

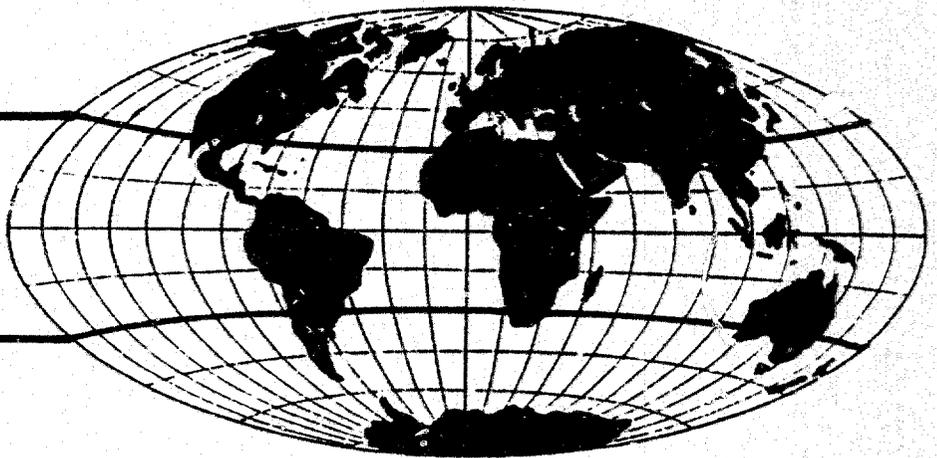
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COOPERATIVE AGREEMENT ON SETTLEMENT AND RESOURCE SYSTEMS ANALYSIS

WOMEN IN RURAL-URBAN EXCHANGE:
IMPLICATIONS FOR RESEARCH AND INTERVENTION IDENTIFICATION

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EXECUTIVE SUMMARY

The Settlement and Resource Systems Analysis (SARSA) project, within S&T/RD/RRD, has developed an applied research framework to guide research of income generating and multiplication processes in specific rural regions. This framework, called "rural-urban exchange" (RUE), is a practical tool for identifying interventions that foster exchange between farms and towns, so as to increase returns to farming while simultaneously promoting employment and enterprise opportunities in local towns.

SARSA RUE research places particular emphasis on local income multiplication effects because of their centrality to regional economic growth. Regional income multiplication involves the spending of income, generated initially through agriculture and marketing, on nonfarm goods and services sold and/or produced within the region. Local spending multiplies the initial income by becoming earnings for nonfarm entrepreneurs in nearby market towns, thereby promoting employment and enterprise opportunities. Market town development, in turn, improves agricultural productivity by increasing farmer access to markets, inputs, and services. This dynamic of agricultural income generation and multiplication, if sustained, is fundamental to regional economic growth.

Women's roles in agriculture in Sub-Saharan Africa have been fairly well documented. Women make important labor contributions to both food and cash crop production. However, because of the smaller incomes typically earned by women in comparison to men, women's direct impact on the cash economy has often been viewed as insubstantial. This study demonstrates both conceptually and empirically that as a result of their expenditure patterns, women make significant economic contributions to the town building process within rural African regions.

WOMEN'S CONTRIBUTIONS TO INCOME GENERATION AND MULTIPLICATION IN THE KUTUS REGION OF KENYA

Analysis of marketing surveys from a SARSA rural-urban exchange study in the Kutus region of Kenya reveals some marked differences between male and female marketers' channels of income generation and multiplication. More than 85 percent of the female marketers in Kutus specialized in the trade of food-related commodities, while about the same percentage of male marketers sold predominantly nonfood-related commodities. Although there were more retail than wholesale male marketers, long-distance wholesale traders were more often men than women. This finding was confirmed by data showing that male marketers travelled more than two and a half times the distance that female

marketers travelled in purchasing inputs, and were much more likely to operate in markets in addition to Kutus.

Male marketers were clearly more mobile than females, with their household responsibilities and their greater labor contributions to the family farm (as revealed by the data). Male marketers' access to distant, more lucrative markets likely contributed to the significantly larger revenues male marketers were able to generate as compared to females. Both the average monthly sales and average input expenditures of male marketers exceeded those of females by about 200 percent. The start-up capital that male marketers stated they accumulated from previous income generating activities exceeded women's by over 250 percent. (No one in the sample had obtained a formal loan.) This evidence demonstrates that women's marketing channels in Kutus are much more geographically circumscribed and undercapitalized than men's.

Both the limited mobility of female as compared to male marketers and women's provider responsibilities produced gender-specific channels of income multiplication. Female farmers in Kutus purchased food for the most part from traders in the open air market, who were predominantly women. Female marketers, in turn, were much more likely than men to purchase their inputs locally; more than 65 percent of female marketers as compared to 20 percent of male marketers purchased inputs inside the Kutus region. Moreover, fifty percent of female marketers and only 12 percent of male marketers purchased locally produced inputs. The propensity of female marketers to spend locally means that the income they generate redounds to the local area, contributing to rural economic development. Men's nonlocal spending, on the other hand, represents a loss of potential income to the region.

The findings presented in this study have important implications for A.I.D efforts aimed at promoting both agricultural and market town development. Previous WID research has shown the importance of women's incomes to child nutrition and education as well as fertility rates (Blumberg, 1988; Safilios-Rothschild and Mourugu, 1987); this study further reveals that getting resources into the hands of women will be critical to increasing the regional income multiplication that underlies rural regional development.

Gender-sensitive analysis of Kutus data showed that, because male and female marketers generate income through different channels, different interventions are often needed to promote their separate activities. For example, because of their provider responsibilities, women have a greater tendency than men to split their time between farm production and town-based marketing activities. Furthermore, because women make frequent, small purchases to provide for their families' daily needs, they tend to make repeated trips between farm and town. Thus, while the scope of their mobility appears to be limited to the region, female marketers are very mobile within this limited geographic

boundary. Consequently improved roads, recommended by SARSA for the Kutus region, will have a significant impact on freeing up women's time. SARSA suggested that road investments be targeted to networks used by farmers growing coffee, which appears to be a male crop; gender-sensitive RUE research indicates the importance of improving roads commonly used by women farmers and marketers.

Analysis of gender-disaggregated data from Kutus also suggested that loans tailored to small-scale female entrepreneurs would help mitigate the undercapitalization of women's economic activities. However, rural-urban exchange research, that examines the links between farm and nonfarm activities, also indicates that women may not be willing or able to expand their marketing activities even with greater access to credit. Female marketers in Kutus claimed that a constraint to expanding their business was the difficulty of spending more time away from home and their families. About half of the female marketers in Kutus devoted more than 50 percent of their work week to the family farm, where they could be close to their families and still be productive. Thus, interventions for increasing women's income generating and multiplying potential need to examine women's roles in rural-urban exchange -- including acquisition of inputs, agricultural production, marketing, processing, and consumption -- to understand fully their constraints and how these might be mitigated.

Analysis of Kutus data suggests that because women have a higher propensity to spend earnings locally than men, interventions that increase the returns to women's crops will be important to increasing regional income multiplication effects. The importance of women's contributions to local income multiplication is supported by other research in the subject area of rural-urban linkages. Haggblade, Hazell, and Brown, 1987; Hazell and Roell, 1983; King and Byerlee, 1977; and Simmons, 1976 indicate that household consumption expenditures, and especially those that are food-related, are most important to regional income multiplication effects in Sub-Saharan Africa (as compared to those associated with either backward or forward linkages with agriculture).

A GENDER-SENSITIVE RURAL-URBAN RESEARCH FRAMEWORK

This study underscores the importance of gender analysis to rural-urban exchange research, and more explicitly, provides guidance for incorporating gender analysis into SARSA's Rural-Urban Exchange (RUE) research framework. In doing so, this study examines those gender issues relevant to the identification of effective, gender-sensitive interventions that promote women's and men's income generation and multiplication potential in rural regions. Moreover, by incorporating gender analysis, it provides a basis for further enhancing the capabilities of SARSA's RUE

research framework to capitalize on the development potential of rural-urban exchange, and provides the Agency with an effective intervention planning tool.

NEED FOR FURTHER RESEARCH

SARSA research is based on the premise that sustainable dynamics of income generation and multiplication promote both agricultural growth and market town development. To the extent that these are key Agency objectives, improved concepts and methodologies for identifying interventions that bring this dynamic about should be a high priority. As shown by the forgoing analysis, gender differentials figure prominently into the identification of interventions for promoting income generation and multiplication in rural regions. To date, research in the subject area of rural-urban linkages has not examined sufficiently how gender influences individuals' ability to respond to changed economic incentives. This study is meant to provide an analytical framework and methodological basis for such further investigation.

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A. Women Make Important Contributions to Regional Income Multiplication

Women's roles in agriculture in Sub-Saharan Africa have been fairly well documented. Women make important if not primary labor contributions to both food and cash crop production. While these contributions to the economic base of most African rural regions certainly highlight women's importance to regional economic development, because of the smaller incomes typically earned by women in comparison to men, their direct impact on the cash economy has often been viewed as insubstantial.

This study demonstrates both conceptually and empirically that as a result of their expenditure patterns, women make significant economic contributions to the town building process within rural African regions. As a result of their provider responsibilities and social and cultural norms, women's economic spheres are often geographically limited. Thus, they have a tendency to spend income they control locally. Findings from field research in the Central Province of Kenya demonstrate the relative importance of women's as compared to men's local spending. They, furthermore, reveal that this local spending has a significant impact on regional income multiplication that may exceed men's, despite men's generally greater incomes. Regional income multiplication involves the spending of income, generated initially through agriculture and marketing, on nonfarm goods and services sold and/or produced within the region. Local spending multiplies the initial income by becoming earnings for nonfarm entrepreneurs in nearby market towns, thereby promoting employment and enterprise opportunities. Market town development, in turn, improves agricultural productivity by increasing farmer access to markets, inputs, and services. This dynamic of agricultural income generation and multiplication, if sustained, is fundamental to regional economic growth.

Women's contributions to local income multiplication are supported by other research in the subject area of rural-urban linkages. Haggblade, Hazell, and Brown, 1987; Hazell and Roell, 1983; King and Byerlee, 1977; and Simmons, 1976 indicate that household consumption expenditures, and especially those that are food-related, are most important to regional income multiplication effects in Sub-Saharan Africa (as compared to those associated with either backward or forward linkages with agriculture). Since women in Africa are almost everywhere responsible for expenditures on food and everyday household items, by inference, they contribute substantially to regional income multiplication.

These findings have important implications for A.I.D efforts aimed at promoting both agricultural and market town development. In order to tap women's potential contributions to rural regional development, interventions must be designed that improve their access to resources. Previous WID research has shown the importance of women's incomes to child nutrition and education as well as fertility rates (Blumberg, 1988; Safilios-Rothschild and Mourugu, 1987); this study further reveals that getting resources into the hands of women will be critical to increasing regional income multiplication effects that underlie rural regional development. This will require gender-sensitive research that distinguishes male from female production responsibilities, and income generating constraints and opportunities. In addition, it will require gender-sensitive interventions that mitigate women's constraints, thereby enhancing their access to land, labor, capital, and expertise and their ability to respond to improved economic incentives.

B. SARSA's Rural-Urban Exchange Research

The present study is based on research conducted by the Settlement and Resource Systems Analysis (SARSA) project within the Regional and Resource Development Division, the Office of Rural and Institutional Development, the Bureau for Science and Technology (S&T/RD). SARSA has taken the lead within S&T/RD for advancing research related to rural-urban linkages, and intended to foster rural regional development by promoting trade between farms and towns, and among towns.

SARSA research rests on the proposition that in order to sell their surpluses, farmers need markets that generally operate through urban centers. To be productive, they need inputs that are generally supplied by town-based enterprises; and to be motivated to produce, they need consumption goods and services upon which to spend net income earned. Urban enterprises are likewise dependent on rural household demand for their goods and services, and on farm output for many of their inputs. Thus, agricultural growth and urban/market town development both depend on rural-urban trade.

SARSA has developed an applied research framework, supported by widely accepted theories linking rural and urban development. This research framework, called "rural-urban exchange" (RUE), is a practical tool for identifying interventions that foster exchange between farms and towns, so as to increase the returns to farming, while simultaneously promoting local income multiplication effects, and thus employment and enterprise opportunities in towns.

The purpose of this study is to underscore the importance of gender analysis to rural-urban exchange research, and more

explicitly, to provide guidance for incorporating gender analysis into SARSA's Rural-Urban Exchange (RUE) research framework. As such, this report serves two purposes. First, in highlighting the importance of gender issues to rural-urban exchange, it provides an analytic framework for examining important-relevant gender issues and for identifying effective, gender-sensitive interventions that promote women's and men's income generation and multiplication potential in rural regions. The second purpose of this study is to strengthen the capabilities of SARSA's RUE research framework to capitalize on the development potential of rural-urban exchange and, thereby, provide the Agency with an effective intervention planning tool.

C. The Relevance of This to Study to Agency Initiatives

There has been growing recognition within A.I.D. of the importance of rural-urban linkages to the development process. Research in this subject area was initiated within the former Office of Urban Development, and has been furthered in the current Office of Rural and Institutional Development in the Bureau for Science and Technology (S&T/RD). SARSA's research has built on these past efforts.

The importance of promoting rural-urban linkages relates to their potential for addressing problems of rapid urbanization and, at the same time, promoting agricultural growth and integrating rural regions, that include market towns, into national development processes. By increasing employment and enterprise opportunities in market towns and intermediate sized cities in rural regions, the promotion of rural-urban linkages, it is reasoned, can stem the tide of rural-urban migration to over-populated metropolitan areas. Moreover, by enhancing the mutually beneficial exchanges between farms and market towns, promotion of rural-urban linkages can improve farmer access to inputs and household goods and services, while generating demand for nonfarm enterprises upon which town dwellers depend for their livelihood. Recognition of these potentials has spurred the Africa Bureau to make market town development a focus of future efforts, resulted in several A.I.D. sponsored regional conferences in Africa, and spawned a number of USAID funded small towns programs.

D. Outline of This Study

In the next chapter, SARSA's Rural-Urban Exchange (RUE) research framework is explained, albeit cursorily, since it represents the analytic foundation upon which a gender-sensitive methodology is built. A more detailed and in-depth discussion of the RUE research framework can be found in SARSA's Rural-Urban Dynamics Synthesis Report, (SARSA, 1988C). This explanation of the RUE

research framework is followed by an analysis of data resulting from the application of this research framework, by SARSA, in the Kutus region of Kenya. Although only part of the data collected in Kutus was gender-disaggregated, the gender-specific marketing data that does exist provides interesting insights into women's roles in rural-urban exchange. On the basis of this analysis, the interventions recommended by SARSA are assessed to see if additional, complementary, or different interventions are warranted in light of gender-sensitive RUE research.

Chapter III discusses the implications of gender analysis for RUE intervention identification. This discussion provides a conceptual framework for understanding gender issues important in rural-urban exchange, guiding gender-sensitive RUE research in a specific region, and identifying effective interventions. It is based on a synthesis of previous-related WID research, recent RUE-related literature, as well as findings from SARSA RUE research.

Chapter IV explores the methodological implications of gender analysis for RUE research. It provides explicit guidance on how to modify the RUE research framework so as to address gender issues that are most important to achieving the objectives of RUE research. These modifications are meant to increase the sensitivity and strength of the RUE research framework as a tool for identifying high potential development interventions, without adding unnecessarily to the research burden.

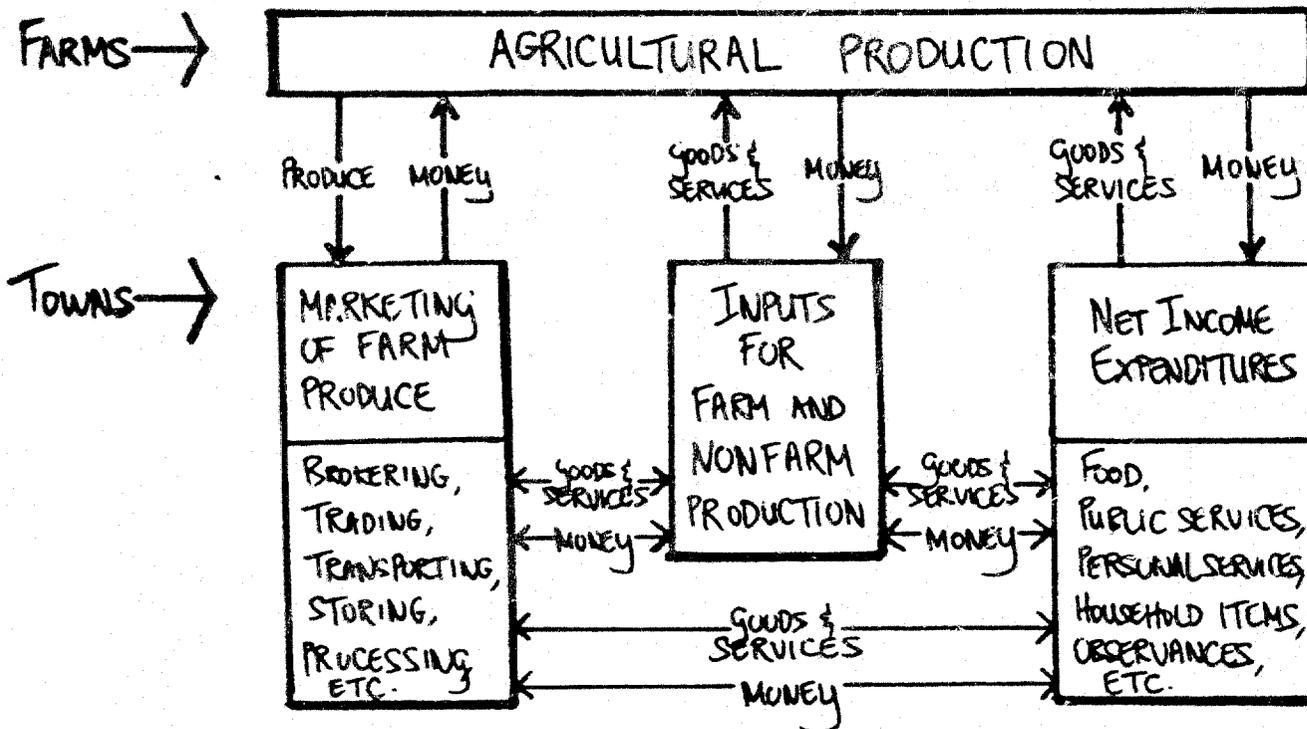
Chapter V concludes this report with a brief discussion of the need for field research to document women's contributions to regional income multiplication, test approaches to improving their contributions, and understand more fully the effect of women's economic activities and expenditures on agricultural and market town development in rural regions.

An annex is included that analyzes in-depth gender issues as they relate to components of the RUE research framework. This section is based on evidence provided by a breadth of WID research conducted in Sub-Saharan Africa. It is meant to provide RUE researchers attempting to understand gender issues in rural-urban exchange in the field with an extensive database of region-specific case studies. It clarifies how gender differentiations influence agricultural production, marketing, and income multiplication effects in rural regions of Africa. Additionally, it discusses in greater detail than chapter III the intervention implications of gender-specific constraints and opportunities as they relate to agricultural income generation and multiplication.

II. RURAL-URBAN EXCHANGE RESEARCH: WOMEN IN MARKETING IN THE KUTUS REGION OF KENYA

A. The Rural-Urban Exchange (RUE) Research Framework

SARSA's rural-urban exchange research framework consists of a conceptual model, representing categories of rural-urban exchange, that include marketing of farm produce, supply of farm production inputs, and supply of goods and services for net income expenditures, consisting to a large degree of household goods and services. These categories represent the potential channels through which income is generated from agricultural production and marketing, and then multiplied through expenditures on inputs and household goods and services. The purpose of the model, diagrammed below, is to provide a structured conceptual framework for guiding the research and organizing data for analysis.



RUE research is based on a proposition that is fundamental to the economic development process: when income generated in a region is spent on locally produced and/or sold goods and services, the resultant income multiplication translates into local employment and enterprise opportunities and essentially broad-based regional development. The RUE research framework is a guide for investigating the agricultural income generation and multiplication processes in a specific rural region, in order to be able to identify interventions that build on the strengths of the

existing economy. Since agricultural income generation and multiplication are, for the most part, the result of exchanges between farm-based and town-based activities, RUE research, as its name implies, focuses the research effort on the three categories of rural-urban exchanges (input supply, marketing, and provision of household goods and services), and income earned from them.

In order to translate this conceptual model of a regional economy into more operational terms relevant to field research in a specific region, the RUE research framework utilizes key commodity systems analysis. In RUE terms, a commodity system is essentially a commodity-specific application of the conceptual model diagrammed above. In order to minimize the research burden and to narrow the research effort, RUE analysis focuses on three or four key commodity systems in a rural region; these are meant to be reflective of local agricultural income generation processes.

RUE intervention identification is based on information that largely comes from tracing the channels or transaction points through which income is generated initially by key commodity production and marketing; multiplied in the first round through expenditures by farm households on inputs and household goods and services often provided in towns; and multiplied in the second round by those involved in nonfarm activities through expenditures on their own inputs and household goods and services (Income multiplication is represented in the diagram above by horizontal arrows). These second round expenditures generally constitute exchanges within and/or between towns.

By tracing these flows of produce, goods and services, and revenue from transaction point to transaction point, RUE research is able to obtain a number of critical pieces of information. First, it is able to calculate, albeit in approximate terms, the portion of the final commodity price received by farmers and traders inside and outside of the region, and to obtain the input costs at each transaction point. This information reveals whether the prices received by farmers are relatively low as compared to those obtained by retail traders and wholesale traders; whether trader input costs are high due, for example, to inadequate infrastructure; or whether the mark-up that traders receive is high because of unfair trading relationships with farmers. This information points to possible interventions that might increase farmers' returns. Moreover, a high differential between the price at the last transaction point inside the region and the point of final sale indicates an opportunity for capturing more value added within the region.

Second, RUE research is also able to calculate the portion of income accruing to farmers and produce marketers that is spent, in the first round, inside the region on production inputs and

household goods and services. The portion that remains in the region after the first round of expenditures by farm households constitutes earnings of local nonfarm entrepreneurs. When these entrepreneurs, in turn, spend their earnings, in what is termed the second round of spending, on locally produced and/or sold inputs and household goods and services, this spending adds to the income multiplication effects.

At each transaction point the money that leaks outside the region through first and second round expenditures (due to purchases outside the region or purchases of imported goods) is tabulated against that which is spent inside the region. The inside portion, while not technically a multiplier, is a good indication of income multiplication effects. The measurement of these inside and outside shares at different transaction points reveals activities and locations associated with low income multiplication effects. This information, thereby, becomes useful for guiding the research towards possible intervention opportunities.

The economic analysis discussed so far is descriptive of the operation of a regional economy in terms of quantities traded, prices charged, revenues earned, and income multiplication effects. In order to intervene into this system of rural-urban exchanges so as to increase returns to farmers and income multiplication effects, it is necessary to know about more than economic indicators. In order to identify incentives that will motivate or enable farmers to produce more, for example, it is necessary to understand those factors in the social, political, and policy environment, or what RUE refers to as the "conditioning environment," that constrain and/or condition entrepreneurial behavior. RUE combines its economic analysis with a research effort that focuses on the most important factors that constrain production and exchange in a rural region.

B. RUE Research in the Kutus Region of Kenya: Gender-Disaggregated Data

SARSA conducted RUE research in the Kutus region of Kenya in 1987\88 in order to provide the Government of Kenya with information to be used in developing and expanding its Rural Trade and Production Centre (RTPC) program. This program was initiated to implement the government's Rural-Urban Balance Strategy, aimed at increasing employment opportunities on farms and in small urban centers, and relieving pressures of rapid and unorderly urbanization. Limited resources and the fact that SARSA's RUE research framework was still in an early stage of development and testing resulted in the omission of gender analysis from the original study. But despite the absence of a systematic application of gender analysis, some gender-disaggregated data was collected. This included data on male and

female marketers in Kutus. The analysis presented in this chapter is largely based on SARSA market surveys, and thus represents only a partial application of the RUE research framework. Data related to agricultural production, farm input supply, and provision of household goods and services is largely unanalyzed because of either incomplete or unavailable gender-disaggregated data.

The discussion of gender issues in rural-urban exchange in Kutus begins with an overview based both on the analysis of Kutus data and a review of recent WID research (see annex). This discussion explores the diversity of ways in which men and women in the Kutus region divide themselves between farm and nonfarm activities and rural and urban areas in efforts to maximize their income generating opportunities. A sketch is then presented of women's roles in key commodity systems selected for study in Kutus. Although the data is incomplete, a fairly reliable though still partial picture can be pieced together of what crops women and men control respectively, and where and how they market their surpluses and spend income earned. The body of the chapter is devoted to an analysis of male and female marketers in Kutus, and their different channels of income generation and multiplication. Finally, the interventions recommended by SARSA's original study are assessed in light of gender-sensitive RUE analysis.

C. Spatial Aspects of Gender and Rural-Urban Exchange in Kutus

Gender-disaggregated data from SARSA's RUE study in Kutus suggests some interesting relationships among gender, economic activity categorized as either farm or nonfarm, and location between farm and town. It appears that in the Kutus region entrepreneurs creatively use these variables in various combinations and permutations, searching for a diversity of income generating opportunities that will spread their economic risks in a resource scarce and uncertain physical and economic environment. In other words, within a conjugal unit, husbands may live, partly if not mostly, in town engaged in some nonfarm activity, while their wives live on the farm, growing food for the family and perhaps generating income from cash crop production. Or wives may be full-time marketers in town, but also spend additional hours on the family farm, while their husbands are full-time farmers, full-time urban wage earners, or some combination thereof.

The Kutus data suggest that just as households cannot necessarily be categorized as farm or nonfarm, neither can they be easily categorized as urban or rural. In many cases, one spouse may live either intermittently or on a fairly regular basis in town while the other lives on the farm. By diversifying both the nature of their economic activities and the location of these activities and dividing both activities and locations between

husband and wife, families find the combination of economic activity and location that provides them with the greatest income generating opportunities, while spreading the risks involved in any one venture.

These general observations are supported by the data. Of the 23 female marketers interviewed, over 50 percent said that they had a farm in addition to their marketing enterprise in Kutus town. Moreover, half of the female marketers owning a farm devoted at least half of their weekly work time to farming, while working "full-time" in their marketing enterprise as often as the male marketers interviewed. Just over forty percent of the female marketers owning a farm claimed they lived in town. One female respondent, living in Kutus town and fully employed by her marketing enterprise, stated that her husband was responsible for the farm which was located outside of the region; another said that her son worked the farm, while she lived in town. Another female respondent lived in town, though devoted 70 percent of her time to a family farm in the region. Her biggest impediment in expanding her marketing business, she stated, was "leaving her household alone."

Of the 26 male marketers interviewed, over 60 percent owned a farm in addition to their marketing enterprise. There was a greater tendency for farms owned by male marketers (as compared to female marketers) to be a considerable distance from Kutus region. Half of the male marketers owning a farm devoted no labor to it, either their wife or their family worked the farm; just over thirty percent were residents of Kutus town.

D. Gender and Commodity Systems Analysis in Kutus

The key commodities SARSA selected for study in Kutus included coffee, the primary cash crop in the area; maize, an important staple; and tomatoes, a partly commercialized crop showing promise for further expansion. In accordance with RUE commodity systems analysis, data were collected in separate modules from farm households, marketers, and town enterprises in order to document commodity-specific marketing and input supply channels and to ascertain household consumption expenditure and multiplication effects. While this documentation was largely not gender-specific, both field observation and data matching descriptions of women's activity documented by WID research suggests a fairly reliable picture of women's roles in key commodity systems in Kutus, including the crops that they control and the channels through which they market these commodities.

Coffee in Kutus is marketed through the Coffee Cooperative structure, which consists of factories and societies in the region and the Union itself, located outside of the region. Field observations led researchers to conclude that men

controlled coffee, making the major decisions concerning input expenditures and marketing. This assertion, however, should be viewed within the context of Safilios-Rothschild's and Mourugu's work (1987) near the much larger and more urbanized market of Karatina, about 20 kilometers from Kutus. Here they found women significantly involved in coffee production. While research in Karatina may indicate that categorizing coffee solely as a male crop is an overstatement, the smaller size and less developed character of Kutus as well as SARSA surveys suggest that the overall transfer of agriculture to women, as suggested by Safilios-Rothschild's and Mourugu's research, has not taken place in Kutus to the same extent as in Karatina. Given this, coffee production in Kutus may still be largely a male-dominated activity.

Rural-Urban Exchange in Kutus Town and Its Hinterland (SARSA, 1988A), SARSA's final report, states that farmers market maize through two channels. They sell either to open air market or store traders, both of whom are located in Kutus town. SARSA surveys indicate that these two marketing channels are gender-differentiated; women clearly predominant in the open air market, while both women and men own the fixed stores. Open air traders tend to buy in small amounts, use few if any inputs, and pay farmers a relatively low price. They only sell for home consumption, and thus operate outside of the regulated maize market. Store traders, on the other hand, of whom a substantial number are men, sell to the National Cereals and Produce Board (NCPB) outside the region at a regulated price and through regulated channels. In contrast to the female traders in the open air market, store traders insist on buying only in larger amounts, spend more on inputs, and offer farmers a higher price. Their operations are more capital-intensive than those of female open air traders, though their higher revenues more often leak out of the region through expenditures on imported inputs.

SARSA'S Kutus report also states that a substantial number of maize farmers sell to open air traders in small amounts on a fairly regular basis; these farmers tend to use maize revenues for purchasing inexpensive everyday items. Expenditure patterns associated with maize marketing are almost identical to those found by Lawson in Ghana (1962) and Guyer in the Cameroon (1980), thus suggesting that maize farmers in Kutus are largely women. This evidence suggests a distinct female channel of income generation. It appears that maize is largely a women's crop, grown by women and sold off in small amounts in order to purchase food and other household supplies on a frequent basis. These small amounts are sold to female traders in the open air market, who appear to specialize in meeting the needs of women farmers. These traders, in turn, only sell for household consumption; and since women almost universally have the responsibility of purchasing food, it is most likely that these female traders sell to female consumers.

Field observations suggest that both women and men sell to store traders, particularly after a good harvest when they have larger amounts to sell. But it is mostly women who sell maize in small amounts, at a price that is lower than that offered by store traders. Although the price that many women receive for their maize is relatively low, the advantages of ready liquidity offered by marketing maize through the open air market obviously is well worth the costs.

While there is insufficient evidence for determining whether tomatoes are a male or female crop in Kutus, the data do indicate that retail tomato trade is dominated by women. Wholesale trade, on the other hand, involves both men and women, though men likely outnumber women. Thus, the marketing channels for this commodity appear to be largely gender distinct, with men commanding the most lucrative and capital-intensive enterprises, and women the less profitable though functionally very important marketing for home consumption.

E. Gender-Specific Marketing Channels in Kutus

To explore whether channels of income generation were gender-specific in Kutus, the following characteristics were examined: the nature of male and female marketers' businesses in terms of the type of good or service sold; whether the good or service sold was food or nonfood-related; whether male and female marketers were employed full-time or part-time by their enterprise; whether they own the enterprise; and in order to assess the size of their operation, the value of monthly sales, the amount spent monthly on inputs, and the number of workers employed.

Not surprisingly, the livestock trade in Kutus was dominated by male marketers. Men additionally specialized in selling hardware: almost 35 percent of male marketers and less than 5 percent of female traders sold hardware. Female marketers, on the other hand, predominated in fruit and vegetable selling: over 65 percent of female marketers and just over 25 percent of male marketers were involved in fruit and vegetable marketing. Eighty-seven percent of the female marketers sold food-related items, while 86 percent of the male marketers sold nonfood-related items, indicating fairly clear gender-differentiated channels of marketing in Kutus.

There was no significant difference between male and female marketers and their full-time or part-time employment status. Over 60 percent of the sample of male marketers and just less than 50 percent of female marketers were employed full-time by their marketing enterprise. Likewise, there was no statistical difference between gender and ownership of the marketing

enterprise; over 95 percent of the men owned their business, and 100 percent of the women interviewed owned their business.

However, data on mean value of monthly sales and input expenditures revealed dramatic gender differentiations. Male marketers had (mean) gross revenues that exceeded women's by almost 200 percent. Similarly, male marketers mean input expenditures was more than twice that of female marketers (see Table 1).

Table 1

THE MEAN VALUE OF MONTHLY SALES AND INPUT EXPENDITURES*
OF MALE AND FEMALE MARKETERS IN THE KUTUS REGION

	Mean Value in KSh.	
	Sales	Input Expenditures*
Males	12,248	8,921
Females	6,549	4,284

Significant at a 95% confidence level.

* Inputs expenditures include all costs including costs of goods sold

Source: Computed from survey database for SARSA 1988A.

Data on the number of workers employed by male and female enterprises revealed that only thirteen percent of the female-owned marketing enterprises as compared to over 40 percent of the male-owned employed either full- or part-time workers.

WID research has documented the types of constraints often experienced by women operating small-scale nonfarm enterprises. These typically include time and mobility constraints accruing from women's dual role of income earner and housekeeper, as well as scarcity of start-up and operating capital (Otero, 1987). To explore constraints faced by female marketers in Kutus, the following variables were examined: distance travelled to purchase inputs; whether traders operated in markets in addition to Kutus; amount of start-up capital; and the value of monthly sales.

Mobility constraints are suggested by the distance that male as compared to female marketers travel to purchase inputs, and by their contrasting tendencies to operate in markets other than Kutus. Table 2 shows that men travelled more than 2.5 times as far as women did in purchasing inputs. (There was no significant

difference in the mode of transportation used by male and female marketers.) Table 3 reveals that over 55 percent of the male marketers and just over 20 percent of the female marketers operated in markets in addition to Kutus, suggesting the greater mobility of male marketers.

Table 2

DISTANCE MALE AND FEMALE MARKETERS IN KUTUS
TRAVEL TO PURCHASE INPUTS

	<u>Mean Distance</u> in Kilometers
Males	75.3
Females	23.3

Significant at a 95% confidence level.

Table 3

MALE AND FEMALE MARKETERS THAT OPERATE
OUT OF MARKETS IN ADDITION TO KUTUS

	<u>Only</u> <u>Operates</u> <u>in Kutus</u>	<u>Operates</u> <u>Out of</u> <u>other market</u>	<u>All</u>
	No./ (%)	No./ (%)	No./ (%)
Males (%)	11 (44%)	14 (56%)	25 (100%)
Females (%)	18 (78%)	5 (22%)	23 (100%)
ALL	29 (60%)	19 (40%)	48 (100%)

CHI-SQUARE = 5.880 WITH D.F. = 1
Significant at a 95% confidence level.

Source: Computed from survey database for SARSA 1988A.

In addition to their marketing activities, women more than men contributed significant amounts of labor to the family farm. Almost 50 percent of female marketers or their families owned a farm; of these more than half devoted at least 50 percent of their weekly work time to the family farm. Although 60 percent of the male marketers owned a farm, less than 13 percent of these spent more than 50 percent of their weekly work time working on the family farm. These data indicate that women more than men engage in both farm and nonfarm activities in town and on the farm, and since there is no difference in their employment status, it appears that women marketers work more hours per day than men. This seems particularly likely when the hours women devote to farming and marketing are combined with time consumed by their household responsibilities and frequent travel between town to farm.

Table 4 shows that, on the average, male marketers in Kutus have over 2.5 times the start-up capital available to them that female marketers do. Almost all marketers interviewed claimed that this capital came from savings. Thus, women marketers seeking start-up capital perceived their constraint to be an inability to accumulate sufficient amounts of capital from previous or other income generating activities to invest in a new and perhaps more profitable venture.

Table 4

START-UP CAPITAL OF MALE AND FEMALE MARKETERS IN KUTUS

	<u>Mean Start-Up Capital</u> KSh.
Males	2,841
Females	766

Significant at a 95% confidence level.

Source: Computed from survey database SARSA 1988A.

F. Gender-Specific Channels of Income Multiplication in Kutus

In order to explore women's contributions to local income multiplication effects, the location of input purchases and location of production of inputs are analyzed for male and female marketers. The more marketers purchase inputs locally, and the more these inputs are locally produced, the greater the income

multiplication effects. Data on value of monthly sales and expenditures on inputs indicate that while men generate much larger gross revenues with which they spend more than twice as much on inputs (see Table 1), they are much more likely than women to purchase these inputs outside of the region. Thus, a significant portion of their expenditures on inputs leak outside of the region, and do not contribute to local income generating processes. Women, on the other hand, buy the majority of their inputs inside Kutus region. Table 5 reveals that two-thirds of the female marketers purchased inputs locally, while less than 20 percent of the male marketers did so. Men most commonly purchased inputs in Nairobi, while women more often purchased them in Kutus town. This finding is supported by data comparing the mean distance travelled by men to purchase inputs as compared to women; men travelled more than three times the distance travelled by women.

Table 5

LOCATION OF INPUT PURCHASES:
MALE VERSUS FEMALE MARKETERS IN KUTUS

	Kutus Town	Inside Region Outside Town	Outside Region Inside District	Elsewhere Kenya	All
	No./ (%)	No./ (%)	No./ (%)	No./ (%)	No./ (%)
Males	2 (8%)	3 (11%)	5 (19%)	16 (62%)	26 (100%)
Females	8 (38%)	6 (29%)	2 (9%)	5 (24%)	21 (100%)
ALL	10 (21%)	9 (19%)	7 (15%)	21 (45%)	47 (100%)

CHI-SQUARE = 11.243 WITH D.F. = 3
Significant at a 95% confidence level.

Source: Computed from survey database for SARSA 1988A.

Data describing where inputs of male and female marketers were produced affirm that women are more likely to purchase locally produced inputs. Table 6 reveals that 50 percent of women marketers and only 12 percent of male marketers purchased locally produced inputs for their marketing enterprises.

Table 6

**LOCATION OF PRODUCTION OF INPUTS:
MALE VERSUS FEMALE MARKETERS IN KUTUS**

	Inside Region	Outside Region Inside District	Outside District Elsewhere in Kenya	All
	No./ (%)	No./ (%)	No./ (%)	No./ (%)
Males (%)	3 (12%)	4 (16%)	18 (72%)	25 (100%)
Females (%)	11 (50%)	3 (14%)	8 (36%)	22 (100%)
ALL	14 (30%)	7 (15%)	26 (55%)	47 (100%)

CHI-SQUARE = 8.403 WITH D.F. = 2
Significant at a 95% confidence level.

Source: Computed from survey database for SARSA 1988A.

Analysis of marketing data from SARSA's Kutus study demonstrates a number of important principles concerning women in rural-urban exchange. Women and men face different constraints and opportunities in choosing, starting, and operating income generating activities and, as a result, tend to generate income through different production and marketing channels. Differences in women's and men's economic activities and constraints associated with these activities surely mean that in some cases different interventions will be needed to unleash women's and men's income generating potential.

An additional RUE principle highlighted by analysis of Kutus data is that, as a result of their mobility constraints, proportionally women's income contributes more to regional multiplication effects than men's. Thus, increasing women's access to income is important to increasing local income multiplication effects.

G. Gender and RUE Intervention Identification in Kutus

SARSA's Kutus report states that the interventions suggested by RUE analysis "should not be taken as recommendations per se,

since detailed examination of feasibility, funding, cost recovery, ... and related matters ... were beyond the scope of the research effort" (SARSA, 1988A). Rather the interventions suggested were offered as an objectively based starting point for further consideration by the government, local authorities, and others. Further consideration would require, among other things, examination of the likely consequences of different interventions, including possible losers and beneficiaries. This section examines SARSA's intervention suggestions in terms of the likely consequences for women as compared to men in light of the gender-sensitive analysis presented above.

Kutus has recently built a new market, with improved facilities and more permanent structures for businesses than exists at the old market. This new market, however, is located off of an unpaved road, a short distance from the main artery through the region; the old market, on the other hand, is situated on this main paved road and thus is more accessible to farmers and marketers. Local authorities have suggested that this old market be closed down, perhaps so as not to compete with the less favorably situated new market. Nevertheless, SARSA recommended a number of improvements to benefit both the new and old market, thereby suggesting that they be allowed to exist side by side.

How will men and women marketers benefit or lose respectively from the decision to abandon the old market, or the scenario whereby the old is allowed to coexist with the new market? While no definitive answer can be given without further research, caveats can be posited that might be valuable to "further considerations" of these scenarios. There are a number of possibilities whereby women marketers could be negatively affected by decisions regarding the Kutus market. Initially there were complaints that the area designated for open air marketers was too small, and would not accommodate as many traders as the old market. Although efforts have been made to address this problem, the question remains who will lose out if space is limited. If higher fees are charged as a means of rationing limited space, women, with their severe capital constraints, will be more likely to lose the competition for space in the new market. Moreover, if there is limited space, women may be at a political, cultural, as well as economic disadvantage in bidding for this scarce resource. Given women's important role in retail commodity marketing and their contributions to local multiplication effects, interventions should be devised that will ensure that women are not unduly harmed by decisions regarding the new and old market.

In the Kutus final report, SARSA suggested that roads in the region need improvement. Coffee, maize, and tomato farmers complained of the impassable condition of roads during the rainy season and their resultant difficulty in getting produce to market. SARSA makes particular mention of the need to improve

society-to-coffee factory roads and those used by tomato growers, who are susceptible to losing their highly perishable commodity if transportation to market is delayed. Gender-sensitive analysis of the Kutus data, however, underscores the importance of transportation improvements for women with their often severe time and mobility constraints. Moreover, because maize farmers, who appear to be largely women, tend to market their maize frequently, they are especially sensitive to the cost and time of travel. This evidence, combined with WID research showing women's willingness to respond to new opportunities (Henn, 1983) strongly suggests that improvement of roads used by women farmers can make substantial contributions to regional income generation and multiplication effects.

According to SARSA research, farmers in the Kutus region claimed that lack of labor was a constraint on current production. This finding was paradoxical given the region's 15 percent unemployment rate. Field observations depicted numbers of men sitting all day in front of the service station or stores, seemingly unemployed. As a solution, SARSA recommended a labor exchange, organized by local authorities both to examine the nature of the problem and help the unemployed find work. Gender analysis, however, suggests that this solution will not work if the labor shortage is gender-related. For example, men may not be willing to accept a wage job if cultural norms deem it to be "women's work." Moreover, because women's food production renders such small returns in relation to men's export crop production, men may be unwilling to work in food production, even if the alternative is unemployment.

Interventions suggested by SARSA's RUE research are meant to unleash the income generating and multiplying potential of farmers and nonfarm entrepreneurs in a given region. This study argues that women are important parts of this potential. In order to unleash their contributions to regional income generation and multiplication, women's access to resources needs to be increased. SARSA's suggestion of relaxing price controls on maize as a solution to low producer prices for this crop would likely increase women's resources. Henn's (1983) research in Cameroon demonstrated that "if women discover an effective opportunity ... they are, according to a wide body of evidence, eager to increase their output (Henn, 1983:1044).

However, because an important channel women use for marketing maize is outside of the policy environment, the effect of higher producer prices on women is more complicated than may appear at first glance. Moreover, larger producers may disproportionately benefit from relaxed producer prices during the off-season for maize when prices rise and small producers are often net buyers rather than net sellers. Given seasonal price fluctuations, will the majority of women farmers actually benefit from such a policy change. These issues make clear the need for additional analysis

to determine the differential effects of higher producer prices on various social groups.

Moreover, the Kutus data reveal that significantly fewer inputs are devoted to maize as compared to coffee production. Men's higher income generating crops commonly receive the bulk of inputs purchased by the household (Henn, 1983). Thus, increasing women's access to inputs will be important to enhancing their ability to respond to higher producer prices.

Another intervention suggested by SARSA was the formation of a revolving loan fund for small businesses. Given the small amounts of start-up capital that female marketers in Kutus were able to accumulate for their enterprise, such a fund would likely be effective means for increasing women's income generating potential. There are numerous cases in which women have revealed themselves to be good credit risks; they have not only proven their deft entrepreneurial skills, but also demonstrated their ability to repay loans on schedule. A Christian Science Monitor article (September 30, 1987:16) quotes the director of the Foundation for International Community Assistance (Finca): "We try to guide money into the hands of women. If the money is available to the wife, she will spend it on rapid-turnover investments like buying and selling vegetables, raising chickens or pigs. She knows what to do with her \$50." According to this director, men know less about the day-to-day realities of the local market because they do not share the same responsibilities that women do for the survival of the family.

In order to make credit more available to women, however, collateral substitutes and streamlined loan procedures may be necessary. Many women may not be eligible for loans with collateral requirements such as land or capital equipment ownership. However, experiments like the Grameen Bank have demonstrated that group lending and collective responsibility for loans are a viable replacement for formal collateral. Moreover, because women with relatively low levels of education are likely to be inexperienced in applying for a loan and perhaps intimidated by formal loan procedures, technical assistance and training sessions might be offered to clarify loan procedures and assist with applications.

The intervention implications of gender-sensitive RUE research are only partially explored in this reanalysis of Kutus. Without a complete set of gender-disaggregated data, it is only possible to surmise women's critical farm production constraints and contributions to regional income generation and multiplication processes. The conceptual analysis presented in the next chapter explores the full implications of gender analysis for RUE intervention identification.

III. GENDER AND RUE INTERVENTION IDENTIFICATION

RUE commodity systems analysis as developed by SARSA provides the conceptual and practical means for making an analytical distinction between men's and women's channels of income generation and multiplication. By tracking flows of goods and money through discrete transaction points, attention can be focused on individuals involved in input supply, production, and marketing, and on the particular opportunities and constraints that they face. This type of information enables an assessment of the relative contribution women and men make to regional income generation and multiplication; the spatial and economic channels through which they do so; the combination of factors that inhibit them from expanding their respective production and consumption practices; and the precise types and locations of interventions required to accomplish this end.

In many parts of Africa, channels of income generation and multiplication are not only commodity-specific, they are also gender-specific. Gender distinct channels are associated with different transaction points and involve different combinations of actors, organizations, and institutions. In turn, the transaction points articulating women's and men's respective channels may be associated with distinct economic possibilities and limitations. Because women's channels of income generation and multiplication are generally different than men's, a different set of interventions may be required to increase returns to female farmers and enhance women's ability to contribute to income multiplication.

A. Intervention Implications of Gender-Specific Channels of Agricultural Income Generation

To explore the intervention implications of gender-specific channels of income generation, this section analyzes in conceptual terms the input supply, production, and marketing systems through which male and female farmers earn cash income from rural-urban exchange. This analysis builds on and draws from a review of recent-related WID research (see annex).

For agricultural production to take place, farmers require access to a variety of inputs, including seeds, fertilizers, equipment, training, and credit. The extent to which such inputs are available for use on a particular crop can have important implications for income generation. When some or all of these inputs are not readily available, productivity may suffer, the level and/or quality of output may fall, and returns from that crop may decline. Labor may be diverted from other income-generating activities in order to compensate for the absence of inputs, further diminishing regional income generation. Thus

packages of interventions designed to increase returns to farmers frequently include measures for enhancing the availability of key production inputs. These interventions may include changes in pricing policies and institutional reorganization as well as improvements in infrastructure.

For the purpose of identifying interventions, it is important to recognize that women and men may require different inputs to the extent that they are involved in production of different crops. Moreover, they tend to face different economic, social and practical constraints in acquiring inputs. Women typically encounter greater difficulties in obtaining title to land and/or independent credit. Prevailing gender biases may restrict women's participation in cooperatives, or prevent them from meeting with male extension agents. Additionally, women frequently have less income available for spending on inputs, since men tend to monopolize most of the high-return agricultural activities, and women are typically expected to spend whatever income they do earn on food and other necessary household goods. Furthermore, women's traditional responsibility for raising children and maintaining the household may influence the way they allocate scarce resources, and limit the time they have to invest in efforts to procure inputs. Their socially-induced mobility constraints, in conjunction with generally poor roads and limited transportation, may further complicate acquisition of inputs.

As a result of these types of constraints, women may be forced to rely on traditional substitutes (e.g., manure rather than commercial fertilizers), on kin networks and children's labor, and ultimately on themselves, devoting more of their own time and energy to their production activities. The mechanisms that women use to compensate for inadequate access to production resources may, in turn, influence their ability to undertake a different set of production activities in response to a particular intervention. For example, women who grow maize primarily to feed their children may not be able to divert time from this activity to some newly-introduced, more lucrative cash crop without jeopardizing their children's well-being. However, a complementary intervention that reduced necessary labor inputs to maize, such as facilitating women's access to fertilizers for maize production, might allow these women to combine subsistence maize with cash crop production more effectively.

Thus, gender differentials in access to key production inputs potentially have important implications for interventions aimed at increasing returns to farmers. Interventions that improve the supply of fertilizers through local cooperatives, for instance, but fail to improve women's independent access to membership benefits are substantially less effective than they might be. Extension packages that presuppose sufficient labor to generate marketable surpluses may not be viable options for labor-scarce female-headed households which are among the poorest and most in

need of technical assistance. Attempts to increase returns to farmers by intervening into the input supply systems of particular agricultural commodities must be based on knowledge of the gender-specific constraints governing access to key production resources.

Gender differentials in agricultural production also have important implications for RUE intervention identification. Production of a marketable surplus is a fundamental prerequisite for income generation. Size of the surplus produced will depend on factors such as the quality of the natural resource base, inputs available for the crop in question, and the amount and type of labor available. Interventions designed to promote income generation frequently focus on improving productivity in order to increase returns from particular commodities. Productivity-enhancing interventions include improving the supply and quality of current inputs, providing irrigation, equipment, and training, and reducing waste. For purposes of identifying interventions, the particular production requirements of the crops in question need to be assessed. Foremost among the factors to be considered is which household member presently contributes labor to that crop, and whose labor contributions are expected to increase given the proposed intervention. For this reason, regionally-specific sexual divisions of labor play a part in determining the types of interventions that will be effective in increasing returns to particular commodities.

Given gender- (and age-) based divisions of labor, units of household labor are not interchangeable. Men and women usually perform distinct agricultural tasks. In many parts of Sub-Saharan Africa, entire crops are often considered to be "women's" or "men's" as measured by labor contributions and/or control over returns. Furthermore, women face gender-specific social and institutional constraints which influence their ability to respond to changed economic incentives. For example, women experience time constraints to increased agricultural production in a more pronounced fashion than men do, given their traditional responsibility for children and household in addition to their other economic activities. Women usually work longer hours than men, sometimes as many as 16 per day, and experience serious labor bottlenecks during peak agricultural seasons. The sex-typing of tasks coupled with women's traditional responsibilities means that women may have less time to devote to any income-generating activities. The amount of subsistence versus commercial production women are able to engage in has important implications for regional income generation and multiplication. When women have more time to devote to income-generating activities, they have the potential to earn more money, which can be exchanged for inputs and consumer goods and services, thereby contributing to regional income multiplication and accelerating the rate at which economic growth takes place.

To be effective, packages of interventions for increasing returns to commodity production toward which women contribute significant amounts of labor will usually need to include measures for mitigating women's time constraints. For example, women who are already over-burdened may not be able grow more maize in response to policy interventions that increase the producer price of maize, unless complementary interventions decrease the time they are required to spend on household tasks. Boring a nearby well to reduce time spent hauling water or supplying handmills to reduce time spent grinding grain for household consumption could alleviate women's time constraints and enable them to devote more time to maize and other cash crop production.

Gender differentials in control of income also have implications for interventions designed to increase returns from production of particular commodities. Women and men exercise varying degrees of control over the income that they generate, as well as over the income generated by other household members. Women's provider responsibilities, combined with the increasingly perceived threat of divorce or abandonment, motivate them to allocate their labor and resources toward activities from which they control the resulting returns. As noted by Guyer (1986) and Blumberg (1988), women are typically unwilling to invest their time and resources in male-controlled projects from which their personal gain is uncertain, even when these activities are more profitable in absolute terms.

The literature is full of examples of projects that required women's labor contributions but fell short of expectations because they were implemented without taking women's incentives into consideration. For example, Dey (1981) discusses an irrigated rice project in the Gambia which targeted men, even though rice was traditionally grown and marketed by women and provided them with a source of independent income. Men needed women's labor on their irrigated plots, so they prevented women from owning or cultivating rice land on their own account. Women protested by withholding their labor, leading to a decrease in rice production.

In short, interventions that require more labor from women but channel the returns to men are not likely to produce desirable results on a sustainable basis. Either women eventually reallocate their labor to activities from which they control the income, or women's independent incomes suffer, with deleterious consequences for children's health and nutrition as well as for regional income multiplication. Thus, besides taking into account gender-specific constraints, proposed interventions must also assess how gender-specific incentives might influence overall regional response to particular measures. Interventions must be designed so that increased returns accrue to women in proportion to the increased labor contributions expected from them.

Gender differentials in marketing also have important implications for intervention identification. For agricultural production to result in income generation, agricultural surpluses must be exchanged for cash. The exchange of agricultural commodities for cash requires the existence of markets, usually located in urban areas where they are supported by sufficient demand as well as by necessary infrastructure such as roads, stalls and shops, and utilities. Usually a number of ways exist for marketing each type of agricultural commodity. For example, a farmer may sell maize to a town-based store trader, who in turn sells both directly to final consumers and to a parastatal; or, a farmer may rent space in a local market and sell several products, including maize, directly to final consumers. Each of these types of marketing channels has particular spatial and economic characteristics. More specifically, the form and location of particular marketing transactions have important implications for the returns that accrue to individual farmers selling their output. A farmer selling crops from a stall in the weekly market incurs different costs and receives a different return than a farmer selling the same goods to a town-based trader.

The channel a farmer chooses for marketing a particular commodity depends on the commodity under consideration, as well as on that individual's social and economic opportunities and constraints. These are governed by a host of regionally-specific conditioning factors, including gender. Gender differentials play an important role in defining rural women's marketing opportunities as well as the amount of income they can expect to earn from marketing activities. As discussed above, women face different time and mobility constraints than men do as a result of their multiple household responsibilities. They are further constrained by greater difficulty as compared to men in obtaining start-up capital and/or credit for higher-return marketing ventures. In many regions, capital as well as time and mobility constraints limit women traders to small-scale retail trade as opposed to wholesale or long distance trade.

Women also experience social and cultural restrictions governing their movement in public that influence the types of marketing activities in which they become involved. For example, Henn (1983) notes that Haya women in Tanzania are prevented from leaving the village without their husbands by the knowledge that they will be considered prostitutes if they do. As a result, Haya women's income generating opportunities are effectively restricted to production and marketing of food crops locally, which yields a return of about three cents per hour as opposed to an average of eight cents per hour available in nearby urban areas. In general, the combination of domestic responsibilities and social restrictions keeps women closer to home, leading them to adopt processing and marketing activities that fit in with their daily routine, practically and geographically.

In effect, the result of gender-structured variations in marketing opportunities and constraints is that women and men typically employ distinct marketing channels. One implication of this tendency is that interventions that systematically benefit large-scale traders at the expense of small-scale local traders may be undermining women's marketing opportunities disproportionately. Given differences in women's and men's expenditure patterns, this can have a negative effect on regional income multiplication as well as on overall well-being of the population. Furthermore, interventions that reduce the time and cost of travel between farms and towns may benefit women more than men, given women's time and mobility constraints.

When gender-specific constraints are not taken into consideration, interventions for improving the efficiency of women's marketing channels may be neglected, thereby forgoing potential income generation. For example, although poor roads and inadequate transportation create marketing problems for both men and women, it is important to appreciate the gender differentials involved in men's and women's respective responses to an improved road: a new road alone may not help female traders find additional time for marketing or help them overcome traditional cultural restrictions limiting their travel. In other regions, where fewer social restrictions on women's mobility prevail, improved infrastructure and transportation may be especially critical for women traders, in view of their lower returns to begin with, their greater time constraints, and their tendency to make more frequent trips to generate sufficient cash for meeting daily household needs.

Given their provider responsibilities, as well as their more limited opportunities to earn higher incomes from other activities (i.e., their lower opportunity costs), women have proven to be highly responsive to marketing interventions that improve their incentives even marginally. For example, Henn (1983) notes that Beti women in Cameroon, who in 1964 received a return of eight cents per hour for food production, increased their food sales significantly in response to an increase in food prices, even though their work day was already forty percent longer than men's. This example suggests the substantial regional benefits to be derived from interventions targeted specifically to women, (although obviously such interventions should simultaneously seek to reduce women's workload rather than add to their existing burdens). Clearly, attempts to promote rural-urban exchange and income generation through interventions in regional marketing systems are more likely to yield desirable results when gender-specific time and mobility constraints, as well as gender-specific incentives, are taken into account.

B. Intervention Implications of Gender-Specific Channels of Income Multiplication

Income multiplication as conceptualized by the RUE research framework begins with first round expenditures on inputs and consumption goods and services by farmers and those involved in processing and marketing commodities. In addition, it includes second round expenditures of local suppliers of inputs and household goods and services on their own inputs and consumption items. Multiplication effects are measured by tallying up the portion of initial farm income -- that is spent in the first round and respent in the second round -- that stays inside the region as compared to that which leaks outside the region. The goal of RUE interventions is to promote local spending, so as to increase the portion of expenditures that remains inside the region providing income for nonfarm entrepreneurs in local market towns. This study argues that first and second round channels of income multiplication are gender differentiated, and that these differentiations have important implications for RUE intervention identification.

Assessment of male/female multiplication effects can reveal, first, whose spending has the higher multiplication effects and whose is leaking outside of the region more. In doing so, interventions might be identified that promote high-multiplication expenditures of women, for example, through measures that increase productivity, lower input prices and marketing costs, and raise producer prices associated with female-controlled crops. On the other hand, interventions might be identified to capture a greater share of men's expenditures inside the region. By understanding gender-differentiated constraints to generating and multiplying income, interventions might be identified that effectively foster male and female income multiplication.

Given their different responsibilities toward the household, notably women's ultimate responsibility for ensuring child survival, women and men tend to have different priorities for spending the income they have at their disposal, resulting in distinctive male and female expenditure patterns or first round channels of income multiplication. Women in Africa are almost universally responsible for providing for their families; men, on the other hand, while also making important contributions to the household, tend to retain larger proportions of their income for personal spending. Male/female expenditure patterns are also related to the different income generating opportunities open to men and women. According to Guyer (1980), women tend to earn small amounts at regular intervals, while men's earnings more often come in lump sums at irregular times during the year. As a result, women's incomes typically go toward current expenditures while men's go toward larger outlays, such as housing improvements and education fees. Also, though there is evidence

that women's tendency to save is greater than men's (Guyer, 1988), men are more often able to accumulate substantial sums to invest, for example, in town businesses.

Male/female differences in expenditure patterns have implications for income multiplication within the region. RUE-related research has indicated that expenditures on different types of goods and services tend to be associated with different multiplication effects. For example, Haggblade, Hazell, and Brown (1987), along with Mellor (1976), claim that household consumption expenditures in Sub-Saharan Africa have greater income generation and multiplication effects than those associated with either forward or backward production linkages. Forward production linkages in this instance include marketing, storage, transportation, bulking, and processing; backward linkages are those associated with production input supply. The strength of income multiplication effects associated with consumption expenditures is partly attributable to the large percentage of household income used to purchase locally produced food (Hazell and Roell, 1983; King and Byerlee, 1977; SARSA, 1988A; SARSA, 1988B). The implication is that African women, who are almost everywhere responsible for food purchases and women marketers who tend to specialize in food-related trading, contribute significantly to regional multiplication effects.

Men's expenditures, on the other hand, most likely have lower multiplication effects than women's; that is their income probably leaks out of localities more often, because of their greater mobility and personal spending preferences. Men are more commonly involved in long-distance trade and thus have access to distant markets, while women tend to be concentrated in local retail trade (except in parts of West Africa); men are more often employed in distant places, and thus are more likely to make purchases outside the region. In addition, the purchases men do make locally are more likely to be imported, as a result of their expenditure preferences. Because women's primary responsibility is home-based, their sphere of movement tends to be more circumscribed. As a result, women probably buy local goods and services more often than men. Thus, they may contribute more substantially to multiplication effects than men, despite men's commonly higher incomes.

The tendency for women's purchases to be small, regular, and frequent means that women probably make many trips between farm and town in spending net income. The time and expense associated with women's frequent trips suggests that interventions that reduce the time and cost of travel between farm and town (and among towns) are likely to have a substantial impact on women's involvement in rural-urban exchange. In releasing the time women have to devote to local buying and selling, such interventions will likely have a significant impact on first round regional income multiplication.

Both WID- and RUE-related literature suggest that second round channels of income multiplication, that include expenditures by urban-based enterprises, are also gender-differentiated. Women account for a substantial proportion of both management and employment in African rural nonfarm enterprises; moreover, the type of enterprises they are involved in tend to be different than that of men. Rural women appear to have a major interest in six informal sectors of regional economies: (1) non-financial services, including beer-brewing and selling, hostessing, hair plaiting, cloth dyeing and clothes making, and cooking and maid services; (2) commodity processing, particularly commodities in which women have a production or trading interest; (3) food preparation for sale; (4) trading, both retail and wholesale; (5) home improvement, broadly defined to include increasing supplies of domestic water and fuelwood, as well as improved roofing materials, soap making; and (6) financial services, including providing informal lending and deposit services (Jiggins, 1988). Their involvement, however, is practically nonexistent in such activities as wood and metal fabrication, petrol stations, repair shops, and other services that are traditionally dominated by men (Norcliffe and Freeman, 1980).

Women's nonfarm enterprises are usually informal, labor-intensive, and reliant on local inputs. Although these activities tend to generate small returns as a result of undercapitalization and dependency on rudimentary technologies, the large number of women's nonfarm microenterprises coupled with their tendency to generate more jobs than men's enterprises and to use local inputs suggests their importance to second round regional multiplication effects (Carloni, 1987).

The intervention implications of gender-specific contributions to second round multiplication effects relate to the greater vulnerability of women's as compared to men's nonfarm enterprises to displacement by import-substitution, economy of scale policies, and capital intensive technologies. In some countries, economy of scale policies, that undermine small scale operations in order to allow larger concerns to develop scale economies, have essentially dampened local multiplication effects generated by women's microenterprises. Although some of these displacements may be necessary consequences of regional development, the costs in some instances may exceed the benefits, thwarting women's income generating activities as well as regional income multiplication.

Although a number of women's nonfarm enterprises are in danger of being displaced as capital-intensive urban-based technology spreads, Haggblade, Hazell, and Brown (1987) assert that others will grow most rapidly with regional economic growth: activities such as food processing and preparation, tailoring, trading, and many other services. Given women's demonstrated entrepreneurial

skills and their deftness at adjusting to changing opportunities, it is likely that they will continue to play an important role in regional multiplication effects with rural economic transformation.

Given the importance of women's contributions to regional income multiplication and sustainable economic growth, it is critical that women's access to and control over income be protected and promoted. This entails fostering women's channels of income generation and altering or compensating for projects or regional changes that tend to displace women's economic activities.

C. Gender and Investment Patterns

WID research suggests that women and men also have different channels of investment, often as a result of different income-generating activities open to them, and conflicting strategies for ensuring their future security and for managing risk. Because of the perceived insecurity of the conjugal unit coupled with high rates of polygyny and male out-migration in some regions, women often invest substantial sums in kin networks as a form of social security. Moreover, they also attempt to bolster their security and that of the household by making independent investments that complement and spread the risks of their husbands' investment ventures. A number of studies (Peters, 1986; Guyer, 1986; Carloni, 1987; and Dixon-Mueller, 1985) suggest that although men tend to make larger capital investments, women often attempt to spread the risks of men's investments by undertaking activities with different vulnerabilities than their husbands'. In doing so, women contribute to the success of male-headed households as well as to regional economic development.

D. Gender and Regional Economic Change

Safilios-Rothschild (1987) conducted research in a relatively undeveloped area of Western Province, and in an area of Central Province with a fairly developed nonfarm urban-based sector and close ties to Nairobi. This comparative study suggested that with increasing urbanization and decreasing plot size, women's and men's income-generating activities become more segregated both spatially and functionally. Men are increasingly employed in nonfarm wage and self-employment activities in towns, while women become sole agriculturalists. Thus, women may play even greater roles in agricultural income generation with rural regional development. Given the strong backward linkages of nonfarm activities to agriculture, market town development may become increasingly dependent on the success of female farmers. This means that intervention strategies will have to make women's concerns and constraints central to efforts to promote agricultural growth and market town development.

E. Gender and RUE Intervention Identification

To be effective, RUE interventions aimed at promoting broad-based regional development must be based on an understanding of gender differentiated channels of agricultural income generation and multiplication. Interventions that are implemented without taking into consideration gender-specific divisions of labor, constraints, and opportunities may lead to situations in which women, who contribute by far the most labor to agriculture, may not be able to respond to improved economic incentives achieved by interventions, such that increases in agricultural income generation and multiplication do not result. The failure of improved production incentives to have results may be particularly pronounced in regions where a large proportion of farms are managed by women. Or, women may make adjustments that run counter to the objectives of increased agricultural income generation by, for example, withdrawing their labor from activities where they do not control the returns, and allocating it to less productive ventures where they do control the returns. In the worst case, women's independent sources of income may be undermined, resulting in less spending on food, health, and education. This, in turn, would deleteriously effect regional income multiplication and sustainable economic development.

Effective intervention identification requires assessment of the dynamic relationship between intra-household male and female economies in order to be able to predict the future consequences of alternate intervention strategies. In effect, four questions need to be addressed in order to identify effective interventions:

Whose labor will be required to increase the production of a given commodity?

What constraints do men and women involved in the production of that commodity experience?

Who will control the returns to increased commodity production?

What changes in demand (expenditure) patterns can be expected as a consequence of changes in income controlled by men and women respectively?

While answering these questions adds to the research burden, there are fairly rapid ways of collecting this information (that are discussed in chapter IV); moreover, the benefits of doing so are substantial. Gender analysis adds significantly to the strength of the RUE research framework by allowing it to make critical links between increased returns from a specific

commodity and likely increases in specific types of purchases, and therefore multiplication effects.

To illustrate, in the Kitui District of Kenya, case studies have shown that husbands treat earnings from coffee as their personal spending money, while women manage whatever money is pooled for everyday family expenses. Thus, in this instance, interventions that promote coffee production may well have the effect of increasing husbands' nonessential consumption without affecting the income to which women have access and which they spend on health and education services and other nonfarm goods and services that are more critical to the sustainability of the family and may be more contributory to regional development.

In addition to elucidating the links between specific commodity production and expenditure patterns, incorporating gender analysis into the RUE research framework clarifies constraints to agricultural production and rural-urban exchange, as well as incentives for responding to alternative interventions. In doing so, gender analysis enhances the ability of the RUE research framework to make the critical link between discrete channels of income generation and multiplication and the identification of specific, targeted, and effective interventions that are sensitive to the impact on beneficiaries.

IV. IMPLICATIONS OF GENDER ANALYSIS FOR RUE RESEARCH METHODS

A. Implications of Gender for RUE Research Methods

The purpose of this chapter is to present the implications of gender differentials for carrying out RUE research, and to provide guidelines for incorporating gender concerns into the RUE research framework and field methodology. The first part of the chapter will address the importance of gender analysis to selection of key commodities, determination of the appropriate unit of analysis, and calculation of regional multiplication effects. Subsequent discussion will identify those gender variables most critical for identifying interventions and suggest ways of obtaining the necessary information without adding excessively to the time and cost of research.

Because of the importance of commodity systems analysis for identifying interventions, a preliminary and critical step in the RUE research process is the selection of key agricultural commodities for commodity systems analysis. The commodities selected will shape the picture that is formed of the regional economy and will focus subsequent intervention identification. The selection of commodities for analysis is a relatively flexible procedure that takes into consideration regional diversity as well as specific host country objectives. In general, a number of commodities are selected to provide a basis for comparing the relative contributions to the region of different commodity systems, in terms of generating incomes and jobs, fostering rural-urban linkages, and promoting spending on goods produced and sold locally.

Where interest lies in promoting broad-based income generation and multiplication as a basis for sustainable economic growth, one explicit objective ought to be increasing returns to female farmers. Thus, it is important to select for analysis at least one commodity that women control the income from, so that interventions for increasing (and protecting) women's returns can be designed.

A further implication of gender-specific channels of income generation and multiplication is that RUE research must be based on intra-household analysis using male and female individuals as units of analysis rather than households. WID research has demonstrated the sharp divisions between male and female economic spheres that prevail in many parts of Sub-Saharan Africa (see annex). Women and men engage in different economic activities. Because of their different structural situations, they face different constraints in spending income, have different tendencies to spend inside and outside the region, and purchase

different items for the household, the family, and/or production. Gender-differentiated divisions of labor, production constraints, income control, expenditure patterns, and strategies for risk management and investment necessitate analysis at the individual rather than the household level.

WID literature also argues that while looking at gender-differentiations is essential, women's income, expenditures, and investments need to be examined as they relate to men's. There are significant patterns of complementarity in men's and women's economic behavior that need to be addressed, and this can only be accomplished if intra-household data on individuals are available. The interaction of male/female economies is particularly important to understanding how women and men are likely to respond to improved incentives, given their interactive strategies for generating income, providing for the household, and investing for the future.

RUE research must also incorporate gender analysis into determining regional multiplication effects. Calculation of separate male/female multiplication effects is important to RUE research because of associated important intervention implications. Arguments have been presented suggesting that men's and women's expenditures have different multiplication effects in many regions. An understanding gender-differentiated multiplication effects reveals opportunities for capturing more income within the region. It also allows for interventions to be targeted to increasing the production of those commodities associated with the greatest income multiplication effects.

B. Data Requirements

Initial data gathering should include acquisition of gender-differentiated demographic characteristics. These should include estimates of the number of female-headed households in the region, the number of males working outside the region, and the number of males living on farms who are employed in full-time nonfarm wage jobs. This information will be valuable in assessing the proportion of female managed farms, and thus highlighting the importance of women's production constraints to efforts to increase agricultural production in the region.

Fundamental to gender-sensitive RUE research is an understanding of gender-based divisions of labor. In terms of the RUE research framework, this requires information on the gender of the individuals involved in various phases and types of crop and livestock production, processing, marketing, and consumption of inputs and household goods and services.

RUE research must also collect data on gender-specific constraints to agricultural income generation and multiplication through rural-urban exchange. These constraints include male/female access to land, labor, capital, and expertise, affecting men's and women's abilities to respond to changed economic incentives. In practical terms, rural-urban exchange requires both the time to market or purchase goods and services, and the freedom and money required to travel from farm to town, or among market towns. Gender-specific time and mobility constraints influence women's ability to engage in additional production and travel to urban markets. Mitigating women's time and mobility constraints is often a prerequisite for increasing agricultural income generation and regional multiplication effects.

RUE research also requires gender-specific knowledge on control over the returns to commodity-specific production. This information is needed to understand incentives for increasing men's and women's labor contributions to a specific commodity. Unless women's control over the returns to their labor is protected and promoted, interventions aimed at increasing commodity production are likely to fall short of expected results.

Knowledge of gender-differentiated expenditure patterns is essential for calculating the multiplication effects of men's and women's income. Moreover, differences in male/female expenditure patterns allow links to be made between increased returns to a particular commodity and probable multiplication effects, depending on whether men or women control the increased returns and on what that individual's expenditure responsibilities and preferences are.

C. Data Collection

RUE research proceeds in three phases of data collection, that successively narrow the focus of research and deepen the level of detail of data collected. The purpose of the first phase of research is to gather data leading to selection of dominant commodity systems to be studied; to assemble a first rough documentation of their characteristics, functions, and operations; and to begin the process of identifying key factors in the conditioning environment.

Collection of data on gender-based division of labor and income control will be required in this initial phase in order to guide selection of male/female commodities. Male- and female-controlled commodities can be defined in terms of men's and women's respective labor contributions and in terms of control over returns from particular commodities. Therefore, it is necessary to know the amount of labor women and men contribute to

the different stages of production of a particular crop, as well as the proportion of returns from that commodity that women and men, respectively, control. For purposes of selecting commodities, information concerning division of labor and income control need only be general, such that broad patterns can be discerned.

The second phase of RUE research is meant to develop further the informational base for designing survey questionnaires. In addition to preliminary data collected in phase one, information is required concerning male/female production and marketing constraints and expenditure patterns. This information is critical for ensuring that survey questions address appropriate activities and issues related to men's and women's income generating and multiplying processes. In addition, these data are needed to target questions to the appropriate individual who will be able give the most accurate answer.

While a simple concept, the importance of asking men about male activities and women about female activities is often overlooked. Rather it is assumed that men are the head of the family and, therefore, know such information as the yields and prices for all crops produced by the household. In much of Africa, this is simply not true. In the case of expenditures it is usually true that men have little knowledge of the prices women pay, the quantities they purchase, and the place of purchase of women's expenditures. The same is true of women's knowledge of men's expenditures.

Since phase one and two data on gender-based division of labor, income control, and expenditure patterns only need to reflect general patterns by social and/or income group, it can probably be gathered most effectively through group meetings. These group meetings must be segregated by gender such that women and men are allowed to answer without the presence of their mate. Gender-segregated groups will minimize the motivation to conceal or falsify information about income earned or spent. From these group meetings "community portraits" can be depicted that provide sufficient information on overall trends of labor specialization by sex, and male/female production constraints, income control, and expenditure patterns for purposes of RUE research, without adding substantially to the research burden.

In phase three, field surveys are conducted gathering more detailed quantitative data. The gender-specific data required include gender-differentiated access to key production resources, time and mobility constraints, and expenditure patterns. While some initial information on these variables should be gathered in phases one and two, RUE research typically uses structured questionnaires, administered at relevant regional transaction points, to obtain types and locations of different constraints and quantitative measures of male/female returns and

expenditures. The design of questionnaires will be based on general patterns gleaned from the group meetings associated with the earlier phases of research.

V. DIRECTIONS FOR FUTURE RESEARCH

The gender disaggregated data analyzed in this report focused only on marketing; gender-specific production and household consumption data were lacking. Future research, that incorporates all components of the RUE research framework -- examining the systemic linkages among agricultural production, input supply, marketing, and provision of household goods and services -- is needed to understand more fully how gender issues affect rural-urban exchange in rural regions. Moreover, many of the arguments made in this study are based on research in Africa, where gender distinctions are most pronounced. And in fact, the bulk of WID research has been conducted in Africa. More gender-sensitive research relating to rural-urban linkages is needed in Asia and Latin America.

SARSA research maintains that sustainable dynamics of income generation and multiplication promote both agricultural growth and market town development. To the extent that these are key Agency objectives, improved concepts and methodologies for identifying interventions that bring this dynamic about should be a high priority. As shown by the forgoing analysis, gender differentials figure prominently into the identification of interventions for promoting income generation and multiplication in rural regions. To date, research on rural-urban linkages has not examined how gender influences individuals' ability to respond to changed economic incentives.

As Agency involvement in related subject areas, including market town development, deepens, it is important that gender analysis be incorporated into program and project design. Research along these lines should contribute to the data base available for developing insights about the impact of specific gender variables on rural-urban exchange. Furthermore, insights gained from gender-focused RUE-research should be incorporated into broader research on rural-urban linkages and market town development, to ensure that recommendations and interventions serve to unleash women's contributions to sustainable economic growth.

ANNEX

GENDER AND THE RUE RESEARCH FRAMEWORK

There is a substantial volume of WID literature that relates to agricultural income generation and multiplication as conceptualized by SARSA's RUE research framework. Analysis of this literature reveals how gender-based differences in access to and control over land, labor, capital, and expertise influence components of the RUE research framework. In doing so, it emphasizes the need to include gender as a critical variable in the RUE conditioning environment.

A. Looking Inside the Household Unit

WID literature suggests to RUE research that in examining income generation and multiplication processes, it is important to analyze intra-household dynamics in order to uncover gender role differentiations that are significant to intervention identification. WID researchers (Bruce and Dwyer, 1988) contend that the household is not a unified decision-making unit, nor necessarily internally harmonious. Typically, there is not one response per household to a given set of economic incentives, but several responses, often structured along gender-specific lines. These multiple responses may not be in conflict with one another, but neither are they necessarily integrated and focused on a common objective. Where there are complementarities between men's and women's production and expenditure patterns, these are often the result of women compensating for changes in men's production and spending, in order to spread risk over multiple activities and ensure survival of the family (Fapohunda, 1988). Examining intra-household dynamics and the role that gender plays in structuring economic activities can shed light on how individuals within a given region are likely to respond to alternate interventions.

For example, in most developing countries, there is some sexual division of labor according to which household tasks are allocated: child care, household maintenance, and food preparation are almost universally women's work. Some agricultural tasks, such as weeding, are overwhelmingly carried out by women, while others, such as the initial clearing of land, are typically done by men. The fact that men and women typically engage in different tasks suggests that in many cases they will encounter task-specific input needs and constraints. In addition to task-specific constraints, women often encounter gender-specific cultural and institutional constraints that hamper their ability to function productively and prevent them from responding to interventions. Thus variations in household composition, such

as the absence of adult male labor, or the presence of several adult females (as in polygamous households) can influence the mix of economic activities pursued.

Women's ability to generate increasing amounts of income is circumscribed by their domestic responsibilities and the task- and gender-specific constraints associated with particular combinations of economic activities. Furthermore, because of their different responsibilities, women and men tend to have different -- sometimes competing -- short- and long-term economic objectives and interests. These gender differentiated objectives and interests influence the way women and men allocate labor and income under their control. The importance of these distinctions becomes clear in the context of intervention identification. To the extent that men and women earn income from different sources and buy different types of goods, analysis of gender-differentiated constraints involved in expanding economic opportunities for both men and women is a prerequisite for identifying effective interventions.

By looking inside the household unit, to intra-household production and expenditure dynamics, RUE research can capitalize on what WID research demonstrates to be significant gender-differentiated channels of agricultural income generation and multiplication.

B. Gender and Agricultural Production in Africa

Estimates based on censuses, national surveys, and UN data indicate that women provide most of the labor required for food and cash crop production in the Third World, producing as much as 90 percent of all food grown in rural areas of Africa. Spring's (1988) research in Malawi shows women making many agricultural decisions and contributing the majority of all labor to smallholder agriculture. Peters (1986) found that women were the "lynch-pins" of households in Botswana and that male-headed households could not succeed without women's labor and management contributions to crop production. Based on research in Western Kenya, Staudt (1985) concluded that women are the primary cultivators and managers or co-managers of farm operations, responsible for land preparation, planting, weeding, and harvesting crops.

Moreover, the importance of women's contribution to agriculture in Sub-Saharan Africa is increasing over time. A growing number of women are becoming farm managers as men become part-time or absentee farmers as a result of salaried employment off the farm. Cloud (1987) notes that in addition to de jure female-headed households (i.e., those headed by women who are unmarried, for whatever reason), there is a growing number of farms effectively managed by women ("de facto female-managed farms) whose husbands

work away from the farm for days, months, or years at a time. According to Jiggins (1988), the number of rural households headed by women has been increasing steadily and is now about 30 percent, with 40 to 70 percent recorded in some locations.

The actual agricultural production tasks carried out by women and men, respectively, vary according to region and type of farming system. For most southern African agro-pastoral systems, men look after cattle and clear and plow the land, while women carry out all other arable tasks and raise chickens and pigs (Peters, 1986). In the Sahel, Bambara men clear the fields, young boys fertilize the fields with animal manure, and men build storage huts and supervise storage of grain (except that which is used to feed the family, which is controlled by women). Bambara women grow food crops and cash crops on their individual plots and receive cash for their work on their men's fields (Creevy, 1986). Staudt (1985) found that in some parts of East Africa, women are the primary cultivators and managers or co-managers of farm operations, responsible for later stages of land preparation, planting, weeding, and harvesting; while men are responsible for early stages of land clearing, plowing, and for cattle care.

Within farming systems in the same region, the sexual division of labor in agriculture can be expected to vary between households, as well as within households over time, in response to variations in household composition. Specifically, the presence or absence of adult male labor can have important implications for agricultural productivity and income-generation within a region. As Jiggins (1988:4) notes:

Given that agricultural and household tasks tend to be distributed on a complementary but gender-based allocation, the loss of male labour necessarily constrains women's own food production and income-earning capacities. At the same time, the value of remittances to the rural household is low and erratic and does not provide a ready source of cash for hiring labour to compensate for household labour deficits.

Jiggins adds that in some cases, residentially separated households become permanently fractured, with women retaining responsibility for supporting children. A further type of family structure that is emerging is represented by multi-generational networks of households headed by related women. These networks provide the advantages of corporateness, such as increased opportunities for diversification as well as sharing of costs, labor, and child-rearing responsibilities. In addition, these networks alleviate the risks and uncertainty of depending on non-resident men, while allowing women greater control over all aspects of agricultural production and the returns to their labor.

Cloud (1987) points out that because productivity in agriculture is related to decisions concerning cropping patterns, seed selection, use of purchased inputs and family labor, and crop disposal, it is important to know not only who is the head of the household, but also who is doing the work and making the decisions. Indeed, most farms have mixed patterns of control; pooled and non-pooled resources, such as land and animals; and pooled and non-pooled income streams resulting from production activities. For example, Abbott (1976) found that, among the Kikuyu, men make decisions about livestock, property, what cash crops to plant where, and how to spend major income from cash crops; women, on the other hand, make daily decisions about cash crops, dominate decision-making concerning food crops and chickens, and decide how to spend minor income resulting from the activities they control. The allocation of decision-making responsibilities, however, is changing as women increasingly become farm managers.

Constraints on Women's Agricultural Production

Perhaps the most immediate constraints on women's ability to become involved in income-generating agricultural activities are their traditional responsibilities of raising children and maintaining the home. Both the amount of time and the degree of mobility women can bring to bear on cash crop production and other income-generating activities can be severely limited by sexual divisions of labor that hold them responsible for the household or "reproductive" sphere (Watts, 1984; Creevy, 1986). In most parts of Sub-Saharan Africa it is women's job to provide the family with enough food through subsistence production; process food for consumption; gather wood and water; and take care of children (MacKenzie and Taylor, 1987; Staudt, 1985; Dixon, 1979; Chipande, 1987; Safilios-Rothschild, 1980; Blumberg, 1988). Cloud (1978) found that in the Sahel region, women in sedentary farm families spend two to three hours each day threshing and pounding grain to make enough flour for the family meal. Okeyo (1988) found that women in the Bay Region of Somalia spent up to 1.5 hours per day in the wet season and 8 hours per day in the dry season fetching water. Jiggins (1988) reported that women in Kenya and Burkina Faso who were supplied with fuel efficient stoves saved an average of 2.5 to 5 hours per week on collecting wood.

Given their responsibility for domestic chores, particularly for ensuring adequate food supplies for the household, women farmers attempt to minimize peak demands on their labor and to engage in activities that can be combined with their necessary subsistence production. For example, Chipande (1987) found that women in Malawi preferred to cultivate groundnuts as a cash crop rather than tobacco, which was being promoted by the local extension service, even though the latter yielded higher returns. This was

due to the fact that labor requirements for tobacco are time-specific and very intensive, whereas labor allocation on groundnut production can be combined with maize production for family subsistence. Nigerian women combine goat rather than sheep production with their daily food processing activities (Okali and Sumberg, 1986). Cassava peels and other crop by-products and household wastes serve as feed and are available without the need for access to grazing land or fodder crops.

Regionally-specific sexual divisions of labor and women's time constraints have implications for interventions that introduce productivity-enhancing technologies. As Berger et al. (1984) point out, although many new agricultural techniques may reduce men's work, they may actually require more of women's time, resulting in labor bottlenecks. For example, the introduction of animal traction plows may enable more land to be brought under cultivation, while associated tasks like weeding and initial crop processing, typically performed by women, remain unmechanized.

Women's workloads and labor shortages are exacerbated by male migration. The absence of an adult male can present de facto female farm managers with difficulties in obtaining access to key agricultural production resources such as land, credit, current inputs, extension assistance, technologies, and information. Chipande (1987) notes that institutional barriers limit or even deny women access to resources and institutional support necessary for increasing agricultural production. For example, in many parts of Africa, women's traditional usufruct rights to land have been eroded as land has passed into private ownership and been registered officially to men (Creevy, 1986; Spring, 1988; MacKenzie and Taylor, 1987; Cloud, 1987). Lack of independent access to land limits the amount of control women can exercise over agricultural production, in terms of deciding which crops to grow and in what amounts. Furthermore, to the extent that having title to land is often a prerequisite for obtaining a loan, women who own no land independently have restricted access to credit (Berger et al., 1984).

Another factor influencing access to credit is type of crop being grown. Often loans are tied to the production of cash crops, to the detriment of women seeking credit for improving food production (see, for example, Venema 1986). Equipment innovations in agriculture are also often introduced for the production of cash crops rather than food crops. Ahmed (1983) points out that this is one of the factors responsible for the growing gap between male's and female's levels of labor productivity. Furthermore, when women are deprived of access to and control over necessary production inputs, their ability to meet the nutritional requirements of their children is constrained. On the other hand, when they are able to obtain access to credit and agricultural training and inputs, their

productivity increases and differentials in male and female productivity decrease (Spring, 1988).

A number of researchers have noted women's limited access to agricultural extension services such as training, inputs, credit, and visits from extension agents (see Spring, 1988; Staudt, 1985; Dixon-Mueller, 1985). In a survey of farms in Western Kenya, Staudt (1978) found that only 39 percent of female-managed households, as opposed to 63 percent of male-managed households, were visited by field service agents; only 28 percent, as opposed to 44 percent, attended a demonstration plot, and only 2 percent, as opposed to 18 percent, received any training. Spring (1988) notes that, in general, women have less access than men to information about fertilizers, pest management, plant populations, and credit, and as a result make more use of traditional farming practices. According to Staudt (1985), women are forced to rely on kin networks and women's organizations in the course of agricultural production, since men dominate the administrative offices and political authority networks that provide contacts and information for obtaining extension services.

How Women Cope with Production Constraints

Women's responsibilities and the constraints associated with them create a situation in which most of women's time is spent on household and child maintenance and food production, while income-generating activities are pursued to the extent that they build on and/or can be integrated with necessary subsistence activities. The persistence of high fertility rates in much of Africa needs to be understood in the context of women's time and labor constraints, their tendency to be overworked, and the increasing incidence of male migration (see for example Blumberg, 1988; Jiggins, 1988; Cloud, 1987). In the absence of means to increase productivity in the tasks they are responsible for, women choose to have many children. Girls' labor is especially valuable to household production: girls start work at a younger age, work longer hours than boys (Safilios-Rothschild, 1980), and are more likely to be taken out of school for seasonal labor (Jiggins, 1988). The benefit of children's labor in the short run is offset by the cost, in the long run, by lower literacy rates, especially among females, and a labor force that is less equipped to participate effectively in the production and exchange activities associated with sustainable development.

Women draw extensively on kin networks in order to compensate for their labor constraints and meet routine as well as peak labor needs. Hyden (1986) and Blumberg (1988) have noted the importance of the ties women maintain with their natal families, especially in Africa where there is less of a conjugal community between husband and wife (Hyden, 1986). The support provided by

kin is particularly critical to women who are poor, whose marriages are polygynous, and/or who are in situations where divorce rates are high or husbands absent for long periods of time. Kin networks, which are drawn on not only for labor but also for cash, are maintained primarily by women, through reciprocal exchanges of gifts, money and labor (Peters, 1986). Women have to invest their labor and money in order to draw support from the network when they need it.

In addition to drawing directly on kin, women also organize collectively to cope with their heavy workload. Berger et al. (1984) have related the increasing importance women's organizations to the adverse affects recent structural changes have had on women, particularly those changes that have affected household composition and labor supply, such as male migration and increasing numbers of children in school (see also MacKenzie and Taylor, 1987). For example, Berger reports that in 1984, 32,000 women were registered with 582 women's groups in Murang'a District in Kenya, a number representing 20 percent of the local rural female population between the ages of 20 and 60.

Impact of Macropolicies on Women's Agricultural Production

A number of studies issued by the World Bank have posited relaxation of agricultural price as a answer to the stagnation of African agriculture (World Bank 1981, 1983). Getting price responses right, some believe, will result in the desired response on the part of farmers. Gender-sensitive research, however, suggests that improving producer prices may not necessarily result in increased agricultural production. Because of gender-based divisions of labor, women may face labor shortages or severely limiting time constraints that essentially prevent them from responding to higher prices for food commodities. Female-headed households, with limited access to land, labor, capital, and expertise may be particularly hard pressed to increase their output and productivity. Moreover, if improved incentives result in crops, that were formerly women's, being taken over by men who expect and need significant labor contributions from women, then it is unlikely that production will increase.

Berry (1986) argues that explaining and predicting responses to relative prices requires an understanding of structures of power and principles of social interaction.

Predicting farmers' responses to policy interventions and tracing their effects on agricultural performance involve more than taking an inventory of those social relations which impose different constraints on different categories of farmers. Policy interventions often touch off struggles over access to resources, or over control of how resources

are used, which affect production patterns and/or absorb resources that might otherwise be channelled into raising output and productivity (Berry, 1986:209).

Changes in macropolicy that improve economic incentives can result in efforts to redefine social rules that govern access to key resources. Because of the complexity of intra-household dynamics, that include gender-based division of labor and sometimes conflicting strategies for income generation, individual responses to a new incentive may not always be those that are most profitable for the household or for the individual. Thus, intra-household research is a prerequisite for predicting the impact of macropolicies on agricultural production.

To summarize, women in Sub-Saharan Africa are making crucial contributions to food and cash crop production even where they receive very little outside assistance. Moreover, the share of agricultural production they are being expected to perform is increasing in many parts of Africa given economic shifts that are drawing male labor off the farm. The labor bottlenecks and declines in agricultural productivity commonly reported can in part be explained by the existence of sexual divisions of labor that prevent female labor from being freely substituted for male labor. When male household members are working away, women are prevented by existing responsibilities, norms, and institutional arrangements from stepping in and functioning as effectively as they might. In order to be effective, proposed development interventions must consider whose labor contributions are anticipated, and what those individuals' changed constraints and incentives will be.

C. Gender and Marketing

As indicated by the RUE conceptual model, after the production of an agricultural surplus, the next step in the rural-urban income generation process is the conversion of this surplus into income through some form of marketing. While factors such as type of crop, pricing structures, institutional arrangements (i.e. presence of parastatals), and infrastructure play an important role in shaping the nature and extent of marketing activities in a region, gender is addition influential parameter. Women and men face different social and economic constraints in their ability to participate in marketing activities, and thereby generate their own cash income. Their respective constraints and objectives tend to produce gender-distinct marketing channels, some of which are more efficient than others and permit higher investment returns.

The importance of marketing channels to regional income generation and multiplication is highlighted by the preponderance

of female traders in Africa. According to Wood (1978), women dominate marketplace exchange in Sub-Saharan Africa. In West Africa, almost all petty trading in food and drink is carried out by women; they also predominate in East African markets in Zimbabwe, Zambia, Malawi and much of Kenya (Lawson, 1976). Watts (1984) found in one rural area of Nigeria, around Ilorin, 90 percent of the women who reported an occupation other than housewife were traders. Haggblade, Hazell, and Brown (1987) indicate that women account for a substantial portion of both management and employment in rural non-farm enterprises in Africa, especially those related to food preparation and food services. In rural Zambia they own 60 percent of the non-farm enterprises, while they represent between 25 and 54 percent of those employed in non-farm activities in Benin, Ghana, Kenya, Nigeria and Zambia.

Male and Female Marketing Channels

Women's and men's marketing activities are differentiated by a sexual division of labor similar to the gender divisions in agricultural production. In general, men sell cash crops such as hybrid maize, European vegetables, and tobacco, as well as equipment, appliances and clothes; while women tend to sell traditional crops, processed and prepared foodstuffs, and small household items, (Dixon, 1979; Wood, 1978). Women sell goods from their homes, while walking around, or in daily or weekly local markets, while men tend to be more involved in long-distance trading. Women carry goods on their backs or heads while men use wheeled transportation. Women work in small family-owned shops while men control larger retail and wholesale enterprises.

One important difference between male and female marketing of agricultural output in most parts of Africa relates to the regularity with which income-generating transactions are conducted by men and women, respectively. Women require small, regular amounts of cash in order to meet their responsibility for providing their families with food on a daily basis (see Okali and Sumberg, 1986; Dwyer, 1983). Moreover, where male migration is high, women's earnings are "the mainstay of everyday subsistence expenditures, especially food" (Carlson, 1987, p. 36). Consequently, women tend to engage in frequent marketing of small quantities of produce. These female marketing patterns predispose women to favor certain kinds of income-generating marketing opportunities over others; they essentially create gender-based marketing channels, with different income-generating potentials and constraints.

As with gender-based task allocations in agricultural production, the division of labor in marketing is subject to regional, as well as seasonal, variability. For example, among sedentary

farmers in the Sahel, men make decisions concerning disposal of surplus grain crops, while women make decisions concerning the marketing of the surplus vegetables and legumes they grow in their gardens and the wild plants they gather, such as baobab and karite (Cloud, 1986). In the village of Katsina in northern Nigeria, women trade in grain, buying after harvest when the price is low and reselling when prices rise. These women also sell groundnut oil, condiments, and seasonings (Longhurst, 1982). Around Ilorin, women process and sell locust beans, shea butter, and cassava and yam flour, depending on the season (Watts, 1984). In pastoral communities in East Africa, men predominate in marketing of large livestock, while women are substantially involved in the marketing small livestock, meat, eggs, and milk products (Okeyo, 1988).

Women's Processing and Marketing Activities

For the most part, women's processing and marketing activities tend to grow out of tasks which they are responsible for performing as part of their daily routine, and for which basic equipment and premises are available. According to Dixon, rural women's non-agricultural activities are usually labor-intensive, based on traditional skills, dependent on primitive technologies and child labor, and poorly remunerated. Women process crops, particularly crops in which they have a production interest, as well as small livestock and fish; engage in small-scale egg and poultry meat production, and beer-brewing and selling (Jiggins, 1988; Due and Mudenda, 1985); run kiosks and engage in petty trading of vegetables, fruits, and clothing (Freeman and Norcliffe, 1984); sell firewood and occasionally goats and sheep (Okali and Sumberg, 1986). Food processing and preparation for sale are especially prominent activities and an important source of income for rural women (see Dixon, 1979; Longhurst, 1982). For example, Longhurst found that food processing for sale was the single most important remunerative occupation in a Moslem Hausa village in northern Nigeria.

To the extent that food processing involves transformation of local agricultural output, it is associated with greater income multiplication effects than any other activity representing a forward linkage from agriculture (Haggblade, Hazell and Brown (1987) note that distribution of agricultural products is the second most important forward linkage from agriculture). Local towns with concentrations of people who are not producing their own food or do not have time to cook meals (i.e., wage laborers) create a particularly effective market for prepared food products (Jiggins, 1988; Watts, 1984). Watts (1984) found that food preparation was most likely to become a full-time occupation for women who had access to rural periodic markets, where many people were away from home all day and too busy to prepare a meal. Food preparation for sale represents an important economic linkage

between rural and urban areas, in that the combination of input production in rural areas and demand for processed food in urban areas allows for the generation of substantial income. An understanding of the gender dimension involved in such activities is one prerequisite for identifying ways to enhance such linkages.

Constraints on Women's Marketing Activities

Given the specific domestic and agricultural responsibilities imposed on them by the prevailing sexual division of labor, women find ways to combine activities in order to use their limited time and resources most effectively. For example, women combine food preparation for cash with food preparation for their families. (Longhurst, 1982; Watts, 1984). Women may buy maize in the morning, process it in the course of their daily household activities, and sell it in the afternoon (Dixon, 1979). Or, as Watts found, women who go into the village to sell prepared foods often use some of their earnings to buy goods like matches, soap, and tinned foods, which they sell for a small profit back in the rural area.

In addition to the time and resource constraints that prevent women from expanding their marketing activities, there are cultural, institutional and policy-based constraints that have particular impacts on women and impinge on their ability to generate more income. For example, where social norms limit women's movement in public, their men frequently market the foodstuffs and handicrafts they produce and receive the cash. Similarly, Dixon found that in a cattle-fattening project in Niger, women paid men to sell their cattle, because by custom they were not permitted to engage in animal trading.

Women may also have limited access to certain marketing channels, such as those relying on cooperatives. In Senegal, Venema (1986) found that groundnuts delivered to the cooperatives are registered under the name of the official member, usually the male head of household, whether or not the groundnuts were grown by him or by women in the household. Furthermore, the man receives the delivery slips and cashes them in on payday. Because many of the women are illiterate, they have no way of ensuring that they are being paid all the money owed them.

Moreover, Dixon (1979) noted that in most parts of Africa, officials responsible for renting or selling market stalls and for setting regulations are almost always men. One result of this situation is that women's independent access to those marketing channels may be suppressed at the outset by as a result of impropriety of negotiating with these male officials.

Women also face problems in raising capital and obtaining formal sector credit to invest in improvements to and/or expansion of their marketing activities. Jiggins (1988) and Dixon (1979) note that women are able to retain less profit for reinvestment than men given their concern with feeding and caring for their families. Also, their savings are often raided by their men. As a result they lack sufficient capital to invest in more merchandise, improved transport, or sales and storage facilities. Women's marketing enterprises also suffer from discontinuous managerial input where women face multiple claims on their time from domestic obligations.

Finally, cash-generating food-processing activities traditionally engaged in by women are being squeezed out by commercial substitutes. Longhurst (1982) notes that, in general, as people develop preferences for commercially processed foods, such as canned meats and soft drinks, women will find it more difficult to realize profits from their traditional food preparation activities. Similarly, modernizing forces, such as the introduction of advanced technology or the substitution of factory produced imported goods for local goods, can displace women's traditional income-generating activities. Longhurst (1982) notes that, in West Africa, the soap women have been making out of palm oil and wood ash is being replaced by imported soaps that look prettier and smell better. Dixon (1979) notes that women who brew beer and hope that a new road will increase their access to urban markets instead find their sales undercut by imports, more readily available thanks to improved infrastructure. In other places, locally produced foods give way to factory products, machine textiles replace handwoven goods, and plastic and metal utensils replace earthenware goods.

Impact of Macropolicies on Women's Marketing Activities

Women's ability to generate income is negatively affected by domestic policies that promote cooperatives and state-sponsored industrial and trading enterprises in direct competition with women's traditional processing and marketing activities (Jiggins, 1988). For example, in many parts of Sub-Saharan Africa, governments are investing in industrial beer-brewing using imported barley, hops, and glass bottles (see Jiggins, 1988; Ahmed, 1983). Jiggins notes that under the aegis of public health legislation, brewing of millet, maize, and cassava beer and spirits is being made illegal, suppressing development of women's beer brewing into a larger-scale, more profitable activity. Furthermore, in several African countries, price supports and investment policies are helping larger industrial establishments that process rice, maize, fish, cane-sugar and bread, often undermining the income-generating ability of rural women.

But while women are especially vulnerable to loss of earnings as traditional products are replaced by capital-intensive commercial products in the course "modernization," new investment opportunities may be opening up for women, for example in manufacture of roofing sheets and bricks out of local materials, and in construction of small bars, hotels, warehouses and workshops (Jiggins, 1988). According to Jiggins, such opportunities may be growing fastest in the informal sector, where women encounter fewer obstacles from the male-dominated bureaucracy. The challenge for SARSA's RUE research is to target interventions that will allow for a continuing, if shifting, set of income-generating opportunities for men and women given the direction of economic transformation and changing male and female responsibilities, constraints, and economic interests.

D. Gender and Income Multiplication

In this section, gender analysis is extended to assessment of regional income multiplication effects. By examining what income women actually control, which expenditure decisions they make, and what things they buy, the magnitude of women's contribution to regional income multiplication can be gauged. Also, the precise channels through which their income is spent can be identified, enabling more accurate targeting of interventions that facilitate income multiplication through rural-urban exchange. Documenting men's and women's separate sources of income and patterns of expenditure can also uncover important interactions between male and female streams. Understanding these interactions becomes important in identifying gender-sensitive interventions that reinforce - rather than contradict or undermine - one another.

Women's Sources of Income

In many parts of Africa, women traditionally receive a plot of land over which they have production control, making all decisions concerning cultivation, sale of surplus, and expenditures of earnings (Safilios-Rothschild, 1980). However, there is evidence that women's traditional usufruct rights are being threatened as modernizing farming schemes formalize systems of land tenure and give men official title to land (see for example MacKenzie and Taylor, 1987). Guyer (1980) found that Yoruba women earn only about a third as much cash from their staple food production as men did from cocoa production; however, if women's in-kind contributions to the household were included, their food crop production amounted to about half of household income. Blumberg (1988) found that women's earnings in many Third World countries averaged far lower than their husbands. On the other hand, Due and Mudenda, in a 1985 study in Zambia, found that women's total cash earnings exceeded men's in Southern,

Central, and Northern Province; their earnings were higher from both farm and off-farm sources in Southern and Central Province.

Safilios-Rothschild's and Mourugu's study (1988), comparing women's cash earnings in villages in Central and Western Province in Kenya, illustrates how gender-based divisions of labor in general, and control of crops and the income resulting from them in particular, are linked to broader sets of economic opportunities within a region. It appears that returns to farming, for men and women, are clearly related to accessibility to urban-based markets. In Mbogoini, Central Province, Safilios-Rothschild and Mourugu found that women earn about 35 percent of their husbands' earnings overall, mainly because many men are able to find relatively well-paid wage positions either locally or outside the region. In fact, almost half the sample of men generated no farm earnings, while those who did only averaged two thirds of their wives' farm incomes. Women were effectively farm managers in most of the households surveyed, earning most of their income from milk, coffee, and fruits.

By contrast, the village of Hamisi is a relatively poor rural area in Western Province, with little in the way of infrastructure and established markets, and also fewer lucrative waged employment opportunities for men (as compared to the area around Mbogoini). In Hamisi, men remained more involved in agriculture, except where plot sizes were too small to make a living, in which case they searched for employment elsewhere and left the farm management to their wives. Yet even in this area, men received most of their income from non-farm sources, mainly from salaries, while women's income came primarily from agriculture and from selling food crops. Overall women earned 42 percent of men's average earnings.

Male/Female Expenditure Patterns

Especially in Sub-Saharan Africa, women and men not only have separate sources of income but also distinct responsibilities for spending income under their control and/or pooled income. Not surprisingly, expenditure responsibilities are linked quite closely to household responsibilities as defined by the prevailing sexual division of labor. Thus women's ultimate responsibility for feeding their children translates into responsibility for purchasing food for the household, utilizing both their own income and whatever transfers they receive for this purpose from their husbands (see for example Bruce, 1988; MacKenzie and Taylor, 1987; Carloni, 1987). Guyer (1980) found that among the Beti in Cameroon, expenditures on food to supplement subsistence production, as well as expenditures on small household necessities, such as kerosene and soap, accounted for as much as 74 percent of women's cash incomes, as opposed to 22 percent of men's incomes. In this case women were responsible

for two thirds of total household expenditures on food and household supplies, while men supplied only one third of overall expenditures in this category.

Resources controlled by women translate more directly into improvements in family well-being, especially improved nutrition (Blumberg, 1988). Numerous researchers have documented that improvements in children's nutrition are less related to overall household income than to increases in women's earnings in particular (Kumar, 1978; Guyer, 1980; Tripp, 1981; Carloni, 1987). Women's incomes tend to be spent on food, while men's go towards productive investments, consumer durables, and entertainment (Safilios-Rothschild, 1980). Cloud (1987) found that women also spend profits from their enterprises on agricultural inputs for food farming.

Women's responsibility for purchasing food is perhaps the most pronounced division between male and female expenditures (although Dey, 1981, noted that among the Serahuli in the Gambia, wives expect their husbands to buy food staples and only contribute their own funds when men's efforts fall short). Expenditures on other types of goods are subject to quite a bit of regional variability and can ultimately only be discerned through field research. For example, MacKenzie and Taylor (1987) found that in Murang'a, Kenya, men who are regularly employed contribute toward school fees and clothing for their children. Similarly, Guyer (1980) noted that among the Beti in Cameroon, men pay for school fees, as well as housing; and Fapohunda (1988) reported that, among the Yoruba, children's school fees, as well as rent, consumer durables and medical care, were decidedly male expenditures. Meanwhile Watts (1984) found that in Ilorin, Nigeria, women pay for their children's school fees using profits from their trading.

Research in Africa and other parts of the world suggests that, in general, women contribute a larger proportion of their personal income toward household expenditures than men, who retain more for personal spending. Carloni (1987) notes that in parts of Kenya, men treat income from certain crops or activities as their own spending money, whereas women's earnings are usually used to buy food. Among the Beti, women supply two thirds of total cash expenses on food and household supplies, which constitutes about three quarters of their personal income, while men contribute about one quarter of their own cash income and retain the rest for personal spending (Guyer, 1988).

Given their greater responsibility for feeding the family, women tend to have less income available for spending on other purposes, such as improved inputs for agricultural production or investments in non-agricultural activities. Furthermore, to the extent that different regional multipliers can be associated with the types of goods that women and men, respectively, tend to buy,

the results of increasing income under female versus male control can be quite disparate in terms of impact on regional economic growth.

Interactions of Income Strategies of Men and Women

The importance of recognizing differences in men's and women's sources of income and expenditure patterns is also tied to the fact that, within households, there is necessarily some relationship between men's income generating and expenditure activities and women's. Men are affected by women's production and consumption decisions, and women are affected by men's. When men's activities change in response to adjustments in the general economy and society, women make economic choices that either accommodate or take advantage of these shifts (Bruce and Dwyer, 1988). For example, the ability of men to take up wage labor depends on women assuming effective management of food production and other household activities (see Peters, 1986). Guyer (1980) notes that women's small but regular contributions to household income allow men to engage in higher risk activities associated with greater absolute returns. Guyer (1986) found that in the Gambia, when men reallocated land from millet, the staple, to groundnuts, the cash crop, women took up rice, a new crop, or went into trade or intensified cultivation of traditional crops in order to spread the risk of their husbands' venture.

However, as Dwyer (1983) and Blumberg (1988) point out, the relationship between women's and men's economic decision-making is not always a harmonious one. The literature provides numerous examples in which husbands and wives are clearly acting in their own best interests, and occasionally at cross-purposes in terms of impact on overall household well-being. For example, according to Carloni, "men have a stake in perpetuating the emphasis on the traditional export crops that they control, whereas women have a stake in expanding production of minor crops such as vegetables," from which they are more likely to be able to control the earnings (Carloni, 1987:5). Another example is provided by Hill's work in Nigeria, where she found that investments by Hausa women may be more oriented toward setting up insurance against divorce than toward complementing their husbands' economic activities.

This review of field research in Africa has demonstrated that acquisition of inputs, agricultural production, processing, marketing, and consumption are all influenced by gender differences associated with specific sexual divisions of labor. Regionally specific sexual divisions of labor, representing prevailing cultural and social norms, give rise to discrete spheres of responsibility for women and men. These responsibilities pose particular time and mobility constraints on

women's income generating activities. Variations in the source and amount of income controlled by women and men combine with distinct household responsibilities to influence individual production strategies and produce different male and female marketing channels and expenditure patterns. As a result, men and women buy different goods, in different amounts, in different places, as well as respond to different types of incentives. These gender-specific variations have important implications for identifying development interventions to promote income generation and multiplication.

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