, or national well-being and personal enrichment. Strategies are developed and employed in the context of the social, economic, ecologic and political constraints and opportunities individuals perceive.

*Household Well Being is secured through Education*

This strategy employs education as a means of increasing opportunities for employment and thereby income generation for the household, as well as indirect benefits brought to the household through education. Concerning income generation, the assumption in this strategy is that education has economic value in terms of increasing future income generation potential, thereby education is perceived as an investment in the future well being of the household through increasing access to the formal economy. Other intangible means such as raising their children in ‘good environment’ are also included in this category as indirectly benefiting the household through education. The primary codifiers for responses to be included in this category are those that identify the link between the family or household well-being and education, be it for income generating purposes or other enrichment benefits. Examples of those within this category are as follows.

- “They might continue their school so they can get a good job to get money for the family. They help the family by getting a good job and making enough money.”
- “They are supposed to go back to school so they can get a good job for the family.”
- “If you don’t go to school you can’t get a job to get money for the family.”

*Household Well Being is secured through Cultural Skills*

This strategy invests in the traditional I-Kiribati culture as it relates to the employment of the local environment and the allocation of human labor to the informal or unpaid sector of the economy for the provision of household goods and services to obtain security and self-sufficiency. Responses that noted one's responsibility or work load associated with the household or family as primary considerations in their decision are couched within this category. Examples of these situations described in responses are as follows.

- "They should [return to school], but they can also work in other ways for the family. Kiribati only has so many jobs available and a large portion of the population is ill equipped to fill these positions. It is important that people and families are self-sufficient. Income generation is not the only way of knowing, cultural skills such as food gathering and cultivation will benefit people beyond retirement age. People need to remember and practice these skills. People can also make money using their cultural skills, [such as making] mats, [and] baskets. They can also use these skills to fill their own needs, less dependency on cash. Pure dependence on the cash economy is to not be self-sufficient."
- 'It is difficult to send women back to school because they have children and much work to do.'
- "They should not go back [to school] because they need to take care of children and the family."

*Village, National, or Well Being is secured through Education*

Included in this category are responses that link village and, or national well being to benefits gained through education or clearly imply that education contributes towards these ends, as in the following statement.

- "Educated Kiribati women are the strength of Kiribati."

*Personal Enrichment is secured through education*

This category reflects statements concerning the intangible benefits of education to personal enrichment. Such responses as follows are included in this category.

- "It is good [to return to school], but it is difficult to return. It is good to use and improve your talents."
- "...they should [return to school] even if not for a job it will improve their understanding."

*Other*

Included in this category are those statements that were not able to be generalized or classified in one of the previously noted categories and were not mentioned consistently enough to solicit a category development or are interpretable. Responses in this category may include sections of some responses and can also include the entirety of the response. They are retained because they may provide insight in other areas and also reflect opinions surrounding PME.

- "...may disrupt school"
- "...easier for men than women"
- "...missed school for a long time.."