8.1 Introduction

Time is an important resource for everyone. It is also a limited resource in that we have only 24 hours in a day to put to competing uses. How we use this limited resource is important and has implications for our economic and social well-being.

Given this importance, the use or allocation of time has been studied by academics and policy analysts since the early twentieth century (Harvey and Pentland 1999). However, more systematic collection of time use data originated only in 1924, when significant quantities of time use data were collected by the Soviet Union (Juster and Stafford 1991). Since then, smaller “bits and pieces of information” on time use were collected with a focus on specific activities such as leisure and travel patterns, but it was not until the 1960s that more systematic attempts were made to collect comparable data for large groups of countries. The first such study was conducted by Alexander Szalai in 1963 for a group of 13 countries (Harvey and Pentland 1999).

Eventually, as research progressed, academics formulated a theory of time allocation, providing a proper framework to study time. In 1965, Gary S. Becker introduced the theory of allocation of time in which time was considered to have a cost on the same footing as the cost of market goods. At the heart of his analysis were households which were seen as both producers and consumers. He suggested that households produced commodities by combining inputs of goods and time according to the cost-minimisation rules of the traditional theory of the firm. Quantities of commodities produced are determined by their utility maximisation.
function subject to prices and constraints on resources. In other words, time is seen as a scarce input which is allocated between alternative productive activities as determined by utility maximisation and its cost in relation to other factors.

Since the 1960s, time use studies have been carried out in most of the industrialised countries and, lately, in developing countries as well, in five to ten year intervals (Juster and Stafford 1991). Much bigger multinational time use studies have been carried out recently; EUROSTAT conducted time use studies in 18 European countries in 1996 and 1997 (Harvey and Pentland 1999).

Turning now to the context of the study, i.e., the rationale for choosing time use as an indicator for Gross National Happiness, let me begin by saying that time use studies provide useful information missing in conventional economic accounts. The system of National Accounts, which is used to calculate GDP, does not measure productive activities accurately. A national accounting system that fails to recognise the total of productive capacities could lead to a conception and implementation of policies that are useless and harmful. In addition to paid work, productive activities include a series of unpaid activities such as household work, childcare, care of the sick and old, and time allocated to various other activities for the upkeep of societies. In addition to activities done for oneself and members of one’s household, productive activities also include voluntary activities carried out for members of the community or for people outside one’s community. These activities are fundamental to the well-being of both those who provide and who receive such services. A true picture of well-being can be obtained only if these activities are taken into account. Time use studies provide information on such activities that are fundamental to the well-being of society.

The detailed nature of information collected by time use studies enables policy makers to understand the needs of special groups of people, such as the old or disabled. As people age, their demands for assistance and care increase. If these demands are not satisfied, the well-being of the old and sick will deteriorate (Andorka 1987). Similarly, it is important to have adequate information on the time parents devote to their children. The quality of care children receive is correlated with their cognitive development (Hill and Stafford 1980). Sound policies related to these issues can only be formulated with the help of such detailed information.
Time use studies give information on what people actually do in their lives and, therefore, provide information on work and labour allocation (including that of children) within households, both at a point of time and over a period of time. Time use studies are, therefore, very useful for understanding the overall transformation or change experienced by societies. Such information is useful for designing comprehensive and balanced economic and social policies; needless to say, the well-being of societies can only be improved by informed policy formulation.

Time use studies provide information on the work-life balance of individuals in society. They provide information on the number of hours an individual spends on work and other activities, such as socializing with family and friends, sports, and other leisure activities. Imbalance in time allocation between work and other activities is caused by a number of factors among which the increased number of work hours is the most prominent. An increase in work hours, in turn, is, among other factors, caused by one’s desire to make more money. Money becomes the focus or the driving force behind long hours of work for many individuals. These individuals exaggerate the importance of money for their well-being, and they get into a situation of what has been called “focusing illusion”. As they devote more time to work they do not find time to do things that they enjoy. Such people are not happier but are much more stressed than others (Kahneman et al. 2006). The European Quality of Life Survey of 2003 revealed a strong correlation between time use and subjective well-being. In most of the countries covered by the survey, it was found that people who had long work hours and poor work-life balance generally had low subjective well-being (Böhnke 2005).

As individuals juggle to do so many things, they easily become stressed. Research has documented a series of stress related impacts on the health of workers. Workers in high-strain jobs have been shown to have a higher variety of disease than their fellow workers who are not or are less stressed. Cardiovascular disease, gastro-intestinal disorders, musculoskeletal problems, and the immune system are all affected by stress. Behavioural problems such as poor relations with colleagues, absenteeism, and loss of self-confidence and self-esteem are often caused by stress. All these consequences affect both the actual as well as the perceived well-being of individuals.

Time use data enable academics, policy analysts, policy makers and policy implementers to understand poverty better. “A significant part of
the survival of poor households in developing countries is through home production”, for which time available to their members constitutes the main resource (Ilahi 2000). The more time they spend at work, the less time they have for leisure and, to the extent leisure is important to well-being, it could be said that the poor not only suffer from economic poverty but also from time poverty and therefore low well-being. This has been substantiated in the findings of studies by the World Bank in Sub-Saharan Africa. These studies revealed that poor farmers, especially women, face competing demands for their time (Blackden et al. 2005). They work on the farm, cook, attend to the sick, fetch water, tend to animals and do a host of other household activities. They do not find time to take up other productive activities even if there are opportunities to do so. They are often unable to take their sick children to health clinics because they are tied to several activities at the same time. They are not able to send their children to school even if there is an opportunity to do so. Children are required to stay back to help their parents who are caught up in unending cycles of work. In such cases, time poverty reinforces economic poverty. Understanding such situations would make it possible to formulate better policies to combat poverty.

In addition to these utilities of time use studies, time use merits inclusion as an index of Gross National Happiness for the number of direct linkages they provide to assessing the well-being of individuals. Juster, Courant and Dow (1985) developed a concept called “process benefits” which refers to well-being derived from doing an activity independently of its end results. According to these scholars, “time plays a crucial role not only as an input into a variety of market and non-market production activities, including leisure, but that time use is equally important as a direct source of satisfaction.” In other words, activities that an individual engages in not only yield “observable and measurable outcomes in the form of market and non-market goods” but outputs in the form of satisfaction from doing those activities. Such information can be obtained and understood through time use studies.

In 2004 Kahneman, Krueger, Schkade, Schwarz, and Stone developed a method called Day Reconstruction Method (DRM) to quantify subjective well-being. Respondents, who comprised 909 working women from Texas, were asked to reconstruct their previous day in terms of how they spent their time and how they experienced a particular activity. It asked the participants to rate different activities in terms of levels of enjoyment, and it was found that socializing with friends and other leisure activities
topped the enjoyment scale while being with the boss and commuting to work were at the bottom of the scale. They next used the scale to characterise the effects of a variety of circumstances and observed a very strong positive correlation between the scale of enjoyment and circumstances. For instance, women who did not sleep well the previous night did not enjoy activities they engaged in the next day. By enabling researchers to understand the way people spend their time and experience their activities, time use studies provide a meaningful lead to assess the well-being of individuals.

In 2006, Kahneman and Krueger developed another method to quantify or measure well-being. They developed a concept called the U-Index, which is defined as “the proportion of time an individual spends in an unpleasant state”. An episode is classified as unpleasant if the most intense feeling reported for that episode is negative. Using time use data, they show that respondents “who report less life satisfaction as a whole spend a greater fraction of their time in an unpleasant state.”

From this review of literature it is clear that time use studies provide critical information related to allocation of time (a scarce resource) and its distribution among different members of households. It provides data which could be used to assess the impacts of policies, compare cultures and societies, gauge lifestyle changes, and assess the needs of special groups of people such as the old and disabled. From the perspective of the present study, time use studies address several shortcomings of GDP-based measures of progress or development. They provide information on unpaid work, voluntary work and other community activities. These activities are all very vital to the well-being of individuals. More importantly, time use studies enable researchers to assess or understand the well-being of individuals directly.

Within the context of the above literature, this study intends to address three objectives: i) to find out amount of time respondents allocated to various activities and, by doing so, to identify the amount of household work, care work and other unpaid work that is normally not included in conventional economic accounts, ii) to find out how patterns of time use differ by gender, age, and other social and demographic characteristics of respondents, and iii) to assess how patterns of time use relate to reported levels of happiness. The remaining part of the paper provides an overview of the survey questionnaire and describes the methodology of the survey and its analysis; reports the time spent on various activities in
demographic, economic and social characteristics of the respondents; studies the relationship between time use and the reported level of happiness or well-being that people enjoy in their life; and summarizes the findings and points out some policy implications as well as some directions for future time use surveys in Bhutan.

8.2 The Survey

A total of 950 individuals were interviewed but for the purpose of this paper, data for only 937 respondents could be used.

8.2.1 Data collection

Data on activities carried out by the respondents during the day preceding the interview and the amount of time spent on each of them was collected through recall method. People were asked to recall in sequential order all the activities that they carried out during the day before the interview with the begin time and end time for each activity.

8.2.2 Data classification

Unlike conventional time use surveys, activities were not classified beforehand. In order to classify them, various classification systems used in time use surveys both in developed as well as developing countries were referenced. Classification systems used by developed countries were mostly designed on the basis of activities in fully monetised economies and often had a specific focus, such as to capture unpaid or non-economic work. The purpose of this survey, however, was to capture all economic and non-economic activities performed by respondents. So, the classification system used by developed countries was not relevant. Of those used by developing countries, India’s provided a good insight (Hirway 1999). Drawing ideas from this, activities were classified according to the type of sectors they belonged to. The following categories of activities were obtained:

1) agriculture related activities; 2) livestock related activities; 3) forestry and horticulture; 4) processing of food and drinks; 5) construction and repairs; 6) craft related activities; 7) business, trade, and service; 8) household maintenance; 9) quarrying; 10) care of children, old and sick household members; 11) community participation; 12) social and cultural activities; 13) religious activities; 14) education and learning; 15) sports,

1 Details of activities comprising the aggregate category are provided subsequently.
leisure and mass media use; 16) personal care; 17) travel/commute; and 18) waiting.

The above activities can be furthered categorised into two broad categories: work activities (activities 1-10) and non-work activities (activities 11-18). The following sections first analyse time use in terms of these broad categories and eventually in terms of detailed activities.

8.3 Empirical Results

8.3.1 Analysis of time use by broad categories of work and non-work

8.3.1.1 Gender analysis of time use

The data show that the burden of work is significantly higher for women than for men. Women worked an average of 8:12 hours during the day preceding the interview while their male counterparts worked only 6:54 hours. On the contrary, men spent much longer time (17:01 hours) at non-work activities as compared to women (15:42 hours). As the data clearly show, the cushion for this excessive amount of time that women spent on work came from reductions in non-work activities.

Figure 8.1 Time allocated to work and non-work by gender

8.3.1.2 Age analysis of time use

Skills and strengths that one commands play an important role in determining what one does. Skills and strengths vary by one’s age. For instance, participation in active sports or strenuous farm work will vary substantially by one’s age.
The data show that respondents in the age group of 31-45 years worked the longest (8 hours and 32 minutes). The shorter duration of work is recorded for respondents below 15 (5 hours and 30 minutes) and those above 60 (6 hours and 35 minutes).

**Figure 8.2 Time allocated to work and non-work by age group**

<table>
<thead>
<tr>
<th>Age group</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 15</td>
<td>5:30</td>
</tr>
<tr>
<td>16-30</td>
<td>7:07</td>
</tr>
<tr>
<td>31-45</td>
<td>8:23</td>
</tr>
<tr>
<td>46-60</td>
<td>7:51</td>
</tr>
<tr>
<td>&gt; 60</td>
<td>6:35</td>
</tr>
</tbody>
</table>

8.3.1.3 *Time use by area of residence and gender*

What one does is often decided by where one is located or based. For instance, in areas where farming is a predominant activity (due to favourable climatic factor) or absence of alternative activities, it is likely for people of such areas to spend long hours working on their farms as compared to people of other areas.

When work and non-work hours are analysed in terms of respondents’ area of residence and gender, we observe that women in rural areas worked the longest (8:20 hours). Women in urban areas have the next longest work hour (7 hours and 34 minutes). Men in rural areas worked longer than their urban counterparts. It is interesting to note that women in urban areas have longer work hours than men in rural areas.
Variations in time use can be extended further to districts. When we do so, the longest duration of work is observed for respondents in Gasa (9 hours and 54 minutes) and the shortest for respondents in Tashiyangtse. However, given the seasonality of activities, variations between districts should not be seen as given.

Figure 8.4 Work hours by districts
8.3.1.4  **Time use by status of employment**

One’s employment status affects the way one allocates time to various activities. Usually, the total hours of work or burden of work is more for employed respondents than for unemployed, housewives or students. The data show a finding which is contrary to this a priori expectation. See figure 8.5. It shows that housewives had worked the longest (8:42 hours) followed by employed people (7:40 hours). It also shows that unemployed respondents worked for fairly long (5:58 hours).

**Figure 8.5 Time use by status of employment**

Two findings are quite striking in the above figure: housewives working the longest and unemployed people working for fairly long (5:58 hours). They merit further analysis. When the work hours of unemployed are broken down by activities, it is observed that they spent 3 hours and 44 minutes on household maintenance activities such as cooking, sweeping, dishwashing, etc. This shows that unlike other countries, unemployed people in Bhutan are not a big burden to the society; they are not unproductive people without any meaningful contributions to the society.
Likewise, when we look at the distribution of time by housewives to various activities, we observe that they spent the bulk of their time (3:33 hours) on activities related to household maintenance. This shows the important role that housewives play in the well-being of members of the family.

**Figure 8.7 Time allocation of housewives to various activities**

8.3.1.5  **Time use by structure of family**

The type of family structure one belongs to could also influence how one allocates time significantly. For instance, studies have found that the
presence of ‘young children substantially reduces mother’s sleep time’ (Biddle and Hamermesh 1990). The study shows that that time spent on work is longest for single parents. It also shows that couples with children work longer than their counterparts without children, indicating that the presence of children increases one’s work, particularly those related to household maintenance.

Figure 8.8 Time use by structure of family

8.3.1.6 Time use by different income groups

How an individual puts his/her time to use is a function of income. As mentioned earlier, in many developing countries home production constitutes the main source of livelihood for which time available to their members constitutes the main resource. The more time they spend at work, the less time they have for non-work activities such as leisure. Likewise, high income people also face a time crunch: multiple things that demand their attention leave them with very little time for family and friends.

The study shows an inverse relationship between level of income and hours of work; work decreases as income increases. See figure 8.9.
8.3.2 Analysis of time use by disaggregated activities

So far the paper analysed time use at aggregated levels of work and non-work activities. This section will look at time spent on various activities under each of the two categories. Like aggregated activities, these activities can also be analysed in terms of gender, age, income, family structure, etc., but the paper would get lengthy and so the analysis is confined only to gender differences. Table 8.1 presents the distribution of respondents and the amount of time spent on various work activities.

Table 8.1 Time spent on various activities under work category

<table>
<thead>
<tr>
<th>Activities</th>
<th>Frequency</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male/Female</td>
<td>Male/Female</td>
</tr>
<tr>
<td>Agriculture related activities</td>
<td>96/93</td>
<td>05:26/05:01</td>
</tr>
<tr>
<td>Business, trade and services</td>
<td>95/80</td>
<td>05:05/06:13</td>
</tr>
<tr>
<td>Care of children and sick</td>
<td>29/81</td>
<td>01:41/01:35</td>
</tr>
<tr>
<td>Construction related</td>
<td>52/17</td>
<td>06:36/05:41</td>
</tr>
<tr>
<td>Craft related activities</td>
<td>38/74</td>
<td>04:17/05:04</td>
</tr>
<tr>
<td>Forestry and horticulture</td>
<td>135/99</td>
<td>03:44/02:34</td>
</tr>
<tr>
<td>Household maintenance</td>
<td>329/440</td>
<td>01:36/03:05</td>
</tr>
<tr>
<td>Livestock related activities</td>
<td>190/204</td>
<td>02:51/02:38</td>
</tr>
<tr>
<td>Quarrying work</td>
<td>7/5</td>
<td>04:45/05:42</td>
</tr>
<tr>
<td>Processing of food</td>
<td>34/32</td>
<td>01:38/02:12</td>
</tr>
<tr>
<td>Transporting</td>
<td>2/4</td>
<td>06:35/02:10</td>
</tr>
</tbody>
</table>
8.3.2.1 Agriculture related activities

This category includes activities such as clearing fields, digging or plowing fields, applying manure, weeding fields, harvesting, and threshing. 96 men and 93 women were involved in agriculture related activities. Differences in time spent on these activities by men and women are not significant.

8.3.2.2 Business, trade and services

This category includes activities such as selling vegetables, fruits, and other farm products; selling livestock products such as butter, cheese and meat; selling food and drinks; tending to shop; activities of officials of government and private organisations (office work); driving and ferrying people; and travels related to them. 95 men and 80 women reported engaging in these activities. Time spent on these activities is slightly higher for women than men. See table 8.1.

8.3.2.3 Care of children and sick household members

Included in this category are activities such as feeding children, bathing and dressing children, looking after children, putting children to sleep, accompanying them to playgrounds and parks, transporting children to and from schools, supervising or helping children with their homework, and teaching children. Various forms of help provided to sick or old members of the household are other activities that constitute this category. The number of women (81) engaged in these activities is significantly more than men, indicating the important role women play in providing care work in our society.

8.3.2.4 Construction and repairs

This category comprises activities such as the construction of a new house, animal sheds, and toilets, minor or major repair of dwellings, and wool activities - construction and repair of public infrastructure such as bridges, schools, health clinics, drinking water supply scheme, mule tracks, roads, temples, offices of community leaders, etc. In these activities, not only more men are engaged but they also spend longer time on them as compared to women.

8.3.2.5 Craft related activities

Painting, knitting, spinning wool or yarn, dyeing wool/yarns, making yarn rolls, setting up looms, weaving, making bamboo baskets, making ropes, carpentry, and blacksmithing. As we see in table 8.1, women spent

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2 Labour contribution required of beneficiaries of development projects.
greater time on them than men did. However, it is not to suggest that women spent greater time on all of these activities; it is because longer time they spent on weaving.

8.3.2.6 Forestry and horticulture

Activities included under this category comprise two sub-groups. Under forestry related activities are included chopping or sawing of wood, collection of timber, and fetching of fodder, firewood, leaf litter, and other forest products. Horticulture related activities include the preparation of beds for horticulture plants, weeding, irrigation of orchards, and the harvesting of fruits. These activities are dominated by men; 135 men reported undertaking these activities and spent an average of 3 hours and 44 minutes while only 99 women were engaged in these activities and spent 2 hours and 34 minutes.

8.3.2.7 Household maintenance

Household maintenance activities include cooking, setting up and serving meals, washing dishes, cleaning the inside and outside of the house, making fire, fetching water, and laundry related activities (washing, drying and folding clothes). Also included under this category are shopping, packing and arranging household objects or things. This set of activities is clearly the domain of women; more of them were engaged in these activities and spent much longer time on them than men did.

8.3.2.8 Livestock related activities

Activities included under this category are preparing feed, feeding animals, milking cows, grazing animals in forests, putting animals to shed, cleaning sheds, shifting cattle from one pasture to other, mating of animals, and putting up tents for the herders. In these activities too, more women were involved and spent longer time on them than men.

8.3.2.9 Processing of food and drinks

This category consists of activities such as grading or sorting of grains, drying grains, pounding of paddy, grinding maize, milling paddy or maize, churning milk, and brewing alcohol. Normally, these activities are dominated by women but the data show that more men were involved in them although time spent on them by women is much greater.

Table 8.2 Time spent on various activities under non-work category

<table>
<thead>
<tr>
<th>Activities</th>
<th>Frequency</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
</tbody>
</table>
### Community participation

Community participation includes participation in community meetings, briefings by government officials on various issues, political activities such as voting, voluntary work and informal help provided to neighbours and other households in the community. There is no significant difference between male and female respondents neither in terms of frequency nor amount of time devoted to community participation.

### Education and learning

This category includes time devoted to both activities of formal and informal learning. Attendance of class, doing homework, reading and studying for the class (either at home or school), attendance of non-formal education (NFE) class, group work and discussions, and informal education such as oral narration of information are included. Here too, there is not much difference between men and women respondents. See table 8.2.

### Personal care

Personal care comprises activities such as sleeping, eating and drinking, washing, dressing, napping, sick in bed and medical care of self, looking for job for oneself, rest and relaxation. Since this category comprises biologically necessary activities such as sleeping and eating, the rate of participation is 100% (937 respondents). Average time spent on personal care is high is largely due to of sleep in this category.

There is no significant difference between male and female respondents in hours of sleep. However, there is significant difference between men and women in other personal care activities which include activities such as eating, rest and relaxation.
Religious activities consist of reciting prayers and mantras, offering water and incense to the altar, lighting butter lamps, burning incense outside the house, conducting or organising rituals, meditation, prostrations, and hoisting prayer flags. Other activities such as attendance of religious teachings, pilgrimages to religious sites or lamas within and outside the community, and circumambulation of chortens or lhakhangs are included in this category. No significant difference is observed between men and women in their time devoted to religious activities. See table 8.2.

Social and cultural activities include socializing with members of the family, relatives, friends and neighbours; and attendance of tsechus, festivals, religious ceremonies of neighbours, community religious ceremonies, cultural shows, and sports activities. It also includes going to see a new born child and celebrating losar (New Year) with families, friends and neighbours, and attending funeral ceremonies. In terms of time spent on these activities, the difference between men and women is very small. However, more men (283) reported engaging in these activities than women (247), indicating that their extended work hours keep them away from social and cultural activities. See table 8.2.

Sports, leisure, and mass media use

The sports and leisure category includes both active and passive leisure activities. Active leisure comprises activities that require physical exertion such as playing archery, khuru, tennis, taekwon-do, snooker, and going for a walk. Passive leisure include activities such as watching TV and video, listening to radio and music, reading books, telephonic conversations, writing diaries, and playing cards. Hobbies such as playing guitar and other musical instruments are included here. Not much difference is observed between men and women in these activities. See table 8.2.

Travel and commute

This sub-category includes travel undertaken for all categories of work and non-work activities. For instance it includes travel to and from work, visiting public offices and functionaries such as: the gup’s office to pay tax, obtain permits for firewood and timber or resolve disputes; the court to settle disputes; and the tshogpd’s house for his/her views on certain matters. More men than women reported undertaking this activity and also the amount of time spent travel and commute by men is higher than that of women’s. See table 8.2.
8.3.2.17 Waiting

This category includes time spent on waiting to see a doctor, extension agent, census and immigration officials, gups, civil servants, etc. 41 respondents reported spending close to two hours on waiting for the delivery of services by public officials.

8.4 Relationship between time use and happiness

Analysis so far has focused on patterns of time use and various factors that determine them. In doing so, we have been able to find the average amount of time allocated to all categories of activities. These findings present a good picture of the nature of economic and non-economic activities that are commonly pursued by Bhutanese. The findings also show how activities differ by age, gender, employment status, residential status, and the type of family one belongs to. This section looks at how the use of time in different areas of life interacts with subjective well-being or happiness of the respondents. Following past studies on this topic, I discuss below how time spent on work, socialization, community participation, religious activities, and sports and leisure by the respondents relate to their reported level of happiness.

8.4.1 Total hours of work and reported level of happiness

A brief review of studies that revealed a strong association between time use and happiness was provided at the beginning of this report. These studies found that people who worked long hours were usually less happy or satisfied with their life in general compared to people who worked fewer hours. Our study reveals findings that are consistent with these studies. It shows that women respondents who worked much longer than their male counterparts are less happy. See table 8.3.

<table>
<thead>
<tr>
<th>Sex</th>
<th>Mean happiness</th>
<th>Mean work hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>6.3</td>
<td>6:54</td>
</tr>
<tr>
<td>Female</td>
<td>6.0</td>
<td>8:12</td>
</tr>
</tbody>
</table>

It is also observed that respondents who work long hours have poor quality of life. See figure 8.10.
The channels through which long duration of work affects well-being are stress and the related health problems from which people suffer. Studies carried out in Japan revealed a positive correlation between long work hours and ‘karoshi’ (a syndrome of cardiovascular attacks such as strokes, myocardial infarction or acute cardiac failure). Uehata (1991)\(^3\) studied over 200 karoshi victims and found that two-thirds of the victims had worked more than 60 hours a week and more than 50 hours overtime work per month prior to the attack. This study shows a similar link between time use and health problems. Respondents who worked for longer duration reported higher stress levels and did not rate their health as high as their counterparts who worked for shorter hours. See table 8.4.

aspects of life, such as spending time with family and friends, doing exercise, praying, and other activities that one enjoys.

**Figure 8.11** *Work hours vs. frequency of praying*

As we see in the above charts, respondents who have longest hours of work did not pray or visit religious places. Being unable to pursue such activities does affect one’s well-being. See figure 8.13.
8.4.2 Socializing and reported level of happiness

Participation in social and cultural activities is “a resource which contributes to social cohesion and enables communities and societies to survive and grow”. Social capital, which contributes to the well-being of the society, arises out of participation in informal social networks such as interactions with friends, colleagues or families, and participation in community events. Social networks that one develops through such interactions help one in times of adversities.

The importance of social networking or social capital to one’s well-being can be found in several recent research publications. European Quality of Life Survey (2005) found that subjective well-being declined significantly in population groups who could not count on social support, compared to those who were socially integrated. The study also found that people with limited opportunities to contact friends suffered low subjective well-being.

Apart from physical support such networks provide during times of difficulties, they also provide intrinsic benefits. One always enjoy time with family and friends, and being able to enjoy one’s time is crucial to well-being or happiness. One study found that people with a higher rate of social participation had a higher frequency of positive feelings, and that contacts with friends tended to increase positive feelings more than other contacts (Phillips 1967).
The survey reveals findings that are consonant with above studies. Respondents who socialized during the previous day reported a higher level of happiness than those who did not participate in any social and cultural activities. The mean happiness score for those who participated in some social and cultural activities was 6.3 points whereas it was 6.1 points for those who did not engage in any social and cultural activities. See figure 8.14.

**Figure 8.14 Mean happiness vs. socio-cultural activities**

![Bar graph showing mean happiness comparison between participants and non-participants in socio-cultural activities]

### 8.4.3 Community participation vs. happiness

Participation in community meetings and political activities are seen to yield both intrinsic and extrinsic benefits that eventually affect the happiness of individuals. Intrinsically, through participation in such community meetings and events people experience self-worth and self-efficacy. Extrinsically, community participation in development activities and political events are expected to yield results that are balanced and sustainable.

The data reveal a finding that is in contrast to these a priori expectations. We observe that respondents who participated in community activities reported lower happiness (6.1 points) than those who didn’t (6.2).
Figure 8.15 Mean happiness vs. community participation

What could be the reasons why Bhutanese dislike participation in meetings? More research would be required to find out the exact reasons, but I would speculate that participation in such events distract people from doing their farm work. People see participation in such meetings as more of a burden than a privilege. Another possible reason could be low the political consciousness of the Bhutanese population, especially the rural residents. People are yet to associate any kind of pride or meaning to time they are required to spend in participating in such meetings. Also, the number of people who participated in community activities is very small as compared to those who didn’t, and so a true picture would require more comprehensive data.

8.4.4 Sports and leisure vs. level of happiness

The role of sports and leisure in affecting the well-being of individuals has been widely studied. These studies have found sports and leisure, particularly active participation, to have positive causal effects on the well-being of individuals. Schnohr et al. (2005) found people with sedentary leisure patterns to report high levels of stress, dissatisfaction and less psycho-social well-being. In their study of working Brazilian

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women, Ponde and Santana (2000)\textsuperscript{5} found that those with active leisure schedules in addition to their commitments to work, childcare and household maintenance, tended to test higher on routine measures of mental health than those with little or no involvement in leisure and sports. A study by Biddle and Mutrie (1997)\textsuperscript{6} found that exercise such as aerobics for 8 to 10 weeks, two to four times a week, increased happiness and reduced clinical depression and anxiety. Exercise and sports are effective through the release of endorphins, social interaction, and the experience of success and self-valuation.

Leisure activities such as dance and music affect well-being by inducing positive moods and social interaction. Cinema attendance has been found to have positive effects on happiness and negative effects on self-reported anxiety and depression (Uhrig 2005). The type of visual stimulation that films provide provokes an emotive response holding therapeutic properties. “The collective and controlled experience of this emotive response promotes well-being generally.” On the other hand, excessive engagement in leisure activities such as watching television have been found to affect well-being or happiness negatively. Frey et al. (2005) found that heavy television watchers experienced lower well-being than others. Many individuals lose control over their behaviour and watch TV in excess. Such behaviour leads individuals to regret when the opportunity cost of their time is high. Long hours of watching certain programs tend to lead to higher anxiety and material aspirations, thereby lowering life satisfaction. Also, excessive watching of TV crowds out other activities, particularly relational activities, which matter significantly to one’s well-being (Bruni and Stanca 2005).

Supporting the general idea of a positive relationship between happiness and sports and leisure, the data reveal that respondents who engaged in sports had higher levels of happiness than those who did not. See figure 8.16.

\textsuperscript{5} Ibid
\textsuperscript{6} Cited in Psychological Well-being (Happiness); available at http://www.texcpe.com/cpe/PDF/ca-happiness.pdf
8.4.5 Religious activities

Studies have found engagement in religious activities to affect the happiness of people positively. Barkan and Greenwood (2003) cites three channels through which religious activities affect well-being or happiness of individuals. First, engagement in religious activities facilitates building social contacts. These social ties yield emotional and physical support during times of difficulties and problems. Second, by turning to their faith people are better able to cope with stress and other problems in their life. Engaging in religious activities bolsters self-esteem and efficacy. Religious engagement offers a sense of meaning in life, leading to an increase in perceived well-being of individuals. Third, through discouragement of unhealthy behaviours such as use of alcohol, tobacco and drugs, engagement in religious activities promotes healthy life styles.

The data reveal results that support these findings. Respondents who engaged in religious activities reported a mean happiness of 6.2 points as opposed to 6.1 points for those who did not engage in religious activities\(^7\). See figure 8.17.

\(^7\) The difference in levels of happiness is trivial in this case. It could be largely due to poor quality of data
8.5 Summary and conclusion

To sum up, we found that the total burden of work for women was more than that for men, largely due to a greater time commitment of women to household maintenance, childcare, and craft-related activities. We have noted distinct gender specificity to some activities; weaving was carried out exclusively by women. We also noted that men largely carried out activities that required more physical exertion while women engaged in activities that were less physically demanding. Men spent more time at sports and leisure.

We observed patterns of time use consistent with life-cycle variation. Confirming an a priori expectation, work hours were greater for the respondents in the age groups of 16-30, 31-45, and 46-60; i.e. the economically active ages. It was observed that patterns of time use differed between the rural and urban residents. We also observe differences in time use between various types of family structures. Families with children had longer work hours, largely amounting from more household and childcare work associated with the presence of children.

The study provides very good information on the type and amount of unpaid work - like household maintenance, care of children. We observe that women play an important role in providing most of these services. If we assign monetary value to these services and calculate an aggregate
figure for a year, the amount would constitute a significant percentage of GDP. As mentioned earlier, these activities affect well-being directly but are somehow excluded from the accounts that are used to measure our well-being.

Important contributions women make toward production of other goods and services at home were also highlighted by the study. Women’s role in home production, particularly in producing handicraft products by engaging in weaving and other craft-related activities, is crucial to maintaining the economic security of many households in rural and urban Bhutan. Such information could be very useful for formulating specific policies related to improving the economic conditions of women.

The study presents a wide array of information related to public policy issues. For instance it was found that rural people spend quite a substantial amount of time on travel and commuting as well as waiting for services to be delivered. This amounts to a waste of people’s precious time since they are not able to work on their farms during such days. Such information could be very useful to our policy makers involved in planning rural roads, transport and communication facilities and to those engaged in instituting effective governance.

Finally, the study provides a clear picture of how time use affects well-being or happiness. To the extent we know that there is such a relationship we can design policies towards affecting time use patterns that would bring greater happiness or well-being to the society.

References


