

00000000

165/2

**Economic Analysis of Social Networks:
An Empirical Study of Selected *Women Iddir*
in Addis Ababa**



A Thesis presented to the School of Graduate Studies, Addis Ababa University
In partial fulfilment of the Requirement of the Degree of Master of Science in Human
Resources Economics

By Teigist Lemma Dessalegn



June 2000
Addis Ababa

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

**ECONOMIC ANALYSIS OF SOCIAL NETWORKS:
EMPIRICAL STUDY ON SELECTED
WOMEN IDDIR IN ADDIS ABABA**

BY
TEIGIST LEMMA



**FACULTY OF BUSINESS AND ECONOMICS
APPROVAL BY BOARD OF EXAMINERS**

Dr. Alemayehu Seyoum

Advisor

Asebe Shimeles

Examiner

Dejene Aredo

Examiner

Signature

Signature

Signature

ACKNOWLEDGEMENT

I would like to express my special gratitude to my advisor Dr. Alemayhu Seyoum for his valuable advice. My appreciation also goes to the staff of the Department of Economics who has been providing me a continuous and unfailing support during the last two years.

I would like to acknowledge Dr. Geberhiwot Ageba, for reviewing the draft chapters, Dr. Stephan Dercon, Dr. Tekie Alemu, Dr. Alula Pahnkrust, Dr. Aklilu Kidanu and Dr. Pieter Serneels for reviewing the proposal and the questionnaire. Dr. Abigail Barr and Dr. Ajay Tandon also deserve my heart-felt thanks for encouraging me to work on this area.

My acknowledgment should also go to African Economic Research Consortium for providing me the financial support throughout my studies. I also appreciate the Austrian Embassy Development Cooperation and ACCORD Ethiopia who have supported the research by providing grant and facilitating the survey.

I would like to express my gratitude to my family and all friends whose understanding, encouragement and unfailing support helped me not only to complete this thesis but also survive the challenges during the last two years.

I wish to thank all the enumerators and data entry specialists for their cooperation and diligent performance during the data collection.

This thesis is dedicated to my dearest children, *Netsebraque* and *Asayen*, who have been tolerating and persuading me not only to complete this course but also continue.

Abstract

By describing and singling out the economic features of *Women Iddir*, the study attempts to review and associate the literature on informal insurance and social capital. It provides a framework of theoretical analysis and empirical results based on descriptive as well as econometric methods. The study brought out the uninterrupted social welfare service of *Women Iddir* that existed for about 60 years. Besides demonstrating its effective informal insurance service in Ethiopia, it reveals that age, education, premium and economic rational significantly explain the demand for funeral cover. Financial capacity and social rational influence efficiency of networks positively while reciprocity and membership to other forms of networks induce negative effect. Results indicate the existence of certain optimal level of informal insurance purchase by a risk averse person.

It is found reasonable to discern that certain level of explicit and implicit economic rationale exist behind *Women Iddir* that mostly are considered as altruistic, traditional, humanitarian, welfare, etc. Although networks are incepted in social and moral contexts, their resource base, welfare services and functions provide adequate justification to consider them as economic institution. Their informal nature and sustained service is the result of using mixed (non pure) strategies based on best alternatives, which are partial contract, partial economic rational and with strong reciprocal exchange and social objective.

The exposure to non-home activities and recognition of wide range of risks enabled women to broaden the informal insurance cover. The non-marketable and efficient service offered by *Women Iddir* makes the potential of its substitutability far reaching. Instead, it has developed great potential to diversify the social welfare services if technical, material and financial backing is availed for them to develop and assume larger societal responsibilities. In spite of their own institutional development, recognition of *Women Iddir's* informal insurance/social welfare services deserves accounting their economic role in the society. Thus, studies on consumption and expenditure need to account their role in the households' economy and provide information for planning.

Occupied

Table of Contents

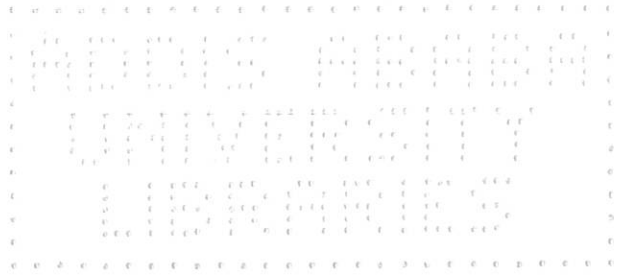
List of Tables

Introduction	1
Chapter I The Research	3
1.1 Objective	6
1.2 The Hypothesis	6
1.3 Method and Organization	7
1.3.1 Description of variables	8
1.3.2 Description of Two-state Model of Funeral Cover	11
1.3.3 Description of the Efficiency index based regression	14
Chapter II Conceptual Framework for Economic Analysis of Social network	16
2.1 General Theoretical and Empirical Framework	16
2.2 <i>Women Iddir</i> as Informal Insurance	23
2.3 <i>Women Iddir</i> as a Social Capital	32
Chapter III Descriptive Results	35
3.1 Description of the Data	35
3.2 Household Characteristics	36
3.3 Institutional Characteristics	39
3.4 The Informal Insurance Arrangement	44
3.5 The Informal Insurance Cover (Support Package)	48

Chapter IV	Econometric Results	55
4.1	The Demand for Funeral Cover	55
4.2	Determinants of Efficiency of <i>Women Iddir</i>	63
Conclusion		69
Reference		74
Annex I	Derivation of the two-state model of funeral cover	81
<u>Annex II</u>	<u>Questionnaire</u>	83

List of Tables

Table 1	Monthly household and per-capita income of respondents	31
Table 2	Level of education and proportion of respondents by income group	32
Table 3	Membership of households to networks	33
Table 4	Total funeral cover by proportion of components	45
Table 5	Total funeral cover to household income	46
Table 6	OLS Estimation of the demand for funeral cover	53
Table 7	Efficiency of <i>women Iddir</i>	59
Table 8	Funeral cover received by members during membership life time	54



Introduction

Welfare is derived from various sources among which the labour and private market, the state and voluntary welfare are some. The labour market provides full employment and/or occupational welfare while the private market provides through market based insurance system and savings. The state is also best placed to involve in welfare provision. Voluntary welfare, on the other hand, centres its function on informal arrangements involving individual economic agents' decision. It originates within and outside a family by people who are willing to provide economic resources such as labour as a donation and/or at a price lower than the market. This type of welfare is widespread and used for different purposes such as filling the gap created by failure of the modern insurance markets through social networks in developing economies.

Scholars have been indicating that public production and private institutions are incepted to mitigate problems either through market allocation or through non-market allocation mechanisms when markets fail. This paper, thus, studies the social welfare service that is based on non-market allocation in Ethiopia. Similar to other developed and developing countries, the Ethiopian people have formed social networks that serve as protection against risk and/or traditional institution involved in mobilizing resources to fill resource gaps in uncertain conditions. One of these, *Women Iddir* is established in most urban areas of the country mainly constituted by orthodox Christian followers with the objective of mobilizing financial, material and labour resources for members to fulfil the necessary social obligations for funeral ceremonies and mourning. According to Dejene (1993 and 1999), *iddir* provides a much wider range of services including

financial and material assistance as well as consolations to members in events of difficulties as well as entertainment as the case may be. Although the history of the existence of these institutions goes back several years, 1936-41 for community *Iddir* (Phankrust & Endreas, 1958), there is very little literature that indicates *Women Iddir's* economic importance particularly its contribution in smoothing resource shortages of households in bad times.

These institutions have orderly defined by-laws that streamline reciprocity among its constituting members and institute an efficient social welfare service ensuring equal distribution of service among members. This study focuses on identifying the economic features of the *Women Iddir* based on a survey conducted on 87 *Women Iddir* (261 respondents). It provides economic analysis by using descriptive and econometrics methods. The first chapter reviews *Women Iddir* in the context of informal insurance and social capital followed by descriptive analysis from the survey. By presenting econometric analysis, the study concludes that *Women Iddir* is an important social welfare institution that provides informal insurance service.

Chapter I The Research

Sociological studies indicate that *Iddir* is a social network that promotes cultural/sociological ties placing limited emphasis on its economic aspects, i.e., the social welfare service it provides to its constituting members. *Iddir* is a social network that people who have the same objective of avoiding the consequences of uncertain events at a lower transaction cost and have the opportunity to organize events streamline their collective action. Although the history of the existence of these institutions in Ethiopia goes back several years, 1936-41 according to Phankrust & Endreas, (1958), its traditional nature is acknowledged (Alemayehu, 1969; Dejene, 1993), there is very little literature that indicate *Women Iddir's* economic importance particularly their contribution in smoothing resource shortages of households in bad times. In addition, these scholars noted that *iddir* is established by people residing in similar neighbourhood, at work place, among friends and relatives. However, there are very little studies that indicated it is part of social capital and consider it as economic institution that provide welfare service on the basis of trust and reciprocity. As it is formed by societal groups and has public good characteristics, it might be appropriate to bring *Women Iddir* under the concept and/or discussion of social capital and informal insurance as it acquires all the necessary characteristics of social network that enhance collective action and economic organization.

Women Iddir has strong basis to be considered as an economic institution. Its interpersonal relationship and its efficient network founded on reciprocity makes it a valuable grassroots institution while its potential to be micro development social

institution is not yet adequately explored. The economic foundation of *Women Iddir* could be confirmed by its predominant role in addressing economic issues at household levels particularly its role in smoothing consumption. Beyond being skipped by academic and other professional studies, except in the areas of sociology and anthropology, its service is often reduced and/or underrated partly because of the general attitude of underplaying household production.

The internal dynamics of these institutions has helped them to involve in development activities (Dejene, 1993, 1999) and also broaden their scope in promoting welfare among communities. It is important to understand their role and also strengths to survive uninterrupted service for long years particularly for development practitioners as well as professionals so as to create appropriate platform to include them in national, regional and community level development agendas. One may also find them to be appropriate for tapping resources for developing the basis for social welfare by making use of existing social networks' structures with a careful assessment of their strategic and managerial capacity to meet the development interest of communities and the society at large. So far only few Non-Governmental Organizations such as ACCORD and Plan International attempt to establish partnership with *Women Iddir* to implement their development programs.

The motivation of this study is, therefore, to find out the economic characteristics of social networks that are referred to as traditional institutions by some scholars, with an aim to identify the salient economic features for *Women Iddir* that may enable the characterization of it as economic institution, in addition to its social nature. The research also looks into the rationales that would allow the inclusion of contribution of

this network in consumption behaviour studies and the possibility of using these institutions either as entry or partners in development. Among other social networks and/or traditional institutions *Women's Iddir* is selected because of its unique characteristics of:

- Involving all members in the build up of the institution, that is, in setting up institutional procedure (constraint) upon discussion and consent,
- Indispensably requiring each member's financial, material and labour contribution to effectively discharge its responsibilities,
- Its unique feature of generating and enhancing close interrelationship for its economic, social and psychological services unlike any other modern and traditional institutions,
- Strength to survive and assert broader societal responsibility, such as involvement in other stress conditions and developmental activities, that are not observed in any other form of traditional institutions.

These institutions have been sustaining themselves for a number of years and some argue that the strength of these institutions emanated either from the trusting relations of their members or economic and welfare considerations. The findings of this study are expected to fill the knowledge gap with regard to social network as one of the main constituencies of social capital in Ethiopia and be a useful input for policy analysis, development planning and research to identify possible areas for synergy of social network and development programs.

1.1 Objective

The main objective of this study is to find out the economic characteristics of social network with particular emphasis on *Women's Iddir* that are established invariably in almost all urban areas of the country. With the aim of confirming *Women Iddir* as an economic institution, the research has specific objectives of

- Identifying the salient economic features as an informal insurance system of *Women Iddir*;
- Looking into factors that contribute to the strength and efficiency of *Women Iddir* in providing social welfare services placing a particular emphasis to funeral cover including the mourning period, and
- Look into *Women Iddir* as social capital that enhances collective action.

The following hypothesis will be tested using descriptive, econometric and other relevant methods of analyses.

1.2 The Hypothesis

The hypotheses are:

- *Iddir* is an effective social network that serves as insurance and other forms of welfare enhancing services. Members join *Iddir* with economic rational and objective of reducing disutility from uncertain outcome of death in a family;
- *Women Iddir* is sustained by long-lived and strengthened reciprocity and trusting relations; and

- As income and education of women increase, *Women Iddir* assume broader responsibility other than funeral cover.

1.3 Method and Organization

The method of data analysis is centred on the theory of choice under uncertainty and has two major parts. The analysis starts by presenting the general theoretical and empirical literature and provides narration on *Women Iddir* as informal insurance and social capital.

The second part captures the empirical findings of the survey conducted on 87 *Women Iddir* and/or 261 individual members of *Women Iddir*. This section characterizes members' social and economic status, the institutional characteristics, the nature of the informal insurance arrangement and the informal insurance cover using both qualitative and quantitative information. The last part adopts econometric technique for analysing the demand for funeral cover using general insurance model and examines the consistency of explanatory variables that are captured by the findings in the descriptive analysis.

This research takes *Women Iddir* as informal insurance system that risk averse individuals institute to minimize their cost during funeral and mourning period. Members of *Women Iddir* are considered to have certain level of income on which they can take decision and they agree that some future events whose prices are determined exogenously induce loss of their income.

It is also considered that all members of *Women Iddir* think that they will encounter similar loss of income and emotion due to death in the family and feel that they are

obliged to perform the social and/or cultural practice in future that calls for the contribution and/or collective action of other people. To minimize the disutility from facing the random occurrence of death individually, members agree to pool and share risk the consequences of such, and reduce the disutility to the individual that is associated with the risk, funeral cover in this case. Members are not restricted to join only one and/or specific network they could sign membership in several *Iddirs* so as to preposition adequate risk coverage. Feeling of insufficient insurance coverage by an agent is met by diversifying response mechanisms.

For purposes of simplifying the analysis, the role of *Women Iddir* is reduced to funeral cover particularly for the member/spouse, and the service is limited to financial, consumables and labour support. Members are expected to pay premium in terms of financial contribution on monthly basis and provide voluntary labour service as and when the risk occurs. Voluntary labour service is part of the premium that is paid in kind and constitutes as the major part of the insurance cover including funeral cover. The model will be using funeral cover as dependent variable and household income and premium would be entered as explanatory variables. Other variables such as education, age, frequency (probability) of risk and others are entered as conditioning variables.

1.3.1 Description of variables

The variables that are considered in the regression for the demand equation are consistently employed in the descriptive part as well and the details are presented below.

Age of the members of the *Women Iddir* is taken in years.

Consumables coverage includes all food items (*Injera*, pulses, spices, edible oil, vegetables and also fuel wood/expenses) that are supplied as part of funeral cover during risk. Conversion of data into financial terms was worked out by using the Central Statistic Authority estimate for retail prices of goods and services (1998). As this coverage varies depending upon the relation of the deceased to the member, the cover for the death of a member/spouse alone is considered to simplify data analysis. The same holds for members' voluntary labour contribution.

Contract is the institutional constraint developed by women and included in the by-laws of *Women Iddir*. In this study, it is captured as qualitative information that reflects the valuation of respondents expressed by ranking. It has been considered that respect to the sanction; avoiding penalty and feeling of responsibility constitute institutional constraint. An attempt is made to associate the variable with traditional terminology such as 'yilugnita and bayitewarnet'. This variable, along with other qualitative information is used as explanatory variable in the regression models.

Demand for funeral cover singles out the insurance cover of *Women Iddir* for the death of a member/spouse alone from a range of insurable risks that are included in the by-laws. It includes a one-time financial, consumables and domestic labour service that the informal insurance offers as an insurance cover for its members. The imputed value of consumables and domestic labour service are added up to come up with the total value of a one-time funeral cover. It represents the service offered by the informal insurance system and is taken as a dependent variable in the regression estimation used in the empirical analysis.

Direct financial & material benefit reflects a pure economic consideration of respondents. It is expected to reveal the intention of members to derive material and financial benefit out of the services of the social network without other considerations such as the social and moral support. Similar to contract, this variable is ranked along with other qualitative information used to explain the demand for funeral cover.

Education refers to the level of education attended by respondents and is classified as tertiary, secondary, primary, literate and illiterate. It is considered as a proxy for income wherever appropriate.

Membership size captures the number of members in the social network.

Monthly contribution refers to the contribution that members make every month. This term together with members' voluntary labour contribution that is premium in kind at least in the short run is used as premium.

Reciprocity refers to the arrangement developed by the social network to maintain investment and exchange of economic resources among members. This variable is used in conjunction with the traditional terminology that exactly refers to reciprocity and it is '*neg beene*'.

Members' voluntary labour stands for the amount of time an individual member is required to allocate during risk so as to meet the demands of co-members and/or the social network. This contribution of members is one of the most important component of the informal insurance cover that is paid by members in kind as a premium at least in the short run. The contribution, however, is subject to reciprocity and is nullified in the

long-run. Because of its importance in the insurance cover, this variable is considered as one of the explanatory variables in the regression. Due to lack of estimate for domestic production and/or service a shadow wage rate is computed using a deflated (by conversion factor) unskilled labour wage rate of Addis Ababa.

1.3.2 Description of a Two-state Model of Funeral Cover

1.3.2A Note on the framework of the insurance model

Adoption of the standard model of insurance (Lippman and McCall, 1981)

Assume two states of nature

State 1: For a risk averse individual this state is represents a period that insurance is purchased prior to the incidence of risk and is considered as a period with no funeral

State 2: This state represents a period when the insurance buyer is encountering risk and the period is characterized as with funeral

Let y_1 = income (wealth) in state 1

Y_2 = income (wealth) in state 2

P = probability of funeral (or of state 2)

$(1-p)$ = probability of no funeral (or of state 1)

1.3.2B Characteristics

The individual (or household) is characterized as purchasing funeral cover (or funeral insurance) before the state of nature is known. This purchase takes the form of exchanging state 1 income for state 2 income. Let a unit increase of income in state 2 is purchased by a decrease of π unites in state 1 income. More specifically, a unit of funeral cover be purchased at π units of income. Thus, π is the unit cost of funeral cover or if s is the amount of funeral cover purchased πs is the premium paid for it.

1.3.2C Assumption

The household utility derived from funeral cover is separable from the utility of other goods; that is preferences between funeral cover and other 'goods' are separable.

The household has a common utility function over income, which is twice continuously and strictly concave. In notational form, $U(y/z)$, where z is a vector of conditioning variables which may include household characteristics (such as education, age profile) and degree of social interaction. Then, $U'(y) > 0$, $U''(y) < 0$

1.3.2D Objective

The households' objective is to choose the optimal amount of funeral cover so as to maximize expected utility of its income. Postulating a specific functional form facilitates the analysis. To do so we assume that the household has constant absolute risk aversion δ , i.e.,

$$\delta = -\frac{\partial^2 u / \partial y^2}{\partial u / \partial y}$$

In that case, it is possible to write the households utility function as

$$u(s) = (1 - p)[a + be^{-\delta(y_1 - \pi s)}] + p[a + be^{-\delta(y_2 + s)}]$$

Where $b < 0$. Hence, the expected utility of the household can be stated as

$$u_s(y) = a + be^{-\delta y}$$

Accordingly, the households' choice problem can be summarized as

$$\max_s u(s) = (1 - p)[a + be^{-\delta(y_1 - \pi s)}] + p[a + be^{-\delta(y_2 + s)}]$$

Assuming interior solution, i.e., ($s > 0$), the first order condition can be stated as

$$(1 - p)\delta \pi b e^{-\delta(y_1 - \pi s)} - p\delta b e^{-\delta(y_2 + s)} = 0$$

Rearranging leads to

$$\pi e^{-\delta(y_1 - \pi s)} = \frac{p}{(1 - p)} e^{-\delta(y_2 + s)}$$

Solving for s after taking logs produces the desired result, (see Annex 1 for details)

$$s^* = \frac{y_1 - y_2}{\pi + 1} - \frac{1}{\delta(\pi + 1)} \ln\left(\frac{\pi}{p/(1 - p)}\right)$$

Therefore, the demand for funeral cover is a function of income, premium and probability of funeral. Formally, the reduced form solution can be written as:

$$S = S(y, \pi, p)$$

The assumption that the demand for funeral cover is increasing in income at the same proportion and at a decreasing rate will be tested along with other conditioning variables such as household characteristics and degree of social interaction.

1.3.3 Description of the efficiency index based regression

OLS estimation is considered to explain institutional efficiency as a preliminary tool to assess the efficiency and sustainability of *Women Iddir*. The estimation includes a choice based index as dependent variable that is computed using respondent's evaluation of their networks. Efficiency and/or good performance of Women Iddir is measured by the members' evaluation of their own networks as efficient/well performing. Particular questions that enable respondents to rank a set of choices that influence efficiency were posed (refer Annex II).

The ranked rationales include degree of participation, equitability of the insurance cover, maintenance of social and cultural practices and realization of the institutional (*Women Iddir*) objectives. These responses have been given a value of 6 for response with 1st rank, 5 for response with 2nd rank, ... , 1 for response with 6th rank. After computing the index for each response/rational using the median as reference, the composite indices are calculated as follows.

$$CI_{fi} = \frac{x_{1i}}{\text{Median}(x_1)} + \frac{x_{2i}}{\text{Median}(x_2)} + \frac{x_{3i}}{\text{Median}(x_3)} + \frac{x_{4i}}{\text{Median}(x_4)}$$

Where subscript i refer to rationals of each individual respondent and

x_1 = scored social rational

x_2 : scored reciprocity

x_3 : scored economic rational

x_4 : scored contract (institutional constraint)

Those observations that has not been ranked by the respondents and/or missing are considered to have a zero value. Referring to standard textbooks the following relationship of efficiency index is considered to identify possible explanatory variables for the efficiency and/or sustainability of *Women Iddir*.

$$CI_f = f(E, I_C, M_o, S_r, R_r, E_r, C_r)$$

Where CI_f = composite index of efficiency

E = education of a member/respondent

I_C = a change in insurance cover during the lasst two years

M_o = membership to other forms of networks

S_r = social rational

R_r = reciprocity

E_r = economic rational

C_r = contract (institutional constraint)

The explanatory variables are considered to have certain influence on the efficiency of the informal insurance from theoretical and empirical point of view.

Chapter II Conceptual Framework for Economic Analysis of Social Network

2.1 General Theoretical and Empirical Framework

Scholars considered modernisation as primary contributor to collective action although some refer to factors such as discontent, altruism, emergencies, cultural traits and their subsequent outcome for explaining collective action. Smelser (1962, 48), for instance, noted that "strain must be present if an episode of collective behaviour is to occur. The more sever the strain, more-over, the more likely such an episode to appear." Although it is believed that rapid modernisation increases incidence of collective action, Khawaja (1996, 148) classified sources of social movement and collective action, despite diverse contemporary theories into the breakdown of social structures (including erosion of traditional values, norms and other binding ties) and psychological states such as frustration and anger resulting from rapid structural changes and/or transformation. It can, thus, be understood that certain stressful motion in the dynamics of peoples life, creates ample condition for people to generate problem solving and supporting attitude and/or capacities that serve as a deriving force for the formation of collective action and to attain specific goals. Collective actions are also rational actions caused by cultural, political, economic and other incidences that create unbalanced situations in the livelihood of people.

Emphasising on the cultural aspect, it would be reasonable to centre one's analysis on the causes and ultimate results of collective actions of people in the context of different cultural traits (norms and values). The inter-generational transmission of cultural traits in the form of values and norms that enabled the formation of social behaviour served

as the foundation for social preferences. Social preferences are a set of social choices made by group of people living in a pre-set and similar social, cultural, political and economic environment and on this Robin (1998, 21) noted that psychological evidence indicate that social preference are not only functions of consumption levels and changes in consumption levels that in many ways reflect the levels of income. In addition to consumption and/or income levels, social preference is a function of behaviour, motivation and intentions of others. Moreover, preferences are reasons for behaviour, i.e, attributes of individuals that (along with their beliefs and capacities) account for the actions they take in a given situation Bowles (1998). The concept implies that a socially accepted and practised preference could be considered as reflections of social behaviour.

Social behaviour, thus, can be viewed as an outcome of individual but aggregated behaviour of individuals and certain form of generalised interaction, i.e., collective action and/or motivation of people living within similar socio-economic environment. This premise would permit the discussion of social preferences in relation to factors such as values, commitments and moral choices, situations in which choices and decisions, compulsion, addiction and psychological dispositions are made.

People's reactions depend on what other people intend or are motivated to do. Altruistic people would like to see others to behave well/good so that they are motivated to positively support the under-served/others and respond negatively for negative actions. This reflects the prevalence of reciprocal nature of human reactions formed as a result of interpersonal relationships. Interaction of people, thus, necessitates co-operation to maintain social behaviour on the basis of reciprocity in social preference.

Several authors have provided theoretical explanation for the rational decision embedded in the reciprocity of preferences and explained that in traditional societies, kinship ties take responsibilities of coordinating and managing reciprocities. Goods flow from household with abundance to those suffering a dearth implying that scarcity and abundance are felt almost equally among closely related families (Reed 1995). He also states that such actions are not altruistic and all families are expected to contribute to and benefit from the safety net of the system. Moreover, balanced reciprocity occurs between distant relatives. Network of reciprocity and mutual dependency ensures that all families have access to sufficient resources mainly food. With the adoption of such system, people in different cultures have developed problem-solving ability and also in diverse situations.

The reciprocity in preference is instilled in human nature and provides the basis for analysing its effect on goods/services that have particularly public nature. Many experiments (Nee (1998), Elster (1998); Evans (1996) hint that contributions towards public goods are not the result of simple altruism, though the evidence for reciprocal altruism has little to do with contribution to public good. Simple altruism is altruistic action taken irrespective of what others intend or are motivated to do. Because of the intention of people to take a rational decision based on values and norms, with no relation to altruism, there is a tendency to seek one's disposition either through implicit or explicit reactions in return. The general tendency of the social preference, therefore, may create situations that necessitate co-operation whereby people develop a commonly understood pattern of relationship for exercising their reciprocity. These gradually take the form of social networks that eventually exhibit salient characteristics of economic

institutions. The basis for co-operation and maintaining the network that has a public good and/or service nature, therefore, could be associated to reasons other than altruism, such as values, norms and communication.

These networks are strong in transmitting cultural traits by their capacity of placing distinct social interaction in the society that may not always be recognized by the members or participants as such but carried out as routines, Bowles (1998). The social welfare institutions that take the form of mutual support systems are established and acquire a club good nature as they are founded on high interdependency of preference and exchange of goods and/or services. With an attempt to reduce uncertainties in human interactions and bringing in stable personal interrelationship, therefore, such social networks develop institutional constraints in the form of by-laws, entry requirements and regulations that are sometimes unwritten. The cost of exit is expressed by taking uncooperative collective measures that forms the social sanction. The evolution of such institutions eventually led to the inception of a systematic reciprocity in preference, altruism and other characteristics to mutual support institutions that thicken the wealth of social capital in a society. Putnam (1993) referred to social capital as the stock of norms of reciprocity and networks of civic engagement helps citizens overcome the classic textbook obstacles to collective action.

Market and other types (such as social) allocation rules establish sensible relationship among people and provide assignments with differing positions, rights, status, obligation and set up defined relationship. As social networks are established with a purpose of enhancing collective action and effective management of certain pool of resources, it is indispensable for it to follow certain allocation rule, which undoubtedly

is not market based and also may reduce transaction costs by being accessible and providing service at the desired level.

The inception of social networks requires pre-positioned resources and the capacity to mobilize and put resources to effective use. In terms of management, it requires to give adequate space for the strengthening of the coercive and/or collective power to efficiently mobilize resources and forward the collective action to achieve its goals by soliciting the participation of members of the network also. It is believed that greater resource availability imply greater ability to attain the objective which some argue that higher levels of resource enable higher rate of collective action and the greater the strength the higher rate of collective action.

When social and economic problems gain momentum, individuals and households attempt to look for possibilities of easing the situation by finding alternatives of which community and kinship relationships are some. Such relationships play a crucial role during crisis, disasters and also other social events that require the participation and/or support of those considered close. Similar to the informal social networks that Denzau and Irwin (1992) demonstrate as relevant for surviving disasters, accessing information, influencing social-economic status, psychological and emotional well being and obtaining material support in the west, networks mean greater deal in developing countries.

Mobilising resources entails voluntary commitment to contribute financial, material, labour and other economic resources that are traditionally considered to have value and are not available in the market and may not be affordable, and that necessitate the

formation of social network. Most networks, also, possess strong ability of mobilising labour including domestic labour, which often had been regarded as not marketable mainly in developing economies. Until the 70's, it was only that part of labour exchanged in the market and productive sector considered to produce value while domestic labour was taken as relevant for producing use value and reproduction alone. Although analysis of labour allocation was founded on exchange and specialisation, the issue of domestic labour was not addressed well.

The role of informal social networks in the provision of scarce goods and services in particular during stress periods has been recognized as safety net and also informal insurance in many countries. As summarized by Dershem and Gzirishvili (1998), social networks' economic role have been taken into account as sources of surviving disasters (Solomon, 1986; Kaniasty, Norris and Murrel, 1990), accessing information (Granovetter, 1973), influencing socio-economic status (Lin, Ensel and Vaughn, 1981; Campbell Marsden and Hurlbert, 1986), psychological and emotional well-being (fisher, 1982; Kadushin, 1983; O'Brien, Hassinger and Dershem, 1994), health (Hammer, 1983; Hainess and Hurlbert, 1992) and obtaining emotional and material support (Wellman and Wortly, 1990). Similar roles have also been indicated in the former Soviet Union and Eastern Europe particularly in gaining access to scarce goods and services (Sik, 1994a; Sik, 1994b; Lomnitz, 1988), handling symptoms of stress (Dershem, Patsiorkovski and O'Brien, 1996) and increasing household food production and sales (O'brien et al., 1996).

General Profile of the Different types of *Iddir* in Ethiopia

	Iddir instituted by/at				
	Community	Work place	Relatives	Friends	Women
Objectives	-promote informal insurance with large community by availing financial cover for relatively large expenses (tents, rental vehicle, etc)	-promote mutual support among co-worker	-maintain kinship relations and create occasions for getting together	-strengthen and maintain relations & promote mutual support	-strengthen close & reliable relations with neighbourhood for moral, financial & material support
Leadership	-election conducted usually every 2 years. -has 9-12 elects (chairperson, vice chairperson, secretary, treasurer, logistic person, members)	-election conducted usually every 2 years. -has chairperson, vice chairperson, secretary, treasurer, logistic (in few cases) & members	-election conducted on consensus. -has chairperson, secretary & treasurer	-election conducted on consensus. -has chairperson, secretary & treasurer	-election conducted usually every two years. -has chairperson, secretary, treasurer, logistic person occasionally
Insurance cover	Provide financial and material moral support and labour	Provide financial & material (in some cases) and moral support	Provide financial, labour support and moral support	Provide financial, labour and moral support	Provide financial, material, consumables, domestic labour service and moral support
Organizational capacity	-have gains from large member size -preposition tents, benches, chairs, few kitchen utensils, have store and hall	-acquire gains from large member size -members should work in same place & institution -preposition finance	-require kinship relation & limited group members -preposition finance	-require prior relations & limited group members -preposition finance	-limited size of membership within neighbourhood -forego gains from large member size -preposition finance, kitchen utensils, consumables and other necessary materials

In Africa as well, social networks have survived and provide access to information and balanced reciprocity (Dock, 1993), financial services (Dejene, 1999; (ed.) Berhanu and Befekadu, 1999) in Ethiopia, (Aryeetey, E. and Gockel, F. 1991) in Ghana, (Nagarajan,

Meyer and Graham, 1999) and in Gambia, accessing scarce goods and services in Egypt, and information in Ghana (Kranton, 1996; Barr, A. 1996 respectively), risk and reciprocity in West Africa (Carter, 1991).

2.2 Women Iddir as Informal Insurance

Welfare is derived from various sources among which the labour market, private sector, the state and voluntary welfare are some. The labour market provides full employment and/or occupational welfare while the private sector provides insurance and savings through market. The state is also best suited to involve in welfare maintenance and provision for its citizens by setting up social welfare systems. Voluntary welfare, on the other hand, is widespread and established for various purposes by groups and societies which some develop as social networks in both developed and developing economies.

Social networks are mainly established to provide informal insurance by filling financial and material resource gaps that are scarcely available and/or unavailable in the market. Missing markets for certain goods and services create opportunity for people to take collective cooperative action for their common goal, which in many cases fall in the realm of risk/uncertainty. 'Failure of market to insure against uncertainties has created many social institutions in which the usual assumption of market are to some extent contradicted' (Arrow 1963, 967). He also noted that public production and private institutions sometimes are incepted to mitigate problems through non-market allocation mechanism when markets fail. Similarly, the Ethiopian people have formed social networks that serve as protection against consequences of various risks and/or uncertainties as a result of long-lived social and interpersonal relationship embedded in the different cultures. Scholars referred to these networks as traditional institutions.

These networks are involved in mobilizing resources to fill gaps created due to uncertain conditions and provide insurance for its constituting members.

Insurance is established either to offer people protection against risk or as an actuarial mechanism in the private sector (Barr N. 1998). To derive utility out of securing risk averse action, people sign for insurance against adversaries in their life. For risk averse people uncertainty generates disutility and thus certainty is a commodity for an individual to be willing to pay a positive price for. Although properties serve as a guarantee to eliminate the elements of doubt, anxiety and insecurity usually take a random walk in life and economic agents define as well as recognise the existence of uncertain state of event being unsure of what may happen in future. Economic agents, thus, are willing to accept lower income at present in order to avoid skewedness in their future income.

Unlike market based insurance systems founded on the law of gains from large number and trade, social networks provide insurance on the basis of social and cultural values and norms that enabled their inception. Although informal in nature, these institutions have developed an inherent system for risk sharing and transfer, and/or pooling. As a rational individual, thus, all that share this common view of uncertainty or risk have a willingness to agree to pool risk at present (in period 1) so that they can smooth their consumption by reducing the effect of risk in future.

The state of risk cannot be either controlled or happen by choice of agents and their uncertainty generates disutility, which creates an opportunistic environment for networks to provide protection against uncertain events. They often mushroom when

market fail to supply the required services and filling the resource gaps during risk. Thus social insurance, in sharp contrast with actuarial insurance, can cover not only risk but uncertainty (Barr, N. 1998).¹

Among other informal insurance systems, *Women Iddir* has the objective of mobilizing financial, material, consumables and labour resources for members to fulfil the necessary obligations for funeral ceremonies and mourning as prescribed by the culture. According to Dejene (1993) *iddir* provides a much wider range of services including financial and material assistance and consolation to members in event so of difficulties as well as entertainment as the case may be. These networks have been operating for around 60 years without any formal legal backing and remain to exist as informal.

The informal nature of *Women Iddir*, however, did not prevent it from acquiring some characteristics of insurance system for the following reasons:

- Although members' contribution is not related to income, other social and economic status of members and actuarial payment, it has a pooling equilibrium that requires all members to make equal amount of financial and voluntary labour² contributions;
- It provides universal/equal benefit for various types of risks and/or events such as death of a family member, close relative and others irrespective of the amount

¹ In this, risk is considered as the death of a member of the family and uncertainty refers to the unpredictability of the occurrence of the risk that requires immediate action.

² The term voluntary labour is used to differentiate from hired labour. In this study, the real sense/definition of voluntary labour is modified and it taken as that part of labour contributed to the social network/*Women Iddir* by its members and is subject to reciprocal exchange.

of contribution (i.e., premium) by a member, income of a member and severity of the effect of the an event on a member;

- It provides protection against risk with an effective monitoring mechanism that is accepted and practiced not only by its members but also by the society and reduces information problem.

Women Iddir is different from other social networks and/or institutions for its features reflected in the

- Provision of four types of benefits for each risk/event, specifically, financial, consumables, material (household items) and voluntary domestic labour, incorporation of different types of risks and events that members agree to be important events both for themselves and their community;
- Specification of different benefit packages for various risks and/or events other than death of members' families such as wedding, sickness, graduation of a child and others;
- Limitation on the size of members to strengthen the interpersonal relationship so that all ensure the effectiveness of the monitoring system of the insurance;
- Maintenance of reciprocity and trusting relations with out any profit motive providing welfare service.

These basic characteristics of the networks necessitate the analysis of the informal insurance, that put forth by the research, to depart from that of private institutions,

which are based on market allocation, and move into the social arena where non-market allocation is employed. Similar to social insurance, *Women Iddirs'* insurance system differs from private insurance by (1) breaking the explicit linkage of premium and risk, (2) using an informal risk-pooling arrangement that is based on reciprocity and strong interpersonal relationship, (3) adopting a contract and monitoring mechanism that is socially accepted and practiced, (4) allowing equilibrium that is based on the full participation and assignment of all its members in the management of the financial and material resources on rotation basis and (5) reduce transaction costs by being amply accessible and affordable for its clients.

The literature indicates that insurance systems are prone to face a problem of information asymmetry, which brings about moral hazard and adverse selection. Moral hazard creates over consumption in the demand or supply side where the insurer is unable to monitor insurance buyer. Unlike private insurance, moral hazard is controlled by making use of various devices that are consistent with social norms and values so that the particular features of informal insurance systems, effectiveness and sustainability, is achieved. It is also relevant to note that *Women Iddir* benefit from the use peer pressure and neighborhood as important monitoring instrument. Neighborhood and peer pressure not only help social networks to reduce adverse selection but also to build trusting relations and adopt social sanction systems. The social values and norms that are captured by the study are 'yilugnita', peer pressure and 'neg beene' and are considered as elements that enhance monitoring systems for the networks.

Contracts also cannot be fully enforced not because of *Women Iddir's* non market based allocation but it is not strategic and helpful to strengthen reliable reciprocity in the

sphere of material, financial, sociological and psychological support it provides. As Bowles (1998) reasoned on incomplete contracts, first, they are incompletely specified or costly to enforce, as the past terms of an exchange may depend on the normative commitments and psychological make up of the parties to the exchange, where the amount of work done on the job cannot be secured by contracts, second, because of the durability of the exchange of one or with different parties may have the capacity to structure the relationship so as to affect the preferences of their exchange.

In most urban areas of Ethiopia, women and/or households sign membership to *Women's Iddir*, after marriage for the vivid reason of expecting death in the family and close relatives, and the subsequent social obligation one has to meet. While subscribing to the responsibilities associated with the membership, members also trust that others will do the same and this ensuring reciprocity strengthens the social network, on the basis of mutual trust and *Women Iddir* use this dependable social relation as the basis for developing its own economic culture. The dependability of social relations and existence of *Iddir* is reinforced by the contractual arrangements placed by the by-laws. Holton (1992, p. 184) indicated that

“trust in others is not derivable from naked self interest, but from a sense that actors will negotiate their own actions in a reciprocally advantageous way. Trust will only built up over time and typically depends on inter-personal networks, which allow the constant monitoring of transactions and also permit sanctions. Without commitment to fulfil certain obligations trust will break down”

Trusting relation is strengthened and is made the basis for *Women Iddir* through various mechanisms as presented subsequently.

Membership to *Iddir* is based on pre-existing relationships, which reduces the screening cost and to some extent determines their structure. It has its own by-laws, plans, goals, and structures, human and financial resources. It provides material, financial, labour and moral support to its members in times of need, in particular during funeral and morning ceremonies by raising the above resources to smoothen consumption of the family of the deceased. Once an *Iddir* set up, individuals can join provided they have connections usually acquaintance and/or friendship through neighbourhood to existing members and willingness to adhere to the objectives of the institution. For a potential member, such network is essential to prove his/her interest to cooperate and commit to accept societal responsibilities prescribed by the institution.

The other main factor that keeps the network sustained is that people and their institutions have developed effective social sanction systems by which malfeasance is curbed. Resolutions on deviations are passed through discussion and penalty payments are imposed as per the by-law. In societies like Ethiopia, where traditions have substantial role in the daily life of the people social sanction have an important role in keeping institutional integrity. The network within informal institutions combined with systems of social sanctions is a powerful force for promoting honesty and integrity in the market place and/or operations where people involve in reciprocal nature of trade. On this subject Barr (1996, p. 223) wrote that “by facilitating the flow of information about agents’ conduct, networks of interpersonal relationships can support community level reputation and multilateral punishment systems, thus allowing agents to trade beyond the range of their own personal acquaintances.”

The institutionalisation process of the network is accomplished by adopting by-law, allocating and propositioning of the necessary stock of resources, placing non-market based supervision and/or monitoring system. Contributions are collected usually on monthly basis and are kept under the custody of a treasurer; consumables are also prepared and stored with one responsible person (usually with the chair-lady). This institution has a very crucial role in maintaining the family of deceased comfortable during the morning period by filling the gap in the household domestic needs of the family and, providing comfort and/or consolation. As the tradition assigns hospitality and food preparation responsibilities to women, *Women Iddir* mobilizes labour for cooking and serving, and provides a stock of consumables sufficient for three days of the early mourning period.

Among the resources it avails during the risk the provision of consumables and domestic labour service are very crucial particularly for the women who are in charge of managing the household domestic economy and during uncertainties partly due to their cognisance of the time intensiveness and arduousness of the household domestic production. Household domestic production is an important activity for women, and ignoring the component of time and effort use can seriously distort measurement of their productive roles (Malthy, 1994, Gardiner, 1970, Rawlins, 1996, Dwyer and Bruce, 1988).

Examination of literature on domestic labour, therefore, revealed that its role has not been adequately addressed in economic analyses for many decades up until the 1960s. Adam Smith considered labour that produces goods not services was productive and allocated by the market that is ruled by self-interest assuming that domestic labour is

irrelevant. Although their argument provided ample theoretical basis, Marginalists and Marxist theorists, differentiated goods and services but were not able to explain the importance of domestic labour (Gardiner, 1997). It was Jhon Staurt Mill who extended liberalism to women and gave the issue feminine touch.

The debate on human resource management, motivation and training become an important element in the discussion of human capital in the late 20th century. Marshall referred to women's domestic labour as an important component of human capital although he supported women and children employment restrictions. Pigou, on the other hand, suggests that the state need to support women so that they can concentrate on providing domestic labour (Ibid.). The long-lived assignment of domestic production along gender lines helped women to substantially contribute to the family and society though it has not been adequately recorded in the formal and national statistics. Beneria (1992) indicate that the influence of international women's movement since the 70's and the subsequent works of international organizations and academic institutions has been instrumental in providing impetus to analyse and emphasize all aspects of the invisibility of women's work, including domestic production.

As is the case with most networks, domestic labour is considered as one of the important components that is often scarce and made available by the *Women Iddir* in this study. *Women Iddir* develop its institutional constraint with adequate recognition of the limitation of women's involvement in an extended voluntary labour support and limits its coverage within neighbourhood. To pursue their common interest and discharge their social obligations effectively, therefore, members define the scope of members' involvement by limiting membership among close neighbourhoods and the

total number not to exceed 60 and fall below 10.³ Such limitation of scope is necessary because of the need for members to devote much time with the family of the deceased, reduce the cost of disseminating information and managing the welfare service in addition to its relevance to reduce information problem that may cause adverse selection and moral hazard as a result of wider membership. In light of these, the research, thus, attempts to value voluntary domestic production of women network and bring out its important role in uncertain situations.

2.3 Women's Iddir as a Social Capital

The build up on interpersonal and inter-communal relationship has allowed people to identify their common interests and/or goals that as a result helped the formation of traditional institutions. These institutions have developed a valuable network among their constituting members so that it becomes capable to effectively providing services detailed and planned by its members. Such networks have essential contributions in the daily life of people in most parts of Ethiopia and also of the world and are taken into account in the microeconomic studies as economic assets.

The different cultures in Ethiopia have acquired and/or developed a wealth of such networks among which *Iddir*, *Mahiber*, *Equb*, *Debo*, *Jige* are some. The roles of these institutions vary depending on their objectives and purpose. Some of these institutions are incepted for the purpose of maintaining traditional practices by providing support in availing resources for those events that require high cost against the low income levels of people and which are not also available in the market. For instance, some scholars

³ Plan International-Ethiopia. Survey conducted to develop Child Centred Integrated Community Development Program

indicate that *Iddir* was originally instituted by low-income groups with a view to systematize mutual support in times of need and serve as risk aversion mechanism. In order to get the appropriate utility from such mechanism, as Moser (1998) indicated, households adapt institutions for pooling income and other resources as well as for sharing both consumption modifying and income raising strategies. These networks are effective in providing access to scarce resources, goods, emotional backing and support for managing of events/services to grand social events where massive individuals participate to fill the gap in meeting household needs of materials and finance in particular periods.

The cultural and/or traditional practices of the Ethiopian people require the cooperation of others to access the benefits of exchange that may emanate from the difference in economic capacities and perhaps knowledge/experience. This in turn necessitates opportunistic arrangement to equate the benefits among the actors so that self-reinforcing mechanisms, such as *Iddir* and/or *Women Iddir* in the cases of Ethiopia, developed. Such common attitude of cooperation, while being vital for the operation of these institutions, is also promoted by them and has positive effects beyond their bounds. This consideration also plays a role in promoting the 'generalized morality' of communities for which Barr (1996, p. 232) uses the term "others regarding" to describe a consideration of the effect that one's own actions are likely to have on the welfare of others and understanding of the importance of this regard for the welfare of the community spirit.

Community inspired morality, thus, has been manifested by the inception of traditional institutions such as *Iddir* in Ethiopia. *Iddir* plays a significant role in maintaining social values and norms by promoting dependable relationship among its members beyond providing welfare services and it being formed within neighbourhood and/or kinship on the basis of trust; it has developed an inherent network for all forms of mutual support.

The transmission of values and norms in the culture plays an important role in providing economic characteristics to the social networks through exchanges that are made for discharging traditional and religious practices, hosting social occasions, etc. Differences in addressing risk aversion, resources mobilization, altruism, psychological disposition and others in different cultures, thus, require understanding of the rational and maintenance of cultural traits particularly those which have repetitive direct and indirect economic consequences in households and the society at large. Sociological, economic and other studies explained the importance of understanding the function and roles of social networks in relation to cultural traits, welfare and other forms of gains, and noted the relevance of seeking opportunities for entry with a view to enhance economic development by making use of the networks.

Chapter III Descriptive Results

3.1 Description of the Data

The research includes 87 *Women Iddir* located in Wereda 11, 12, 17, 18 and 19, that are identified with an attempt to capture a representation of low, middle and high-income residents in the city. Wereda 11, 12 and 19 are considered to be inhabited by middle and low-income households and are represented by 65.6% of the respondents (including those in the pilot survey). The total respondents are 261 that is nearly 8.8% of the total member of the selected *Women Iddirs*. While the smallest enumeration unit is a member, a group of three women of whom one is among the leaders are interviewed from each *iddir*. Data was collected by interviewing based on a structured questionnaire during March 2000.

The questionnaire included four parts seeking for social, demographic and economic, opinion of respondents, support package of *Women Iddir* and institutional information (Annex 2). The social, demographic and economic part deals with basic information on household income, occupation, family size, education and membership to traditional associations. The part on opinion of respondents included questions regarding respondents' reason for participating in *Women Iddir*, evaluation of their own and co-members' performance and related issues. The third part explicitly deals with the insurance cover of *Women Iddirs* while the fourth part focus on the institutional issues. The data is processed using SPSS data entry facility and analysed by making use of different computer software packages.

3.2 Household Characteristics

Although information on income is usually expected to be biased, the general indication acquired is that the mean per capita income of respondents (calculated based on the monthly household income and family size) is Birr 1803.7 which is higher than that estimated for the urban population in Addis Ababa, Birr 1569.0 (MEDaC, 1999, p. 20). Comparison with the poverty estimation in the same study yields that the survey captured 23% of households who live in absolute poverty with an estimated per capita income below Birr 402.58 per month. The household income of respondents ranges between Birr 30 and Birr 5,280 per month with a median of Birr 390, Table 1.

Table 1: Monthly household and per-capita income of respondents in Birr

Monthly Household Income			Monthly Per-capita Income		
Intervals	No.	%	Intervals	No.	%
Below 200	76	29.1	Below 100	1	0.4
201 – 500	75	29.7	101-400	59	22.6
501 – 1000	57	21.8	401-700	39	14.9
1001 –2000	32	12.3	701-1000	29	11.1
Above 2001	21	8.1	Above 1001	133	51

With regards to education, only 16% of the respondents are illiterate indicating that illiteracy among the respondents is much below the national estimate for illiteracy of women (46%) in the urban areas (Ibid.). The remaining have attended different levels of schooling and 19.5% of them can read and write. Those who have attended primary (26.4%) and secondary education (26.8%) have a problem of entry to the labour market

and are mainly housewives (55.6%). Nearly one third of the housewives are from the low-income group. Those who are not staying home are involved in low paying activities such as petty trading, casual office work and earn household income in the range of Birr 30 and Birr 230. It is only 15% who have attended secondary school and this same group constitutes the low-income group.

Table 2: Level of Education and proportion of respondents by income group

Educational Level	Percentage of Households			
	Sample	High income	Middle income	Low income
Illiterate	16.1	2.3	13.6	32.6
Literate	19.5	12.6	27.3	18.6
Primary education	26.4	24.1	21.6	33.7
Secondary education	26.8	29.9	35.2	15.1
Tertiary education	11.1	31.0	2.3	-
No. of respondents	261	87	88	86

Classification of respondents in three-income group made possible to observe that education of women is associated with household income. About 75% of respondents in high-income bracket attended primary education and above and those who attended tertiary education account for 31% while similar proportion remain illiterate in the low-income group. The proportion of those who are illiterate in the high-income group is very small accounting about 2.3% while similar proportion attended tertiary education in the middle-income group. It is also worth noting that no one attended tertiary education in the low-income group. The variation in income across households is strongly related to the returns to women's education and the higher the income of a household, the lesser is the illiteracy of the women, Table 2.

The whole sample descriptive result indicates that nearly half of the respondents have attended primary and secondary level education and only 11% attended tertiary education. This entails that most women are able to attend schooling up to secondary level. The social networks also involve women in different walks of life.

In Ethiopia, community *iddir*, *Women Iddir* and *iddir* at work place render the services of informal insurance and offer club good services for individuals to diversify their response to the consequences of uncertainties by signing membership in multiple institutions, if need be, to optimise their utility. According to the data, about 28% of the total respondents sign membership to one while the majority of the remaining sign for up to 4 other forms of networks. Although it is beyond the scope of this study, it seems that certain level of optimal membership could exist for an agent to be a member and/or willing to incur the required costs of membership to multiple institutions, which in most cases compete leisure time and or working hours, but with a gain in the social realm.

Table 3: Membership of households to networks

No. of Networks	Membership of households (%)	
	Women Iddir	Other Networks
1	77.8	27.6
2	19.9	31.4
3	1.9	19.9
4	-	10.3
5	-	3.4
Above 5	0.4	4.7

The survey included those married and/or women heads of households who are members of *Women Iddir* and between 22 and 75 years of age. It was found that 61.7%

of the respondents signed membership to 2 to 4 other forms of institutions. In addition, the majority of respondents (77.39%) are members to only one while the remaining are up to 3 *Women Iddir*. The maximum number of network that women subscribe to are three while for other forms of networks the household could sign for up to five and above. The limit to number of *Women Iddir* that one can subscribe is partly due to the difficulty for women to invest money (for the premium), time (allocate as many hours as required to discharge their responsibility assigned by the *Women Iddir*) and effort. In general, membership to such network does not preclude involvement in others as it has placed its own unique services.

Of the total respondents only 2.7% signed to *Women Iddir* alone, Table 3. As evidenced by the data, the proportion of respondents that sign membership to one *Women Iddir* is more than two fold when compared to that signed to one of the other form of networks (i.e. 27.6%). Membership to *Women Iddir* is widespread and women/households sign membership to more than one along with other types of networks, the degree of spreading could not be measured due to lack of data on the number of *Women Iddir* in the city.

3.3 Institutional Characteristics

The traditional and/or religious practices of funerals and mournings and the indispensability of economic resource that called for risk pooling are the basis for the formation of *Iddir*. *Iddir* has been characterized according to (Phankrust and Endreas, 1958; Alemayehu, 1969; Dejene, 1993) as formed by community workplace, friends and families that are in certain way different from *Women's Iddir*. As the name entails

Women's Iddir is constituted by women and focuses on mobilizing labour, finance, house hold material, consumables and moral support while other forms of *Iddir* provide finance, material (tents, chairs, household utensils, vehicle for the coffin) and some labour mainly for the funeral service. *Women Iddir*, specifically, differs in availing consumables, mobilizing labour, utensils, and staying close to the families of the deceased for one week in most cases (and several days if need be) as prescribed by the culture and also the intimate relationship developed by the network. The presence as well as active participation of each of the members is imperative for the efficiency of the system and this is one of the factors that makes it different from other forms of social networks in the country. The links they have with historical and cultural factors and the existence of trusting relations that is based on reciprocity among its members have created fertile environment in which further cooperation and trust among members can grow.

The appropriateness and accessibility of the traditional institutions described above offer opportunity for members to effectively manage and sustain the institution, as there are not any modern formal institutions that operate in similar line of operation. According to Dejene (1993, p.14), "*Iddir* is attractive because of its appropriateness, flexibility, accessibility (easily), and cost effectiveness....", and thus, individuals' preference to involve in collective action for raising resources for use by its members is a 'generalized morality'. 'Generalized morality' is the derivative of social values and norms and has a role in shaping peoples collective and individual actions and thoughts. Barr (1996, p227) indicated that

“Generalized morality is important because it reduces the costs of enforcement through formal institutions. Without generalized morality, many resources would have to be dedicated to monitoring agents’ activities and punishing deviance, and personal freedom would be significantly curtailed...when expectations about the actions of others have a significant effect on the actions of a particular agent,...the perceived deposition of agents in general becomes important the more agents there are in a population who have a preference for honesty the more robust is the cooperative equilibrium.”

Iddir provides a substantial contribution to families and communities in preventing unforeseen resource gap at household level and thereby promoting network of social welfare.

The role of the social network in family problems, particularly during a time of need and/or risk provides them a unique feature to attract community members. As membership is open to those individuals (women) living in the neighbourhood the membership of the affluent is appreciated and if they reject so, they are out cast and considered as losers of the social ties with the neighbourhood in most cases. The strength of these institutions is also manifested by the provision of appropriate opportunity for participation and ensuring equitable distribution of resources and benefits for members. As authority is relatively non-centralised, re-elections are in some cases based on rotation and the leaders need to have close interaction with members, as this strengthens their sensitivity to the challenges as well as needs of members and/or their communities. Voluntarism in leading associations is also customary and considered normal.

The continued maintenance of reciprocity, nurtured by sustained collective action that promotes social and individual welfare, created ample foundation for the institutionalisation of *Women Iddir*. The extended commitment of sustained reciprocity over long years proved that *Women Iddir* has survived uninterrupted funeral cover for 60 years (since 1940) as captured by one of the networks in the survey. Although Phankrust & Endreas (1958), Alemayehu (1969) and succeeding scholars inscribe the historical record that *iddirs* have been operational since the Italian invasion in 1936-1941 with the exception of anthropological and sociological studies, identify *iddirs* instituted by community, friends, relatives and at work place; the existence of *Women Iddir* providing a specialized service for household domestic production until then was probably generalized. In addition, this sustained and women managed grassroots social welfare institution has not been adequately recognized in the sphere of development to date which enabled the creation of several other forms of institutions such as non governmental organizations instituted by different social groups, churches, etc. Among the few NGOs, ACCORD and Plan International are currently implementing development projects with *Women Iddir* and use the social networks for tapping finance to institute grassroots credit systems.

Examining the dynamics of *Women Iddir* also shows that 25% of the networks started operation by adopting verbal agreement (by-law) and contributing Birr 0.25 and below each month as well as voluntary labor service during risk. At present, however, all have adopted written by-law and set up the monthly contribution to be a minimum of Birr 2.00, which was the maximum contribution during inception of 53% of the networks.

Currently, the maximum monthly contribution is Birr 10, the majority (66.6%) pay from Birr 2.00 to Birr 5.00 and there are only two women pay a total of Birr 20.00 per month.

In addition to the adoption of the written by-law and adjustment of premium, the institutional dynamics has helped all networks to develop institutional constraint that placed an effective arrangement of partial contract that binds members' vision and collective action. As a club good, the networks have also been exercising full participation and/or democracy by allowing members to follow up the effectiveness of the institutional constraint, the by-law and others such as discussion on 'yilignita and neg beene', self evaluation as found necessary and revision of the by-law on average every 2 years. Revision of by-law is a common practice and sometimes is undertaken along with budget revisions, which is primarily meant for adjustment of income and expenditure of *iddir* and other welfare modifying issues. Beyond maintaining managerial efficiency and promote team building and/or leadership mechanism, they also maintain leadership quality by undertaking election every 2 years.

Besides the adoption of institutional constraint based on social and economic values and norms, neighbourhood and cooperation, *Women Iddir* is attained sustainability by limiting the size of membership. For most of *Women Iddir*, the founding members were 15 on average, which has more than doubled (35) over an average of 20 years of the networks operation. Membership spans a minimum of 6 and a maximum of 85 members (oldest network). Currently, the 87 *Women Iddir* covered by the survey are providing welfare service to 2,957 households with a potential capacity of reaching nearly 3,450 households according to the decision of 56.6% of the social networks on their maximum

membership size. Each network, on average had decided to register up to 6 new members.

The limit to membership size is considered upon decision mainly to reduce inefficiency that may emanate from increased coordination problem, transaction costs, information failure and also incompatibility of available labour resource. The larger the size of members and the wider the area coverage, the greater would be the cost to be born by the individual member. Although members' preferences are not necessarily governed by utility maximization from the network, maintenance of cost effectiveness is an important issue that every member focuses as a rational consumer.

3.4 The Informal Insurance Arrangement

Informal insurance systems originate from social networks developed based on non-market allocation such as trusting relationship and reciprocity. Individuals' motive to alleviate and/or mitigate risk necessitates agents to play a cooperative game and assisted the inception of social networks based on trusting interpersonal relationship where trusting relationship instrument relatively balanced reciprocity, and eventually serves as a foundation for the development of informal insurance. In line with this, Ethiopia has developed a wealth of social networks that are historically founded on long-lived informal arrangements of reciprocity mainly from social and culture based practices. For individuals and households, these arrangements provide a source of finance; consumables such as food and materials, as well as labour that in some cases are not either supplied in the market or are affordable (for instance domestic labour service). Such facets are of much importance particularly for those who break their kinship ties after settlement in urban areas (Alemayehu, 1969).

As there are different kinds of social networks established for different purposes, signing membership to multiple institutions is a common practice. While registration to Community *iddir*, *iddir* at work place, *Iddir* of friends, Mahiber is open to all and is accepted by the social and cultural logic, membership to *Women Iddir* under normal conditions is subscribed to after marriage.

Individual's effort to preserve the social and economic integrity of households and/or families during uncertainties contributed to the inception of *Women Iddir* as social networks that facilitate risk sharing and transfer through household level resource flows. As a result, those who assumed responsibility of the household domestic economy as constructed and accepted by the society, have streamlined reciprocity and trusting relationship among themselves to cope with the effects of risks that come into their domain. With due regard to the demerits, the social division of labour coated by the noble interest of women to care and maintain the integrity of a household domestic economy generates a positive externality to the upkeep of social and cultural practices, although it might be criticised on different grounds⁴, beyond availing protection against uncertainties in a community.

The inception of *Women Iddir* that follows the urban settlement, according to Alemayehu (1969) is founded within close neighbourhood unlike other forms of networks such as community/village *iddir*, which span over a wider locality, work place *iddir* and Mahiber. The hobbling of *Women Iddir* in the neighbourhood is strategic

⁴ The traditional way of funeral and mourning performance that requires mobilization of large amount of resources have been criticised as being wasteful from the point of expenditure. Many scholars and individuals expressed on different occasions that this practice erodes the savings of households (which might be built over years) and recommend a change in funeral and mourning practice.

primarily for limiting the size of membership so as to have maximum control over information problem (moral hazard and adverse selection), reduce transaction cost and to ensure the sustainability of the voluntary pool of labour. As the domestic household production requires long hours for organizing events, the network needs to pool voluntary labour from members in conformity with the time that each member needs for her other and family responsibilities. The limitation of the size of members, in addition to its role in balancing members' responsibilities, helps the networks to reduce transaction costs that may emanate from disseminating information, travel cost and others. In contrast to the private insurance, therefore, the gains from larger membership and exchange are foregone for the benefit of acquiring and maintaining balanced reciprocity over time and sustainability. Although it cannot be generalized by this study, there could be some optimal membership size for *Women Iddir* to attain efficiency in their welfare service.

Neighbourhood, in addition, is very essential for agents to ensure the reliability and perpetuity of reciprocity and trusting relationship as it can be confirmed by the famous Ethiopian say 'close neighbour is better than close relative who resides somewhere else'. The travel time required arrive at the place where the risk occurred and precision of arrival of others for help is very crucial for a household as there are not adequate facilities that provide the required service during death of someone. The development of communication that has been in place to date does not reduce the need for the collective action to centre on the neighbourhood at least with respect to *Women Iddir*.

Approximation to any risk event in the vicinity, therefore, is an important element for each individual member and also the network to take timely action that commonly

spans from preparation of the body of the dead to preparing meals, comfort the family of the deceased and organizing the whole event. It should also be noted that keeping cooperative strategy under such conditions has a greater social and economic value for building reliable trust and also maintaining reciprocity.

Oakerson (1988, 144) referred that “the establishment and maintenance of reciprocity depends critically upon the properties of trust, fairness and mutual respect.... Reciprocity requires broader agreement on the basic norms of social interaction”. On this, the research evidences that trust, fairness and mutual respect is reflected where the majority, 97% of the respondents sign membership mainly due to the location of *iddir* in their neighbourhood followed by 85% who noted the need for cooperative action in a community. The latter was expressed in the socio-cultural context that they try to avoid being an alien ‘bayitewar’ ‘yilugnita’ and which Dejene (1999) denote as ‘Tizibt’ in the neighbourhood. These aspects are considered as major elements of peer pressure, which are taken along with reciprocity, as they are perceived and their influence is closely associated with reciprocity, ‘neg beene’.

Although members consider their subscription to *Women Iddir* is primarily for psychological and social reasons, their performance in attending meetings and events (burial and condolence) is largely due to the implicit and explicit institutional constraint assembled in the social network. The survey evidenced that 94% and 96% of respondents attend meetings and events respectively, primarily for maintaining reciprocity reflecting that reciprocity is implicitly built in institutional constraints. In

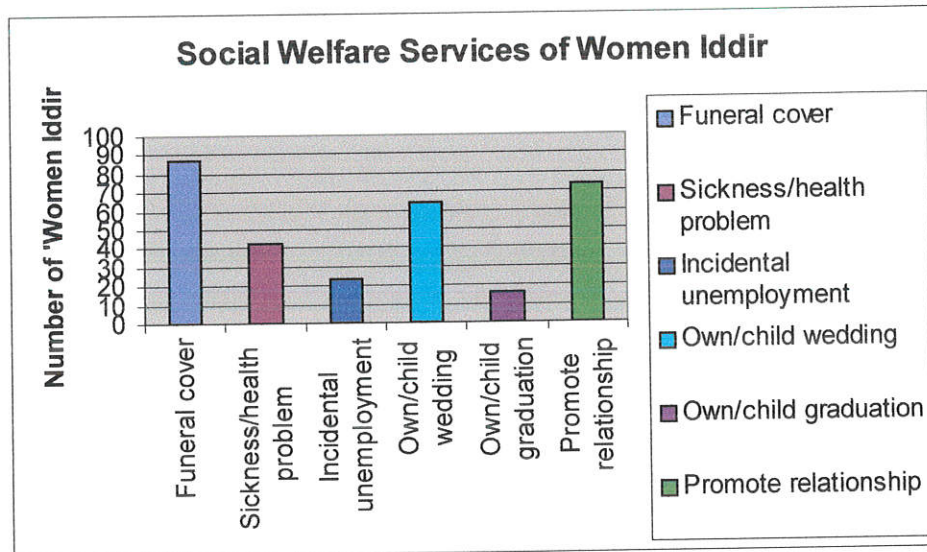
addition, respect to the sanction system⁵ (90%) and interest in acquiring the support package (84%) follow this reasoning indicating the indispensability of the adoption of appropriate institutional arrangement to sustain the social network. People, thus, have developed mechanism for monitoring moral hazard and adverse selection by setting up the social network in their neighbourhood and in conjunction with developing norm for maintaining reciprocity and respect to the sanction that is partial contract.

3.5 The Informal Insurance Cover (Support Package)

The institutional dynamics of *Women Iddir* unveiled the informal insurance to cover risks other than death of a family member as confirmed by the data. Of the total, 75% networks have extended their cover for events such as sickness of member and/or spouse, death of close blood relations and unemployment. In addition, they also provide gifts when a member gives birth, for member's child graduation, wedding and others, as these are also happy moments that culturally friends and neighbours need to share. Such extensions are amended in the by-law usually after ensuring that all members seconded the inclusion. Accordingly, about 75% of *Women Iddir* have adopted objectives other than death and/or consolation and included sickness and instant unemployment of a member and/or a member's spouse as insurable.

The extension of the informal insurance cover, in any case, is providing opportunity for further strengthening and also sustenance of the reciprocity in the communities with broader societal responsibilities. As it proved from their experience, these networks operate in an environment where their flexibility and accessibility have firmly contained and keep members' enthusiasm and trust.

⁵ Sanction system includes the responses expressed as the desire of members to fulfil responsibility.



The flexibility of *Women Iddir* is manifested through changes made in the by-law that binds their areas of operation and institutional constraints. Often budget shortages that arise mainly due to high frequency of risks and increasing cost of funeral cover or others are matched by increasing monthly contribution and seldom through special contributions. The affordability issue is discussed exhaustively among members, as cost of exit of a single member would mean much from social point to all the members. Few *Women Iddir* reported that funeral cover is adjusted downward for some time as the members' maximum capacity of premium was attained. Although it was difficult to acquire a genuine response regarding the capital of the networks, about a quarter of the networks experienced zero balance. The present status, however, indicates that the average capital amounts to Birr 556 while the maximum is about Birr 10,000 with a median of Birr 400.

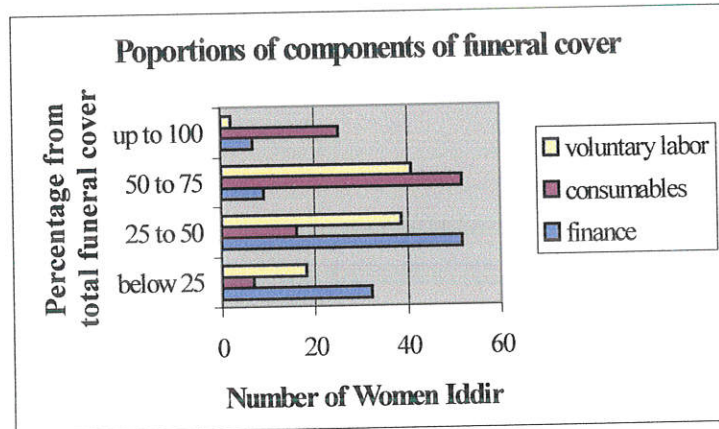
The insurance system adopts different covers depending on the type of risk/uncertainty and events that members celebrate. In connection to funeral and/or condolence, certain

predetermined cover, legitimised by the by-law, is provided on the death of a family member and very close relatives such as parents, brothers and sisters of the member and her spouse. In addition, irrespective of the relationship to the member/spouse, *Women Iddir* provide all the necessary cover if a person incidentally passes away in a member's residence.

The insurance cover of *Women Iddir* is provided in terms of finance and in kind. The cover provided in kind specifically labour and consumables are analysed using their imputed values.⁶ The average financial support of social network (Birr 198) is about half the voluntary domestic labour service and/or consumables support that is about Birr 450 and Birr 349 respectively. As discussed earlier, the important components of the coverage are consumables and voluntary domestic labour which in turn are factors that provide *Women Iddir* different characteristic from other forms of networks.

As a universal rule, all *Women Iddir* provide funeral cover by availing finance, consumables, material and labour. Few networks, however, institute in the by-law that finance, consumables and material are included in the support package in pair or optionally. All *Women Iddir* universally adopts voluntary labour, as availability of the required level of such labour service from the market is either scarce and/or unaffordable. It has been confirmed that these networks also value labour and allow very poor women to sign membership on the condition that their domestic service is counted as premium for their membership in the network.

⁶ Consumables is calculated for selected food items based on 1999 retail price survey, SCA.



Of the total networks, 6 reported that they each have members who provide service as cooks during risk instead of requiring them the regular monthly contribution/payment and 9 who employ women for preparing food on every event. The valuation of domestic labour, thus, is not an alien practice in these networks and women also do value the time they are expected to spend during each risk. Although the survey could not capture exhaustive information on time allocation of women, it has been confirmed that every member needs to work and/or participate on average 15 hours per risk event.

The opportunity cost of the voluntary labour service of *Women Iddir*, thus, needs to be valued and entered in the funeral cover as it is one of the major components of the system. As the occupation of the women varies extensively and measurement of opportunity cost for every woman requires consideration of individual income and valuation of leisure, it is found to be simplistic to use imputed value of labour for analysing funeral cover in this study. Shadow wage rate for voluntary domestic production, whose estimate is often absent in the national statistical publications, is considered by adopting the estimated unskilled daily wage rate⁷, which neither

MEDaC, (1998). The daily unskilled labour wage rate for Addis Ababa is Birr 6.72.

explicitly approximate the wage rate for domestic service, for Addis Ababa and this is deflated by the opportunity cost per market price⁸. While such measurement is taken as option for valuation of the voluntary service, its deliberation does not in any way disregard the need for consideration of certain level of skills required for household domestic production.

Table 4: Total funeral cover by proportion of components

	Up to 25	Up to 50	Up to 75	Up to 100
Finance	32.2	51.7	9.2	6.9
Consumables	6.9	16.1	51.7	25.3
Voluntary labor	18.2	38.6	40.9	2.3

Iddirs have sustained themselves even with out financial resources as other resources such as labour, material and consumables diversify their institutional resource base. Consumable is commonly processed and stored for a year and once food stock is pre-positioned, *iddirs* can sustain their operation for some time up until sufficient fund is collected form members. For about 51.7% of *Women Iddir*, the share of consumables accounts about three fourth of the total one time funeral cover while domestic labour service account between 50% to 75% for about 75% of the respondents. Voluntary domestic labour service has also a significant contribution in the system.

The efforts made for easing management such as use of hired labour for cooking additional food provisions, such as 'Ezin' (complement during risk provided by each household during mourning) has been implicitly included in the system in some of the social networks. This enables social networks to meet the demands of their members and also strengthen the sense of mutual support during the mourning period which is

⁸ Ibid. Conversion factor for unskilled labour is estimated to be 0.84.

very important to the women because it expresses their closeness and concerns to the family

Table 5: Total funeral cover to household income

Total funeral cover to household income (%)	Up to 50	51-100	101-200	201-300	301-400	Above 400	Average proportion
Percent of households	27.2	26.1	21.5	9.6	6.5	9.2	229.3

For nearly half of the households, a one-time funeral cover amounts to about half to two fold of the household income. Moreover, for nearly a quarter of the households this coverage accounts for more than triple of the household income. Beside the social and psychological support that are non-marketable, members' utility from the funeral cover, which includes the marketable resources for this particular study, is significant to smooth the consumption of particularly the middle and low income households. Insuring a single risk is likely to inject a long-term effect if households are able to avoid loss their asset due to the informal insurance cover. It is important to note that the consumption-smoothing role of *Women Iddir* and other similar networks in the study of consumption and expenditure and/or the domestic household economy need to be addressed. The data on funeral cover during membership lifetime, table 8, also shows that the past insurance cover has implications on the inter-temporal consumption behaviour of households. Ignoring the income smoothing effect of informal insurance might give understate consumption and/expenditure patterns of households.

Table 8: Funeral cover received by members during membership life time

Funeral cover in Birr	%	% of cover to income	% of household received
0	26.82		
1000	27.59	100	39.46
2000	25.29	200	12.64
3000	12.26	300	6.90
4000	4.60	400	8.05
5000	3.45	500	32.95

Chapter IV Econometric Results

4.1 The Demand for Funeral Cover

The econometric analysis begins by examining the behavioural pattern of the demand for funeral cover from the OLS estimation conducted on three income groups that are classified based on the distribution of household income and in comparison to the whole sample regression. An attempt is made to assess the consistency of the assumptions developed in chapter II that assumes funeral cover is increasing in income at equal proportion and at a decreasing rate.

The earlier assumption presented in Chapter I, i.e., funeral cover is increasing with income at a decreasing rate has been dropped as the regression results do not provide an explicit relationship between the demand for funeral cover and household income/per capita income. This particular result may indicate that *Women Iddir* are instituted based on neighbourhood and by a mix of women from different income brackets, i.e., women institute their social network regardless of the household and/or their income. However, membership requires possession of certain level of income and/or willingness to provide extra voluntary labour service. After having done exhaustive tests for the existence of linear relationship between these variables, however, sub sample regressions were estimated to observe the possible level effect emanating from difference in household income.

Education, on the other hand, is considered to proxy income in the interpretation of the regression results wherever appropriate as they have certain relationship according to findings of empirical studies on income and education. In line with the discussion in the previous chapter, the regression exercise has brought out strong association between the funeral cover and age, education, premium and economic rational.

The whole sample regression discloses certain general behaviour while the sub sample regressions revealed some patterns pertinent to the high, middle and low-income sub samples that can be described in line with the descriptive results and expectations. The regression result for the middle-income sub sample did not reveal a clear pattern to firmly discern the relationship of the variables and in relation to the rest of the regression results. This may be due to the mixture of behaviours in the group that have close proximity to both low and high-income groups.

In the whole sample regression, all the variables entered have positive association with funeral cover including the qualitative variables except contract and economic rational. Although discussing the qualitative variables could be argumentative in terms of their valuation, the relationship and magnitude of the coefficients have a strong theoretical and empirical foundation to be considered in the discussion.

The inclusion of the qualitative variables, in this connection, enabled the identification of reciprocity and social reasoning that have positive association with the demand equation of the whole sample, Table 6. The more members are willing to reciprocate, the higher will be the demand for funeral cover. Similarly, an attitudinal increase (in literal sense) in the valuation of social aspect of the network would lead to an increase

of the same by nearly half below than the possible change observed due to increased reciprocity had it been significant. The strength of the coefficient of social reasoning, that is significant at 10% level, may indicate the high weight allocated by members and society for the social aspects of the informal insurance system, which involve in promoting social and individual welfare based on reciprocal exchange of goods and services. The expedience of *Women Iddir* and the demand for funeral cover in the urban areas can, therefore, be attributed to its strong and dependable reciprocity that influence the rational of members to expect that they would receive a relatively and/or nearly equal amount of service and/or resources as what they have invested and in the socially well valued informal insurance system.

The desire for deriving utility from the funeral cover, therefore, is executed by maintaining reciprocity that is consistent with social value and norm. In other words, the network enforces its informal insurance by placing a reciprocal exchange mechanism for both non-marketable and marketable economic resources and adopting appropriate social sanctions in the form of values, norms and practices, i.e., social traits. The social trait includes the trusting relations, psychological and mutual support among members and the funeral practice itself. The combination of social, psychological service, and other marketable and non-marketable resources, thus, gives the network strong institutional basis for it to remain hardly substitutable by private institutions at least for some time to come.

As indicated earlier, women sign membership to *Women Iddir* usually after marriage and/or if they head a family. According to the whole sample regression, age entered significantly and positively showing that the demand for funeral cover increases with

age. Members could perceive that the marketable and non-marketable resources need to be accessed at low transaction cost and their longer stay within a community would also increase not only their attachment to members but also their confidence in interpersonal relation. From the reciprocal and social nature of the exchange, members could regard the service and resources of the network would be scarcer and/or unavailable to acquire from outside through time and this is justifiable from the non-marketability nature of the network. The role of age in the demand for funeral cover, thus, might also be seen from the point of its capacity to shift preference of individuals.

Increase in the level of education induces a significant increase in the demand for funeral cover as confirmed by the whole sample regression. Education has a positive attitudinal effect on the demand for funeral cover. The role of education, in this regard, can be considered along with its positive effect on the extension and/or involvement of *Women Iddir* in diverse situations such as during sickness of a member and/or spouse, incidental unemployment, at birth, which are not addressed in this study. As this study focuses on funeral cover alone, a broader framework of analysis is required to capture the effect of education and its return (income) on the social network particularly the extension of *Women Iddir's* objectives in various situations, efficiency, institutional strength and related investments in the social network.

The sub sample regressions show that the behavioural patterns of the networks follow certain pattern of income distribution of members. The intercept term for the sup sample regressions may show that women in the low-income sub sample demand on average about Birr 125 more than the women in the middle-income sub sample. In other words, the demand for funeral cover by a woman in high-income sub sample is relatively lower

than those in the low-income sub sample. Consistent to the theory of insurance, the result shows that as income increases, the lesser is the need for buying insurance by the women and/or households. In this context, it can be discerned that the participation of women in the network is vital for maintaining their integration and ties within their community even though women could fulfil their household needs from their own sources, particularly those belonging to high-income sub sample.

Education tend to increase the demand for funeral cover, in particular for the high and middle-income sub sample as it has both income and attitudinal effect. An increase in the level of education is of a woman in these sub samples leads to a rise in the demand for funeral cover. Corresponding to the whole sample regression, this result provides indication that the attitude of women to collectively sign for cautionary measures is related to their income and/or education levels. Moreover, it may suggest that members need to have the basic economic capacity to enrol as well as participate actively in the social networks if education is to proxy income.

For the high income sub sample, all rational have negative association except social reasoning. In conformity with the theoretical and empirical expectations, social values and norms have certain leading role in the demand for funeral cover for this group and this may pre-empt utility maximisation not to be derived from direct financial and material benefits. Direct material and financial benefits, reciprocity and contact have negative coefficients, as they are inherently pure maximization traits and could bear disincentive effects on the social network. Therefore, social networks fro the high-income sub sample provides social forum.

Unlike the high income sub sample regression, reciprocity and economic rational entered positively in the mid and low income sub sample regressions and this may entail that *Women Iddir* is well-founded on expectations of further exchange. On the other hand, contract and social rational have negative relation with the demand for funeral cover. These results provide a pilot direction entailing that *Women Iddir*'s service is more of economic to the middle and low-income sub samples.

The data has born both the perception of the respondents and the theory that in such context pure utility maximisation strategies could not work and members utility maximization is derived from other motives that are non marketable such as social and psychological elements in this case. The adoption of binding rules and pure utility maximization objectives may not be necessarily applicable, as it could lead not only to inefficiency but could be counter active to the mutual and altruistic nature of the social welfare system.

As observed from the previous discussions, the non-marketable elements of the demand for funeral cover, domestic labour, mutual/moral support and others, constitute the major part of funeral cover. For instance by examining the coefficient of voluntary labour, it can be alleged that domestic labour for high income sub sample has a relatively greater effect on the demand for funeral cover as the opportunity cost of leisure time is high. This shows that the demand for funeral cover is relatively highly sensitive to changes in members' voluntary labour service in this sub sample compared to others. This may suggest that time allocated by the women for the social network activities depends on income of members. This requires further research for explicitly

identifying the effect of voluntary labour service on the demand for funeral cover and other societal activities that relate to social networks.

Table 6: OLS Estimation of the Demand for funeral cover

Variables	Demand for Funeral Cover			
	Sample	High Income	Middle Income	Low Income
Constant	-193.35 (1.14)	-363.11 (0.95)	-31.15 (0.13)	156.45 (0.89)
Monthly contribution	30.23* (6.99)	34.91* (4.43)	4.89 (0.63)	20.03** (2.57)
Education	58.81* (4.57)	69.94** (2.30)	-40.45 (1.92)***	14.15 (0.71)
Age	4.81** (3.31)	10.85** (2.950)	3.72*** (1.83)	1.80 (1.01)
Social rational	19.69*** (1.67)	28.28 (1.02)	-10.69 (0.57)	-4.91 (0.31)
Direct financial & material benefit	-22.16 (1.31)	-91.80* (2.45)	35.29 (1.55)	3.55 (0.15)
Contract	-17.91 (1.16)	-15.20 (0.44)	-21.67 (0.95)	-22.10 (1.03)
Reciprocity	47.89 (1.56)	-2.57 (0.04)	69.0 (4.58)	3.09 (0.08)
Member's voluntary labour contribution	3.04 (1.16)	8.04 (1.52)	1.45 (0.37)	1.54 (0.45)
Membership size	0.99 (0.11)	2.70 (1.30)	0.12 (0.09)	1.94 (1.34)
Adjusted R ²	0.32	0.37	0.02	0.03
F test (model test)	14.25	6.58	1.19	1.70
Degrees of freedom	251	75	76	76
N	261	87	86	86

* Significant at 1%, ** significant at 5%, * significant at 10%
 Figures in parenthesis are t-ratio/values.

Premium is paid in terms of monthly contribution and voluntary labour. Voluntary labour serves as a payment in kind for the network in the short run while it is subject to be nullified in the long run because of reciprocity. Contrary to expectations, these elements have a positive association with the demand for funeral cover in all the regressions. This result entails that the demand for funeral cover is increasing in

premium unlike other services and it might be associated with the very character of the social network in availing resources based on members' contribution and non-market allocation. In addition, members bound their own demand by limiting the amount of all the components of the insurance cover, as they need to commensurate it with their capacity (financial, physical, i.e., domestic labour, time and others). As a club good, the magnitude of the informal insurance cover depends on its member's principles of allocation and decision. Therefore, the positive association between premium and the demand for funeral cover revealed an important departure of *Women Iddir*' social welfare service from market based (private) insurance systems.

The regression results, particularly the whole sample regression, provide a preliminary indication that the demand for funeral cover is explained by the variables entered in the model. Although most variables have the expected signs and support expectations, there is a need for further research to adopt and/or develop appropriate econometric model and firmly discern and/or explain the demand for funeral cover and the role of social networks in providing informal insurance and social welfare services at large.

Considering *Women Iddir*'s well founded economic ground, therefore, it would be reasonable to discern that certain level of explicit and implicit economic rationale exist behind social networks and/or activities that in many cases are considered as altruistic, traditional, humanitarian, welfare, etc. Although the network is incepted in social and psychological context, its resource base, welfare services and its functions provide an ample basis to consider it as economic institution. The informal nature of the network and its sustained service is, thus, the result of using mixed (non pure) strategies on the

basis of best alternatives, which is partial contract, partial economic rational and with strong reciprocal exchange and social objective.

4.2 Determinants of Efficiency⁹ of *Women Iddir*

It has been discussed that social networks are best suited to meet the demands of their members by being accessible, flexible and provide services that are not commonly availed by the market, in addition to sustaining the provision of efficient informal insurance service for many years. The institutional efficiency/performance of social networks, in particular *Women Iddir*, can be seen from the point of its ability to define institutional goals, objectives, privileges, procedures and roles, and adopt rules in conjunction with social norms and values.

Analogously to any social organization, they involve in decision-making, mobilizing resources, maintaining efficient communication and seek solutions for conflicting interests that may arise among members and thereby promote collective actions and enhance trusting relations of its members. As Uphoff (216, 1999) noted that 'social organization is less costly and often more effective in cases in which cooperation is motivated by norms, values, beliefs, and attitudes that create reinforcing expectations, rather than the organizers having to gain cooperation through material incentive actions'. Lower transaction costs are relevant for keeping the informal insurance system efficient and sustainable as its amplitude to members is essential for promoting participation, information sharing, reducing travel expense and others.

⁹ Efficiency is meant in operational terms and does not imply any technicality. It is measured by the opinion/evaluation of respondents who are the prime participants, movers and managers of their own social networks/institutions.

Identifying the factors that explain the continued and efficient operation of *Women Iddir* may, thus, provide better understanding of the role and potential of social networks. Moreover, some indicative explanations on how to involve these social networks in a more strengthened and probably diversified services that could enhance the development efforts could be acquired. This motivation requires extending and/adding econometric estimation in the study. Establishing econometric relationship between efficiency (as defined in here) and the variables that have been considered so far is believed to impart better understanding of the social services of *Women Iddir*. This exercise may also yield indicative results for identifying areas of possible interventions so as to promote the social welfare services of the networks.

Unlike the formal institutional analysis that is often measured by setting performance standards, therefore, this study attempts to capture efficient/sustained informal insurance of *Women Iddir* by examining whether the respondents' evaluation of their institutional constraints can explain the efficiency of the informal insurance service. The relevance of rules, roles, privileges and procedures are explicitly and implicitly presented for consideration in the evaluation.

Efficiency and/or good performance of *Women Iddir* is measured by members' evaluation of their own network as efficient/well performing. Particular questions that enable respondents to rank a set of choices that influence efficiency were posed (refer Annex II). The ranked rationales include degree of participation, equitability of the insurance cover, maintenance of social and cultural practices, promotes cooperation (trust and reciprocity), flexibility to meet members needs and realization of the institutional (*Women Iddir's*) objectives. These factors are used to develop composite

indices of efficiency¹⁰ and entered as dependent variable in a regression model, Table 7. Both OLS and Poisson estimation methods were tested and they provide similar results.

As stated above, the composite index of efficiency are taken as rough measure of efficiency that takes into account the expenditure of the social networks on funeral cover, the degree of participation of members, the leadership experiences of members and others. The regression for efficiency, thus, included education of a member, membership to other forms of networks, social rational, reciprocity, contract, economic rational and the change in the expenditure of funeral cover of the last two years (1990 and 1991 E.C) as explanatory variables. Due to lack of data on expenditure of funeral cover, this regression is estimated on 46 institutional observations, which is computed as the average of three respondents (assumed as representing their co-members) from each *Women Iddir*. The variables that have been used for the regression on the demand for funeral cover are directly applied without making changes except averaging out so as to have the institutional data.

According to the regression result, Table 7, most of the variables indicated above are significant to explain the variation in efficiency. A one Birr change in funeral cover per year increases the level of efficiency on average by 0.0003. In other words, an increment of Birr 100 on funeral cover in a particular year induces a 0.03 level increase in efficiency of *Women Iddir* other things remaining constant. Similarly, an increase in the level of education would lead efficiency to increasing by 0.47 keeping other variables constant. These results indicate that the financial capacity of *Women Iddir* and

¹⁰ The ranks are used as scores allocated by the respondents and they have a unitary valued ranging from 6 to 1 (missing values are equated to as zero they are not ranked). The median is the base (for the weight).

increase in the education of women fosters an impetus to the institutional growth by providing them strengthened resource base. Education of women contributes through increased premiums and also by promoting the management system of the social network. Revision of by-laws, broadening of objectives to involve in wider range of insurable risks, strengthening of the interpersonal relations and others are associated with the exposure of women to education and non-household domestic activities. Education may also contribute to social networks by promoting team spirit, leadership quality, participation and improved quality of the informal insurance service.

Table 7: Efficiency of *Women Iddir*

Explanatory variables	Coefficients
Constant	7.5* (5.47)
Education of a member	0.47* (3.17)
Change in insurance cover	0.30×10^{-3} * (2.97)
Social rational	0.33** (2.33)
Reciprocity	-0.74** (2.04)
Membership to other forms of networks	-0.42*** (1.82)
Adjusted R ²	0.39
F test (model test)	6.73
Degrees of freedom	40
N	46

* Significant at 1%, ** significant at 5%, *** significant at 10%.
Figures in parenthesis are t-ratios.

The positive and significant effect of social rational in the regression also indicates that the more the social rational is emphasized by the women, the greater is the efficiency of the *Women Iddir*. The increase in the social rational provides a positive platform for cooperation that promotes collective action. As discussed earlier, instituting the social

values and norms as part of the institutional constraint, thus, has born a favorable condition for both the efficiency and sustainability of the social networks.

Consistent with the suggestion forwarded in the preceding section, this result is indicative of the possible existence of certain optimal level of membership and this may have some implication on the optimal level of reciprocity for a social network as well as members. It might be interesting to further examine the relationship between optimal level of reciprocity for both members and social networks and maximum number of membership. It seems that increasing membership to networks more than certain level induces a negative effect on the networks efficiency by reducing reciprocity unless there is some mechanism that checks the balance of reciprocity and membership for both the members and networks. As any rational consumer, members are constrained by physical ability to provide domestic labour service, time, money and other factors.

The long-lived institutional structures and the gradual development is the result of continued investment of time, money, efforts and others by members to maintain and also promote social welfare. As Uphoff (1999) referred that the net reward over time to participants in social networks can be substantial, but achieving these benefits requires a willingness to make some sacrifices at least in the short run. The direct economic gains acquired by individuals helps the translation of members' effort as a complement to the investment in the social network. Such investment enables social networks to acquire certain level of institutional development that are as partly explained in this study. The data analysis on efficiency assisted a preliminary identification of factors that enhance the efficiency of *Women Iddir* and this is indicative of the need for looking into the

education of members, social aspect and financial capacity of networks along with reciprocity for promoting their social welfare services to the society.

Conclusion

By describing *Women Iddir* and singling out its specialised features, this study attempts to review and associate the literature on informal insurance, its arrangement and social capital and provide framework of both theoretical and empirical analysis for social networks. The long-lived informal arrangement of women that centred on trusting interpersonal relations and/or reciprocity enabled *Women Iddir* to adopt appropriate institutional constraint that is interlocked with social traits.

Although the study did not adequately capture the degree of the institutional development of *Women Iddir*, it has brought out the uninterrupted social welfare service that existed for about 60 years and the salient economic features founded on social values and norms. People's cultural practice, their capacity to maintain and streamline reciprocity with the subsequent formation and development of social networks enabled the wide spread of societal groups as the major constituencies of social capital in the country.

The inception of *Women Iddir* that follows the urban settlement, according to Alemayehu (1969) is founded within close neighbourhood unlike other forms of networks such as community/village *Iddir*, which span over a wider locality, work place *Iddir* and others. Individuals' effort to preserve the social and economic integrity of households and/or families during uncertainties contributed to the inception of *Women Iddir* as social networks that facilitate risk sharing and transfer through resource flows among households. *Women Iddir* demonstrates its effective social welfare service by its informal insurance cover in the urban areas. It has continued to serve as a source of

finance, domestic labour service, consumables and moral support that are partly marketable and provide moral support during uncertainties in Ethiopia.

Considering *Women Iddir's* well founded economic ground, therefore, it would be reasonable to discern that certain level of explicit and implicit economic rationale exist behind social networks and/or activities that in many cases are considered as altruistic, traditional, humanitarian, welfare, etc. Although the network is incepted in such social and psychological context, its resource base, welfare services and generally its functions provide an ample basis to consider the network as economic institution. The informal nature of the network and its sustained service is thus the result of using mixed (non pure) strategies on the basis of best alternative, which is partial contract, partial economic rational and with strong reciprocal exchange and social objective.

The economic features of social networks, thus, is established not only in providing funeral cover which this study centred on but also insuring risks and events such as death of close relatives, sickness, at birth and others. The valuation of its services, even without the un-quantifiable resources such as social and moral/psychological support has brought out the significance of its economic role, particularly the social welfare service. In addition, the widespread and efficient welfare service offered by *Women Iddir* makes the potential of its substitutability far reaching, as the private institutions are incapable of placing the non-marketable services at the desired level and prices. Still the substitution of the voluntary labour service, which seems to be marketable from the outset, would be difficult as it may not be affordable by many households.

The study confirmed that long-lived and strengthened reciprocity and trusting relations had helped the sustenance of the informal insurance and revealed that as income and education of women increase the social network assumes broader responsibility other than funeral cover. The exposure of women to non-home activities and the recognition of wide range of uncertainties enabled them to extend their social welfare services for various risks. It is believed that education, income and exposure of women has vital role in shaping the social service and also the social network in this respect. Moreover, the flexibility and adaptability of *Women Iddir* indicates their potential to assume broader societal responsibilities.

According to the study, nearly half of the *Women Iddir* members receive an insurance coverage as much twice as their household income. As explained in the previous sections, the temporal and inter temporal consumption smoothing role of social networks needs exhaustive investigation by further research so that the economic resources offered by such networks could be accounted in consumption and expenditure and/or household economy studies and other relevant planning activities.

In full recognition of its economic importance, households sign membership on average up to four different informal insurance systems (social networks) to diversify their response to risks. This entails that increased utility from membership to multiple social networks could be acquired and objectives of economic agents probably may not only be risk aversion but utility maximization. Thus, it is important to study whether non-market allocation based insurance is welfare enhancing. Moreover, understanding the possible optimal number of signing membership to different networks that would enable

agents to maximize their utility from insurance coverage would provide important insight.

Besides demonstrating *Women Iddir's* its effective informal insurance service in Ethiopia, the paper reveals that age, premium, education and social justification significantly explain the demand for funeral cover. The standard insurance model used for the regression analysis exposed the departure of the informal insurance from that based on market allocation (private). In addition, the qualitative variables entered in the regression revealed the expected results and relationship substantiating the social and psychological/moral foundations of the social welfare services of *Women Iddir*. It is necessary, however, to further assess appropriate models of the demand for insurance to come up with firm and conclusive results in explaining the demand for funeral cover and/or informal insurance at large.

Financial capacity and social rational influence efficiency of networks positively while reciprocity and membership to other forms of networks induce negative effect. The relationship among the dependent and explanatory variables, in this case, brought out relevant results that provide insight to the most important aspects that determine the efficiency of *Women Iddir*. Accordingly, the regression results revealed that education and increase in the insurance cover leads to higher level of efficiency implying that access to economic resources and education of women would contribute in strengthening the network as well as social capital. Education has dual benefit because it assists women to reap the returns from it and increase financial contribution. In addition, it helps networks to improve by enabling the adoption of modern techniques of managing operation from the women.

The recognition of *Women Iddir's* informal insurance cover and social welfare services requires placing appropriate emphasis for accounting their economic role in the society and also providing them appropriate technical, material and financial backing for them to develop and assume larger responsibilities which centres at communities. Although case studies planned earlier are not presented due time constraint, it is important to further assess the factors that explain network's involvement in various risk situations so that appropriate intervention modalities could be designed. It is believed that education, income and exposure of women has vital role in shaping the institutional character in this respect.

Full participation of people in development need to begin from the household and this requires genuine commitment of involving people and communities. Government policies need also be able to create an environment for social networks to grow and/or develop, and assume societal responsibility particularly in alleviating poverty. It is also important to note that these institutions have strong basis to be stakeholders of development and can serve as the best tool for bringing change to the lives of communities. Appropriate framework of collaboration/partnership that fits the vision, objectives, management capacity of *Women Iddir* need to be developed for bringing them as active partners of development. It is also necessary to understand the need for providing social networks adequate room for them to exercise their autonomy so that they could build trust and/or confidence to participate actively. As many scholars indicate, provision of legal backing and linking them to formal institution is relevant to bring social networks in the formal institutional scene-.

- Beneria, Lourdes, (1992). Accounting for Women's Work. The Progress of Two Decades. World Development Report. Vol. 20, No. 11, pp. 1547-1560.
- Bergstrom, Theodore C. (1996). Economics in a Family Way, Journal of Economic Literature, Vol. XXXIV, pp. 1903-1934.
- Bevan, P., (1996). Researching Small-scale Enterprises in Ethiopia: How Economists and Sociologists Might Work Together, Paper presented for the Sixth Annual conference on the Ethiopian Economy. Addis Ababa, Ethiopia.
- Binmore, Ken, (1992). Fun and Games: A Text On The Game Theory, D.C. Health and Company, Canada and USA.
- Biswas, Tapan (1997). Decision Making Under Uncertainty, St. Martin's Press Inc., New York.
- Bowles, Samuel (1998). Endogenous Preferences: The Cultural Consequences of Markets and Other Economic Institutions. Journal of Economic Literature, Vol. XXXVI, pp. 75-111.
- Coate, Stephen and Ravellion, Martin, (1993). Reciprocity without Commitment Characterization and Performance of Informal Insurance Arrangements, Journal of Development Economics, 40, pp. 1-24.
- CSA, (1998). Monthly and Annual Average Retail Prices of Goods and Services by Urban Centers, Report, Addis Ababa.

- Dejene Aredo, (1993). The Informal and Semi-formal Financial Sectors in Ethiopia: A Study of the Iqqub, *Iddir* and Savings and Credit Co-operatives, African Economic Research Consortium, Research paper 21. Nairobi, Kenya.
- _____, (1997). Institutions and Economic Development: A Survey of Aspects of the New Institutional Economics, *Ethiopian Journal of Economics*, Vol. VI, No. 2.
- _____, (1999). The Village Economy and Indigenous Financial Institutions: Theory and Evidence from Rural Ethiopia, Proceedings of the 3rd Conference of Agricultural Economics Society of Ethiopia, October 1997, Addis Ababa.
- Denzau, A. and Irwin, R. D., (1992). *Microeconomic Analysis, Markets and Dynamics*, ING.
- Dershem L. and Gzirishvili D. (1998). Informal Social Support Networks and Household Vulnerability7: Empirical Findings From Georgia, *World Development* Vol. 26, No. 10, pp1827-1838, Elsevier Science Ltd., U.K.
- Dwyer, Daisy and Bruce, Judith. (1988). *A Home Devide: Women and Income in the Third World*. Stanford University Press, Stanford, California, *Economic Development and Cultural Change*, (1996)., 0013-0079/964401-005.
- Ebert, Teresa L. (1999). *Ludic Feminism and After: Post-modernism, Desire and Labor in Late Capitalism*, University of Michigan Press, US.

- EEA, (1999/2000). Annual Report on the Ethiopian Economy, (ed) Befekadu Deyefe and Berhanu Nega, Vol. I, 1999/2000, Addis Ababa.
- Ekins, P. and Max-Neef M. (ed.) (1992). Real-Life Economics: Understanding Wealth Creation, Mackays of Chatham Plc, Kent, U.K.
- Elister, Jon (1998). Emotions and Economic Theory, Journal of Economic Literature, Vol. XXXVI, pp. 47-74.
- Evans, Peter (1996). Introduction: Development Strategies Across the Public-Private Divide, World Development, Vol. 24, No. pp. 1033-1037.-
- Frank, Robert H., (1992). Melding Sociology and Economics: James Coleman's Foundation of Social Theory, Journal of Economic Literature, Vol. XXX, pp. 147-170.
- Gardiner, Jean, (1997). Gender, Care and Economics, Macmillan Press LTD, London.
- Gujarati, Domar N., (1995). Basic Economics, Third Edition, McGraw-Hill, Inc, Singapore.
- Hodgson, M. G., (1993). The Returns of Institutional Economics. Paper presented at the Russel Sage Foundation Conference on Economic Sociology. New York.
- Holton, R.J., (1992). Economy and Society, Routledge, Chapman and Hall INC., New York.

- Khawaja, Marwan (1996). *The Dynamics of Local Collective Action in the West Bank: A Test of Rival Explanation, Economic Development and Cultural Change*, 0013-0079/96/4401-0005.
- Kranton, Rachel E. (1996). *Reciprocal Exchange: A Self-Sustaining System*, *American Journal of Economics*, Vol. 86, No.4.
- Lal, Deepak, (1992). *Development Economics, Vol. IV, The International Library of Critical Writings in Economics 18*, Edward Elgar Publishing Limited, U.K.
- Plan International, (1995). *Child Centered Community Based Integrated Urban Development Program*. Addis Ababa, Ethiopia.
- Putnam, Robert (1993). *Making Democracy Work: Civic Traditions in Modern Italy*, Princeton, N.J., Princeton University Press.
- Malathy, R. (1994). *Education and Women's Time Allocation to Non-market Work in an Urban Setting in India. Economic Development and Cultural Change*. The University of Chicago. 0013-0079/94/4204-0047.
- MEDaC, (1998). *National Economic Parameter Conversion Factors for Ethiopia*, Addis Ababa.
- MEDaC, (1999). *Poverty Situation in Ethiopia*, Welfare Monitoring Unit, Addis Ababa.
- Moser, Caroline O. N., (1998). *The Asset Vulnerability Framework: Reassuring Urban Poverty Reduction Strategies*, *World Development*, Vol. 26, No. 1, pp. 1-19.

- Mukherjee, Chandan, White, Howard & Wuyts, Marc, (1998). *Econometrics and Data Analysis for Developing Countries*.
- Nee, Victor (1998). Norms and Network in Economic and Organizational Performance, *American Economic Review*, Vol. 88, No. 2.
- North, Douglass (1990). *Institutions, Institutional Change and Economic Performance*, University of Cambridge, New York.
- Ostrom V., Feeny D. and Picht H. (ed.) (1988). *Rethinking Institutional Analysis and Development: Issues, Alternatives and Choices*, International Center for Economic Growth, USA.
- Robin, Mathew, (1998). Psychology and Economics, *Journal of Economic Literature*, Vol. XXXVI, pp 11-46.
- Pankhurst, Richard and Endreas Eshete, (1958). Self Help in Ethiopia, *Ethiopian Observer*, Vol. II, No. 11.
- Platteau, Jean-Philippe, (1997). Mutual Insurance as an Elusive Concept in Traditional Rural Communities, *Journal of Development Studies*, Vol. 33, No. 6, London.
- Rawlins, Joan M. (1996). *Women From Midlife: Coping in Jamaica. A Study of Power in the Lives of Women Aged 50-74 in Jamaica*. Thesis prepared in fulfilment for the degree of Doctor of Philosophy in Development Studies of Institution of Social Science. The Hague, The Netherlands.

Reed, Richard (1996). Household Ethnicity, Household Consumption: Commodities and the Guarani, *Economic Development and Cultural Change*, 0013-0079/96/4401-0007.

RRC/UNDP, (1993). Disaster Prevention, Preparedness and Mitigation, Annex 3, Sub-program on Area Based Integrated Development Program, Five Years National Program. Addis Ababa, Ethiopia.

Smelser , (1962). *The Collective Behaviour*, Free Press, New York.

Stephen, Lynn, (1991). Culture as a Resource: Four Cases of Self-Managed Indigenous Craft Production in Latin America, *Economic Development & Cultural Change*, Vol. 40, No. 1.

Townsend, Robert M., (1995). Consumption Insurance: An Evaluation of Risk-Bearing Systems in Low-Income Economics, *Journal of Economic Perspectives*, Vol. 9, No. 3.

Varian, Hal R., (1992). *Microeconomic Analysis*, Third Edition, W.W. Norton & Company, Inc., New York.

Weber, M., (1968). *The Theory of Social and Economic Organization*. Translated by A.M. Henderson and Talcott Parsons, The Free Press, New York.

World Development, (1996). Vol. 24, No. 6, pp. 1033-1131, Elsevier Science L.t.d.

World Development, (1998). Vol. 26, No. 1, pp. 1-19, Elsevier Science L.t.d.

World Development, (1996). Vol. 26, No. 10, pp. 1827-1838, Elsevier Science L.t.d.

Annex I Derivation of the a two-state model of funeral cover

Let the utility derived from income be represented by

$$u_s(y) = a + be^{-\delta y}, \text{ where } b < 0$$

And the utility from funeral cover be

$$u_s(s) = (1-p)[a + be^{-\delta(y_1 - \pi s)}] + p[a + be^{-\delta(y_2 + s)}]$$

Then, the first order condition is

$$(1-p)\delta \pi b e^{-\delta(y_1 - \pi s)} - p\delta b e^{-\delta(y_2 + s)} = 0$$

$$\frac{\partial h}{\partial x} = \frac{\partial h}{\partial \delta} \frac{\partial \delta}{\partial x}$$

Since

(by the composite function rule). By rearranging we get

$$(1-p)\delta \pi b e^{-\delta(y_1 - \pi s)} = p\delta b e^{-\delta(y_2 + s)}$$

then,

$$\pi e^{-\delta(y_1 - \pi s)} = \frac{p}{(1-p)} e^{-\delta(y_2 + s)}$$

Taking logs,

$$\log \pi - \delta(y_1 - \pi s) = \log\left(\frac{p}{1-p}\right) - \delta(y_2 + s)$$

$$\log \pi - \log \left(\frac{p}{1-p} \right) = \delta y_1 - \delta y_2 - \delta \pi s - \delta s$$

$$= \delta(y_1 - y_2) - \delta(\pi + 1)s$$

Rearranging

$$\delta(\pi + 1)s = \delta(y_1 - y_2) - \log \left(\frac{\pi}{p/(1-p)} \right)$$

Since $\log x - \log y = \log (x/y)$, and we get

$$s^* = \frac{\delta(y_1 - y_2)}{\delta(\pi + 1)} - \frac{1}{\delta(\pi + 1)} \log \left(\frac{\pi}{p/(1-p)} \right)$$

$$= \frac{(y_1 - y_2)}{(\pi + 1)} - \frac{1}{\delta(\pi + 1)} \log \left(\frac{\pi}{p/(1-p)} \right)$$

Therefore, the demand for funeral cover is a function of income, premium, and probability of funeral. Formally, the reduced form solution can be written as:

$$S = S (y, \pi, p)$$

1.1.1 Annex II Questionnaire for Conducting Empirical survey on elected *Women Iddir* in Addis Ababa (January 2000)

Part I: Socio-economic Identity: Personal income, income and *Iddir* membership

I. D	Name	Sex (a)	Age	Education (b)	Main activity (c)	work hrs/day & # of days /wk	Income			Membership to traditional associations									
							m on thly	w e ekly	d ail y	Mahiber		Communi ty		Work place <i>Iddir</i>		Women <i>Iddir</i>			
										No.	Fee	No.	Fee	No.	Fee	No.	Fee		

NB No.: Number of traditional institutions
Fee: amount of contribution per month

- (a)
Male 1
Female 2

- (b)
Illiterate 0
Literate 1
Primary schooling 2
Secondary schooling 3
12 + diploma/certificate 4
Bachelor degree 5

- (c)
House wife 1
Petty trading 2

- Sanitary work 3
Office clerk 4
Expert 5
Professional 6
Head of dept./office/etc 7
Entrepreneur 8
Other 9

Part II: *Iddir* and Respondents' opinion

1. Have you been a member of traditional institution such as Mahiber and *Iddir* before marriage?

Yes No

2. If yes, since when and to which of the following forms of institutions were you a member? (Answer all that apply)

- a) Mahiber of kinship since _____
- b) Mahiber of friends since _____
- c) Church Mahiber since _____
- d) Community *Iddir* since _____
- e) Work place *Iddir* since _____
- f) Women *Iddir* since _____

3. What is your reason to be a member of *Women Iddir*? Please rank your reasons.

- (a) Social reason
- (b) Psychological reasons (condolence)
- (c) Financial reason
- (d) Material reason
- (e) Labor reason
- (f) Other reason (specify) _____

4. Have you been a member of *Women Iddir* that you have currently abandoned?

Yes No

5. If yes, fill the following

Period of membership (year)		Fee/month	Support received		Reason for abandoning (b)
From	To		(a)	In Birr	

- | | | | |
|-----------------|---|---------------------|---|
| (a) | | Graduation of child | 7 |
| Death of spouse | 1 | Wedding of child | 8 |
| Death of child | 2 | (b)Change residence | 1 |
| Death of parent | 3 | Social reasons | 2 |
| Own wedding | 4 | Economic reasons | 3 |
| Sickness | 5 | Personal reasons | 4 |
| Loss of job | 6 | | |

6. Are there many *Iddirs* in your neighborhood?
 Yes No
7. In how many Women *Iddir* are you a member? ___ *Iddir*(s).
8. Name the Women *Iddir* that you prefer most and in which you are a member

Address: Wereda _____, Kebele _____ .

9. What is your reason for choosing this particular *Iddir*? Please rank your reasons.
- a) it has good support package
- b) *Iddir* support fills the household resource gap
- c) it is within my neighborhood
- d) members are my friends
- e) I do not want to be an alien by not being a member
- f) For the sake of maintaining the cultural practice
- g) Other specify _____
10. Have you been the official of the *Iddir*
 Yes No
11. What is your current role in the *Iddir*
 Member Official (specify position) _____
12. What is the objective of the *Iddir*? Mark in the box.
- a) provide support during death
- b) provide support during sickness
- c) provide support during loss of job of spouse and self
- d) provide support during wedding of members children
- e) provide support during graduation of members children
- f) other (specify) _____
13. How many members are there in your *Iddir*? _____
14. When was this *Iddir* established? _____
15. Please fill the contribution you are making to your *Iddir*

Type of contribution	Birr/last month	Birr/ last year
monthly regular		
special contribution for strengthening <i>Iddir</i>		
Penalty		
for cookers payment		
Other specify		

16. How often do you attend *Iddir* meetings?

- a) very regularly b) regularly c) irregularly d) very irregularly

17. If your answer is (a) or (b), what is your reason to do so? Please rank your reasons.

- a) not to take risk of paying penalty and/or being penalized by the sanction system
- b) out of humanity and to support *Iddir* members
- c) commitment to maintain reciprocity
- d) peers social pressure (yilugneta)
- e) other (specify) _____

18. How often do you attend *Iddir* events?

- a) very regularly b) regularly c) irregularly d) very irregularly

19. If your answer is (a) or (b), what is your reason to do so? Please rank your reasons.

- f) not to take risk of paying penalty and/or being penalized by the sanction system
- g) out of humanity and to support *Iddir* members
- h) commitment to maintain reciprocity
- i) peers social pressure (yilugneta)
- j) other (specify) _____

20. How do you rate the participation of your co-members on meetings?

- a) very high participation b) high participation c) moderate participation
- d) poor participation e) very poor participation

21. How do you rate the participation of your co-members on events?
 a) very high participation b) high participation c) moderate participation
 d) poor participation e) very poor participation
22. If your answer is (a) and (b) for question 20 to 21, what are the reasons for the effective participation of members? Please rank your reason.
- a) not to take risk of paying penalty because of the sanction system
 b) out of humanity and to support *Iddir* members
 c) commitment to maintain reciprocity
 d) peers pressure (*yilugneta*)
 e) other (specify) _____
23. What measures does the *Iddir* take when members fail to discharge their responsibility? Mark in the box.
- a) Officials decide on the penalty on those who default
 b) decision will be made upon discussion with all members
 c) defaulting members will be discharged form the *Iddir*
 d) change the by-law
 e) other (specify) _____
24. How often does election of *Iddir* leaders take place_
- (a) every year
 (b) every two years
 (c) every three years
 (d) as required
 (e) others (specify) _____
25. How often does the *Iddir* by-law changed/revised?
 Every _____ year.
26. What conditions result in the changing of the by-law?
- (a) when there is shortage of finance
 (b) when number of members is high
 (c) when number of members is low
 (d) when members do not fulfill their obligations
 (e) upon the request of members
 (f) when members are in disagreement
27. Are you happy with the election procedure of your *Iddir*_
 Yes No

28. If yes, what is your reason? (please rank your response)

- (a) participation in leadership is equal
- (b) capable ladies should get the position
- (c) it will help the *Iddir* to be effective
- (d) Leadership position rotates
- (e) other (specify)_____

29. If your response is no to No. 27 please give your reasons below.

30. Which particular services and/or characteristics availed by *Iddir* do you think are the most valuable to you and your community? Please rank your responses.

- (a) Social
- (b) Psychological (condolence)
- (c) Financial
- (d) material
- (e) labor
- (f) others (specify)_____

31. Do you think the Women *Iddir* discharges its responsibilities effectively as an institution?

- a) very highly effective
- b) highly effective
- c) just effective
- d) poorly effective
- e) very poorly effective

32. If your answer is (a) or (b), what are the reasons? Please rank your response.

- (a) it provides equal support package to all members
- (b) it provides adequate room for participation
- (c) it maintains cultural/religious practice
- (d) it promotes trust/reciprocity among members (cooperation also)
- (e) it provides quite good economic support
- (f) it always meets its objectives
- (g) it is flexible in meeting members needs

33. If your answer is (d) or (e), what are the reasons? Please give your reasons.

34. Do you believe that your co-members will support you in the affairs other than prescribed by the *Iddir*?

Yes No

35. Why do you think *Iddir* members provide you such support? Please rank your reasons

a) members trust each other and all attempt to maintain reciprocity

b) It is traditionally accepted norm

c) *Iddir*'s sanction system is effective

d) Others (specify) _____

36. If your answer is (d) or (e), what are the reasons? Please give your reasons.

37. Has your *Iddir* and/or your co-members ever involved in activities of common interest other than prescribed by the by-law?

Yes No

38. If your response is yes to the above question, what in kind of activities have you been involved? Please mark in the box.

(a) fund raising (Equib) for personal use

(b) fund raising for business

(c) fund raising for supporting disadvantaged people

(d) fund raising for pilgrimages

(e) mobilizing labor for community activity

(f) mobilizing labor for other community activity (please specify)

39. Have you received support from your *Iddir* since you have been a member?

Yes No

40. If your response to No. 39 is yes, please fill the following table

Reason for support	Type and amount of support received				
	Financial in Birr	Labour in hours/days	Consumables	House hold items	Others

40 Do you prepare food and/or snack during Iddir meetings?

Yes No

41. If yes, how much do you spend for the preparation?

(a) for food/snack Birr _____-

(b) for drinks (including tea/coffee) Birr _____

(c) Time required for preparation hrs. _____, minutes _____

42. Under what condition have you become a member of this Iddir?

Part III: The Support package of Iddir to its members

Financial & Labor Support					
Type of event	Birr	Type of event	No. of particip	No. days on event	No. Hrs. on
		Death			
Death of child		Merdo			
Death of parents		Gurbitna			
Wedding		Wedding			
Sickness		Sickness			
Loss of job		Other (specify			
Graduation of a child					
Wedding of a child					
Other (specify)					

House hold materials (for ___ days)			Consumables			
Items	Unit	Birr	Items	Birr	Unit	Total
Dishes			Injera			
Glasses			1.2 Pulses Processed &			
Plates			Lentils (unprocessed)			
Mattress			Peas processed			
Mats			Shiro			
Bed covers			Spices			
Others specify			Paper (Bereber)			
			2 Vegetables and others			
			Onion			
			Potato			
			Cabbages			
			Carrots			
			Butter			
			Edible oil			
			Fuel wood			
			Others (specify)			
			Lump sum financial support for consumables			

Part IV

Questions for Iddir Leaders only.

2. When the Iddir you are currently leading incepted? _____
3. How many members does it have during its inception/ _____
4. What was the reason for the establishment of your iddir?
 - (a) maintaining traditional practice
 - (b) providing economic support
 - (c) observing a member's problem in mourning practices
 - (d) most of the members had experienced similar problem of mourning practices
 - (e) other (specify)
5. During the establishment of the iddir
 - (a) How much was the monthly contribution? _____
 - (b) If there was special contribution made for building iddir's capacity, indicate the amount of contribution?
 - (c) Have you adopted a by-law?
Yes No
 - (d) If no, when did you developed the by-law?
 - (e) The initial by-law was verbal or written (please underline)
6. Capital of Iddir
 - (a) had low capital: Birr _____ in 19____
 - (b) had large capital: Birr _____ - in 19____
 - (c) Current capital: Birr _____ - in 19__
7. Was there a time that the iddir face capital shortage?
Yes No
8. If yes, what measures did you take?
 - (a) members provide special contribution
 - (b) wait for monthly contribution
 - (c) look for other sources of finance
 - (d) others (specify)
9. what was the reason for shortage of finance?
 - (a) There was high incidences that involve financial support
 - (b) Number of members was low
 - (c) Members were not paying their monthly contribution on time
 - (d) Iddir's expenditure and income is not compatible

- (e) Other specify _____
10. what does a women/person who want to be your iddir member need to fulfil for signing membership?
- (a) must have a friend among members of iddir
 - (b) must live in the neighbourhood
 - (c) must not have large family size
 - (d) must be and have healthy family members
 - (e) must be able and agree to fulfil responsibilities assigned by the iddir
 - (f) must be friendly with iddir members
 - (g) other specify
11. how much does your iddir charge for registration (of membership)? Birr _____
12. How many new members is your iddir prepared to accept from now onwards? _____ members
13. how often do you conduct meetings?
- (a) every month
 - (b) every two months
 - (c) every six months
 - (d) every year
14. On average, how much time do you spend for meetings? _____ hrs. _____ minutes.

Figure 1 Weighted responses of respondents

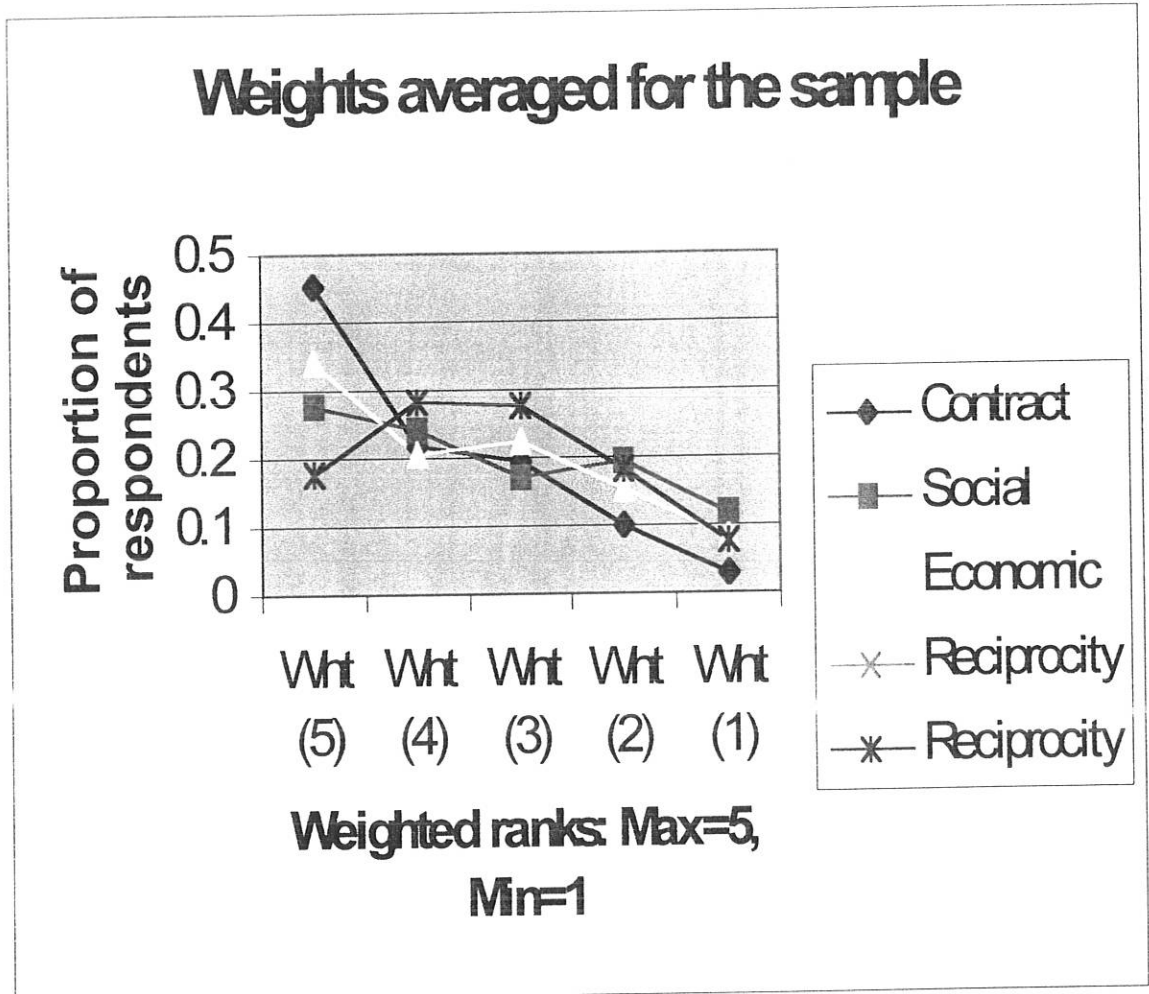


Figure 2 Reciprocity as a reason for attending meetings and events of risk

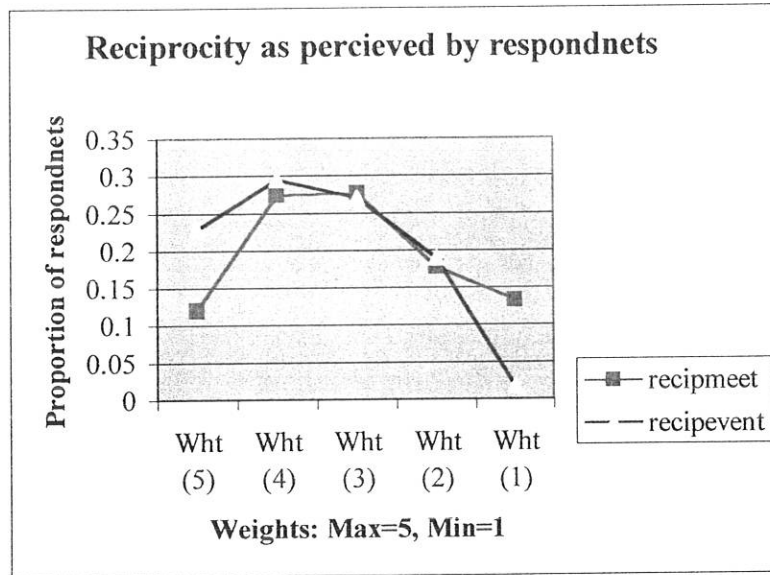


Figure 3 direct economic benefits as a rational for attending meeting and events of risk

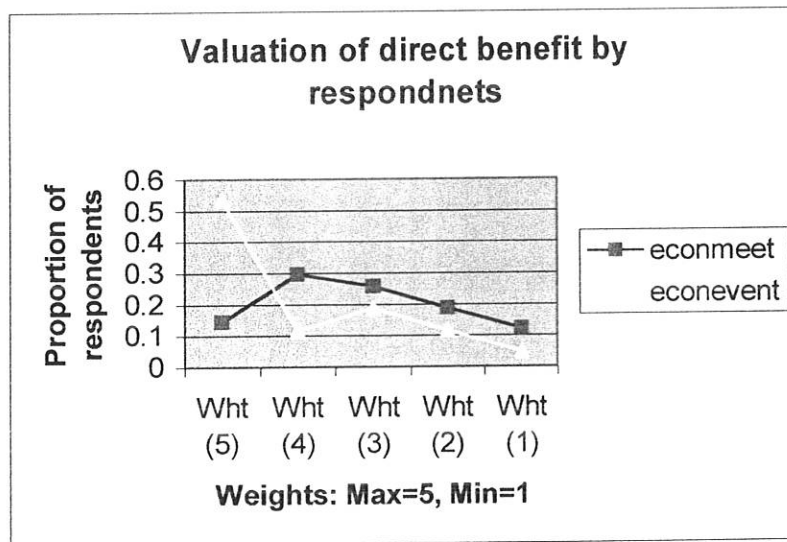


Figure 4 Institutional constraints as a rational for attending meeting and events of risk

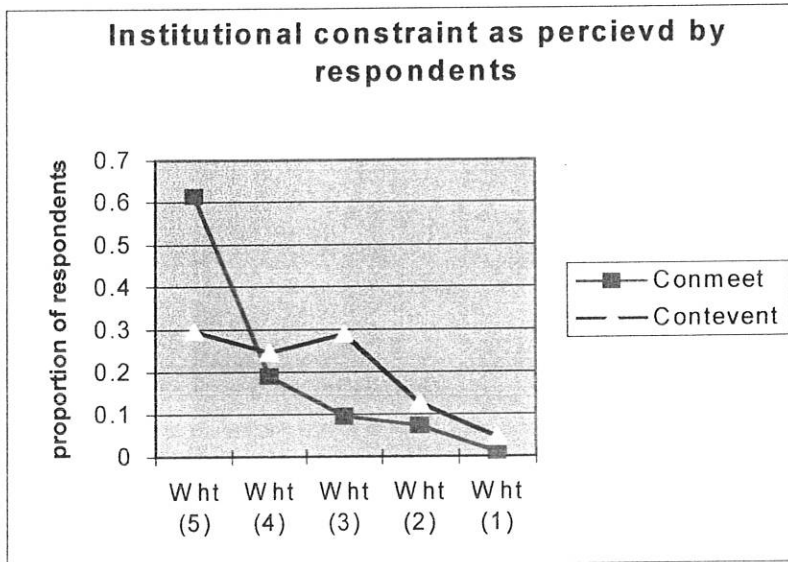
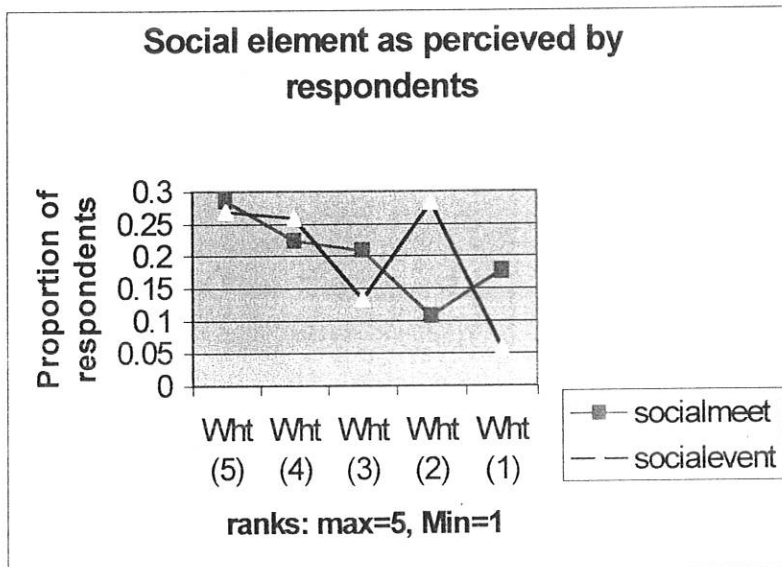


Figure 5 Social reasoning for attending meetings and events



DECLARATION

I the undersigned, declare that this is my original work and has not been presented for a degree in any other univesity. All references used for this thesis have been duly acknowledged.

Name: Teigist Lemma Dessalegn

Signature:

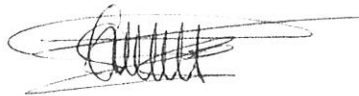


Date: June 19, 2000

Confirmed by the advisor

Name: Dr. Alemayehu Seyoum

Signature:



Date: June 19, 2000