INVESTING IN AGRICULTURAL EXTENSION: THE CASE OF ALBANIA

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Agricultural and Applied Economics

(ABSTRACT)

The purpose of this study is to provide a policy framework for designing an effective agricultural extension service in support of the market orientation of small farmers in Albania. The main findings and policy implications of this study can help guide the establishment of an agricultural extension service and define appropriate roles for the public and private sectors in providing extension services to Albanian farmers.

A case study was conducted by interviewing researchers, extension specialists and university staff in Albania to identify the problems and constraints encountered in establishing extension service. Data from secondary sources, including surveys and case studies conducted by Tirana Agricultural University, were used to analyze the country's agricultural sector performance during the transition period.

A three-part procedure is used to develop a policy framework for agricultural extension in Albania. The first part underscores the need for the many facets of extension and its goals to be viewed from a systems perspective, by examining its place within the matrix of support services and agricultural knowledge information system (AKIS). The second part emphasizes the need for an extension strategy and analyzes the main elements of a formal extension policy. A comparative analysis of the most eminent extension systems worldwide is provided to help design an appropriate extension system for Albania. It is argued that Albania needs an extension system that is "demand" as well as "supply-driven". Such an extension system needs to be designed based on the following basic principles: situation specificity, financial sustainability, system flexibility, and systemwide participation. A conceptual framework with respect to public goods and externalities is used in the third part to evaluate the incentive structure of private and public sectors for providing extension services to farmers. Two groups of factors that affect the private sector supply of extension are analyzed: (i) demand and supply-side factors that affect the profitability of the service and (ii) factors arising from the public good nature of extension output that affect the appropriability of returns of the service. It is concluded that a public-private extension balance should be achieved. The role of the public extension service to correct for undesirable effects of extension privatization is emphasized.

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Table of Contents

Abstract ii
Acknowledgments iii
List of Tables vi
List of Figures vii

INTRODUCTION 1

Problem Statement 1
Background 1
General Problem 4
Specific problem 6
Significance 8
Objectives 9
Methods and Procedures 10
Method 11
Data & Sources 11
Structure of the Report 11
Limitations of the Study 13

AGRICULTURAL DEVELOPMENT IN ALBANIA: AN OVERVIEW 14

Background 14
Agrarian Reform 15
Collectivization 17
Decollectivization and Privatization 20
New Production Structures 22
Market Orientation 25

THE ROLE OF EXTENSION IN ALBANIAN AGRICULTURE 32

Introduction 32
Why An Extension Service? 34
Extension as A Support System 37
Extension as A Policy instrument 39
Extension as part of Larger System (AKIS) 41
Principles for Developing Agricultural Extension 45

POLICY ISSUES IN AGRICULTURAL EXTENSION 49

Introduction 49
Extension Organization 50
"The Watermelon Case" 50

Current Organization of Extension Service 52
Need for An Extension Strategy 54
Extension System 56
Conceptual Issues 56
Types of Extension Systems 58
Which System is Appropriate for Albania? 62
Some Prerequisites for An Effective Extension Service 63
Objectives and Goals 64
Scope of Activities 66
Clientele 68
Linkage Problem 72
Need for An Integrated AKIS 72
Mechanisms for Strengthening Linkages 74
Implications for Restructuring Agricultural Education 76
The Economic Importance of Education 76
Some Directions of Change 77

INCENTIVE STRUCTURES FOR PROVIDING EXTENSION 80

Introduction 80
Public and Private Goods 81
Externalities 84
Public and Private Good Dimensions of Extension 86
Determinants of Private Supply of Extension 88
Demand-side Factors 88
Supply-side Factors 91
Public vs. Private Service 94
Privatization vs. Cost-Recovery Programs 97

CONCLUSIONS AND POLICY IMPLICATIONS 99

REFERENCES 110

APENDIXES 118
Apendix A 118
Apendix B 124

VITA 129

List of Tables

Table 1.	Macroeconomic Indicators.	118
Table 2.	Share of the Economically Active Population Employed in Agriculture in East European Countries, 1988.	118
Table 3.	Albanian Population and Rural Population, 1923-1991.	119
Table 4.	Agricultural Land ('000 hectares).	119
Table 5.	Distribution of Cultivated Land Before 1946.	119
Table 6.	Breakdown by Origin of Agricultural Production, Selected Years, 1950-1991.	120
Table 7.	A comparison of Agricultural Productivity among East European Countries.	120
Table 8.	Milk Production in Eastern Europe and Comparison with the Netherland, 1988.	121
Table 9.	Average Annual Growth Rates for Principal Agricultural Products.	121
Table 10.	Grouping of districts by per-capita agricultural land.	121
Table 11.	Development of Tractorization in Albania.	122
Table 12.	Proportion of Farms with Sales and Quantities Sold.	26
Table 13.	Proportion of Livestock farms with sales.	27
Table 14.	Ratio of Farms with Sales to Harvested Farms and that of Sales to Production by Quantity Harvested.	27
Table 15.	Ratio of Farms with Sales by Ecological Zones.	28
Table 16.	Proportion of Hired Labor to Total Farm Labor by Ecological Zones.	29
Table 17.	Proportion of Farms which Use Purchased Inputs to Total Crop Farms by Ecological Zones.	29
Table 18.	Land Preparation by Ecological Zones.	30

List of Figures

Figure 1.	The Farmers' Market Integration Continuum.	25
Figure 2.	Services Supporting Farming Community.	38
Figure 3.	Elements of AKIS.	44
Figure 4.	The Elements of An Extension System.	57
Figure 5.	Organization Scheme of a Conventional Extension Service.	125
Figure 6.	Organization Scheme of U.S. Land - Grant System.	126
Figure 7.	Organization Scheme of T&V System.	127
Figure 8.	Steps in FSR/E to Adapting and Extending new Agricultural Technology.	128
Figure 9.	Division of Efforts in FRS/E.	61
Figure 10.	Public-Private Good Spectrum of Extension Output.	87
Figure 11.	Determinants of Private Supply of Agricultural Extension.	89
Figure 12.	Public and Private Organizations Providing Agricultural Extension.	96

INTRODUCTION

Problem Statement

> "The contrast between the performance of the Western economies and centrally planned economies since World War II provides a sobering reminder of the critical importance of institutional frameworks that induce competition and decentralized decision making and that reward the acquisition of productive skills and knowledge" (North, 1992: p.17).

Background

Since 1989 all formerly centrally planned economies of Central and Eastern Europe have been making radical changes in both their political and economic systems. Each has followed its own way and time path, although there are clearly common characteristics. One of those characteristics is the policy of transferring public and collective property to private ownership. Privatization is considered essential to the process of reform for three main reasons: (i) to establish well-functioning markets, (ii) to create incentives for decision makers to act in response to market signals, and (iii) to assure irreversibility of the reforms themselves (World Bank, 1995).

Broadly speaking, Eastern European countries are following two different paths for implementing their reform programs: gradual and radical. The supporters of gradual reforms argue that economic transformation must allow for a transition and adjustment process and that during that process the following objectives will be achieved: (i) the country will be raised from the economic and political crises of the socialist economy prior to reforms; (ii) market signals will be created for agents involved in production activities, and (iii) institutions and structural reforms needed to

affect the transformation will be created. The major criticism against the gradualist approach is its inherent credibility deficiency. The results of economic reform in countries that have applied this approach (like the former-Soviet Union) have shown that gradualism is unlikely to induce the desired changes in behavior needed to transform the economic system (Neuber, 1995). This credibility problem is considered the main shortcoming and it directly affects the fulfillment of the third objective, that is the creation and/or configuration of the market-framing institutions. On the other hand, the radicalists assume that the introduction of a liberalized price system and private property rights are necessary and sufficient conditions for successful economic reforms even in the (initial) absence of market-framing institutions (Neuber, 1995).

Which approach is the most appropriate? Many economists agree that the radical agenda or the so-called "shock therapy" approach to economic reform is superior to the gradual approach. It is not only small countries that have proven the success of radical reforms. In 1995, for example, growth rates in Slovenia, Poland, Albania, Slovakia and Armenia ranged between 3 and 11 per cent a year (Illaronov, 1996). Where radical transformation took place, it drew strong public support, but where it did not happen, there was deep social frustration which represents a real threat to the economic transition. As emphasized by the World Development Report (World Bank, 1996: p.28) "A stronger, more sustained liberalization spells a smaller output decline and a stronger recovery." However, there is not a clear-cut answer to the above question. It all depends on the given country's specific conditions. "The real challenge is to identify the specific policy areas where "shock therapy" is appropriate and those where "gradualism" is the more effective approach." (Schiavo-Campo, 1994).

Despite high growth rates achieved by the transitional economies so far, new entrepreneurs in these countries are operating production activities in the absence of an adequate institutional framework and legal system.

Under these circumstances, there exists a high degree of uncertainty as the planning structures are dismantled and not yet replaced by market institutions.

Institutions do play a crucial role in the performance of the economic system (North, 1992). In the case of Eastern Europe, the entire economic system is being changed, institutions are different, property rights are redistributed, subsidies abolished and relative prices are undergoing drastic changes. Consequently, the process of institutional development which is commonly seen as a complex and difficult task with long adaptation periods becomes even more uncertain in its outcome when it is only a part of a much broader process of economic transition.

It seems that even the radical agenda proponents have underestimated the institutional context of development during the initial stages of transition process. As Neuber (1995, p. 215) points out "..most attention has focused on the comparative advantage of market economies in static efficiency terms, and much less on how the institutional set-up facilitates dynamic efficiency"(p.117). On the other hand, it is generally accepted that the radical changes in Eastern Europe are an unprecedented case in the history of economic development. Furthermore, even the new institutional economics does not give a satisfactory answer to the issues of institutional change in Eastern European Economies. As Furubotn (1992) admits:

> "At present, it seems true that the best advice the economists can give Eastern European societies is to proceed with free market reforms. What is generally needed, however, is a theory of development that is capable of dealing in some depth with interrelation between institutional change and growth. The fact that the profession has no generally accepted theory of this type to offer, suggests how much work is yet to be done in adopting political economy and the analysis of institutions to the problem of reconstruction"

Thus, the question “Transition to where ?” in the case of Eastern European economies is not solely a matter of academic curiosity. On the contrary, it implies addressing the puzzles and dilemmas the policy makers of these countries are facing in the transition from the centrally-planned to the market economy system.

General Problem

Like other Eastern European countries, Albania is now in the midst of transition toward developing a functioning market economy. It has already privatized agriculture, housing, small and medium industries and is working on privatizing large state enterprises. It has liberalized the price formation structures and the exchange systems, consolidated fiscal policies and established monetary and income policies with the help of international financial organizations such as the International Monetary Fund (IMF) and the World Bank. It reduced inflation from 400 per cent in 1992 to 6 per cent in 1995. It has achieved the highest growth rate among emerging market economies for the last three years (World Bank, 1996).

Albania is an agricultural country and as such the role of agriculture within the Albanian economy has historically been and will continue to be the predominant factor in its growth and development for many years. Actually, half of country's GDP comes from the agricultural sector and it employs over 50 per cent of the total work force. Some 60 per cent of the population lives in rural areas. Therefore, it is necessary to have an explicit policy framework to support it.

During the 45 years of communist rule, agriculture was led, as was the whole Albanian economy, by centralised laws and bureaucratic methods of command and control which gradually brought about economic and social stagnation. This stagnation was attributed to some factors that were considered to be deeply rooted in the Albanian socialist system such as: the misman-

agement, financial imbalances, the collectivisation campaign, bad structural policy, and misallocation of investments and resources.

The so called "shock therapy" underlying the political and economic reform applied in Albania at the beginning of 1990s, brought about a new structural framework in the agricultural sectors. The state-controlled cooperatives and state farms were broken up and new production structures composed of a great number of small-scale farms emerged. In the command system, agricultural production was centrally planned and directed, as was the research and extension system. Therefore, the existing institutions of agricultural research and extension could not continue functioning in the same way as with the previous production structures. Under these circumstances, there was a pressing need to reconfigure technology institutions including research and extension in support of evolving production structures.

The present private farm units in Albanian agriculture suffer from a lack of balance between production factors available to each farm and institutional structures needed to support efficient agricultural operations[1]. Many elements of the old agricultural institution system have either stopped functioning due to shortage of public funds, or do not respond to the deep political, social and economic changes that have occurred in Albania during the past five years. Albanian farmers are operating production and market activities in the absence of an integrated system of technology institutions such as agricultural research, extension service, and agricultural education.

[1] This phenomenon is present in almost all Eastern European countries. As the World Bank (1995: p.14) indicates "Because of the risk they [farmers] face, the lack of well-functioning markets and the absence of cooperative institutions, retrenchment is the dominant attitude of farmers in Central and Eastern Europe."

Particularly, farmers located in areas with high agricultural potential like those in the coastal region are in a great need of such a system. They are involved in producing cash crops much more than farmers of other regions. For example, farmers in the coastal plain want to expand their activities by investing more in farm structures (land, buildings, and equipment) and purchasing more high-pay-off inputs, but do not have enough access to credit. They want to shift to producing cash crops, but the market infrastructure is not sufficiently developed to absorb the agricultural surplus. They want to use high-yielding seeds and other yield enhancing inputs, but agricultural research institutions have not yet determined what kind of research system will help farmers solve their technology problems. They need advice on improving their farming techniques and practices, but the agricultural extension service is only on its infancy (World Bank,1995).

Specific Problem

This paper looks at the institutions involved in the process of generation and diffusion of new technology and information to the private farming community in Albania, with special emphasis on agricultural extension. It seeks to provide a policy framework for guiding the establishment of the country's agricultural extension service. Further, it examines, among other factors, the arguments for and against the public sector's role in institutional design of agriculture.

Basically, to date the changes in institutions have been implemented as supplements to, as adaptations of, or as substitutions for the preceding institutions. Given the structure of the support system of Albanian agriculture inherited from the past, the institutional design process with respect to the agricultural extension service has to start from the scratch since this institution did not exist before.

Actually, institutional change in Albanian agriculture is happening very slowly. The lagged introduction of market-framing agricultural institutions is explained by the existence of diverse interests of different agents involved in this process, as well as other constraints and problems that accompany the transition period.

As a matter of fact there are many foreign projects underway whose major objective is the strengthening of agricultural institutions in Albania. To mention a few: the Support for Agriculture Restructuring in Albania (SARA) project financed by the United States Agency for International Development (USAID), is strengthening policy analysis capacity and restructuring the agricultural research at the Ministry of Agriculture, as well as supporting the restructuring of the two agricultural economics departments at Tirana Agricultural University; an Extension Project and AVATAR project, both financed by European Union, are making great efforts to establish an extension service and to train extension specialists. In addition, there are other projects financed by different European countries that are supporting the restructuring of research, extension and vocational education.

Despite the efforts of such projects, the requisite change in agricultural institutions is not explicitly stated as a key element within the government's program of reforms. There is little effort directed towards coordinating the various foreign projects in order for Albania to benefit as much as possible from this assistance. The poor coordination by domestic decision makers may come from a lack of a clear vision about the need for institutional design in the agricultural sector.

In order for this to change, it is essential for Albanian policy makers to have a clear understanding of the role of agricultural institutions in agricultural development, their nature and functions, organizational structures, and their integration. Such strategic understanding is one of the most important missing ingredients in Albanian agrarian policy.

Institutional reform can not be carried out properly unless policy-makers and other specialists involved in the agricultural development process "see the forest for the trees". They need to know the answer to the following questions: (i) will the economic performance of Albanian private farming be sustained in the long run in the absence of an integrated system of research, extension and agricultural education? (ii) what research and extension systems should be applied in response to diverse needs of a great number of small-scale farmers prevalent in Albania? (iii) should and can the extension service address the needs of all groups of farmers? (iv) should the extension service in Albania be provided by the public sector or by private agencies? If provided by government, should farmers pay for the advice? (v) What is the incentive structure that governs the private sector participation in providing an extension service?

Answering these questions would make it possible to closely link agricultural policy instruments and the support system in fulfilling the policy objectives toward higher stages of agricultural development in Albania.

Significance

Agricultural development requires much more than capital, technology and education. The institutional context of development is crucial to agriculture's performance. Creating a support system for Albanian farmers must involve much more than just creating something that never existed before. In the initial stage of the development process, the role played by the support system is critical. Without an effective system of marketing, input supply, credit, transportation, extension, research, education and other services, the small-scale farmers are unable to make the transition from subsistence to market-oriented farming (Weitz, 1971). Raising agricultural productivity through new technology is essential to the alleviation of poverty and to assurance of long term economic growth of Albania. Equally important over the long term is helping farmers adopt less intensive and more

environmentally sound agricultural practices. Research, extension and agricultural education are crucial elements of the support system. As the main approach for generating and diffusing new technologies and information in the agricultural sector, they comprise the main support and direct contribution of the state to Albanian private farmers.

It is hoped that the main findings and policy implications derived from this study will contribute to the efforts for designing an effective agricultural extension service in Albania. Policy decision makers, specialists working in agriculture-related departments, agricultural research institutes, agricultural extension units, vocational education training centers, and agricultural universities, all are intended to be the target clientele of this study.

Objectives

The main objective of this study is to provide a policy framework for designing an effective agricultural extension service in support of the market orientation of small farmers in Albania. The specific objectives are to:

1. identify areas of contribution that an agricultural extension service can make to fostering the country's agricultural development;
2. examine the main instruments of the agricultural extension policy and suggest ways to improve its relevance and responsiveness to Albanian agriculture's conditions; and
3. evaluate the incentive structure for private and public sector participation in providing an agricultural extension service.

Methods and Procedures

The following describes the methods and procedures followed for achieving the objectives of the study and briefly presents the structure of the report.

Methods

This study uses descriptive and case study methods. The unit of analysis is the agricultural extension service, as one of the technology institutions involved in diffusing and disseminating agricultural technology and information to Albanian farmers. The methodological issues related to institutional development are subject to many disciplines. Within this context, the formulation of a policy framework for designing an effective agricultural extension service is discussed from an economic perspective.

The first two objectives were achieved by conducting a case study through a two week field trip to Albania. The information collected was mainly conceptual and qualitative. A checklist of issues was compiled based on interviews with researchers, extension agents, and agricultural university staff. The intention was to identify the problems and constraints encountered in the process of structuring the agricultural extension service, as perceived by specialists working in these institutions. In addition, the latest information was collected from other agencies and foreign specialists involved in strengthening the institutional structures of Albanian agriculture.

The third objective, that of evaluating the current and perspective roles of private and public sectors in providing extension service to Albanian farmers, was achieved by analyzing the extension output from a public good and externality perspective. The ideas in the World Bank paper "Public and Private Agricultural Extension: Beyond Traditional Frontiers" (Umali &

Schwartz, 1994) were used to develop a conceptional framework for the third objective.

Data and Sources

Given the research objectives and resources available, the data for carrying out this study came primarily from secondary sources. Data related to the performance of new production structures was obtained from sources such as *Agricultural Statistics Yearbook* published by the Albanian Ministry of Agriculture and Food, as well as from the surveys and case studies carried out by Tirana Agricultural University during the past four years. One such source is the data from the survey conducted during 1993-94 as a part of the World Bank study "Farm Restructuring and Land Tenure in Reforming Socialist Economies" in which the author of this study was involved as a member of the Albanian study team. In addition, supplementary data on the economic reform in Albania's agricultural sector were obtained from the various publications of the Food and Agricultural Organization (FAO) of the United Nations, IMF and World bank.

Structure of the Report

The report is divided into four sections. The first section “Agricultural development in Albania” starts with a brief description of the pre-reform situation of the Albanian economy and its agricultural sector. It describes the main stages of agricultural development for the period 1946-1996. Further it examines the current situation of private farming, its performance, new production structures and the level of commercialization. It concludes with the implications that the evolving structures of the agricultural sector have for restructuring agricultural research and extension.

The second section provides a brief discussion on the importance of extension in Albanian agriculture. It briefly analyzes the structural changes that have recently occurred with respect to the basic elements of Albanian

agriculture and identifies areas of contribution that extension can make for fostering the country's agricultural development. The many facets of extension and its goals are viewed from a system perspective by examining its place within the matrix of support services and agricultural knowledge information system (AKIS). Finally, it outlines key principles for establishing an extension service, drawing implications for the Albanian situation.

Major efforts in the third section are devoted to discussing some of the policy issues related to agricultural extension. It emphasizes the need for an extension strategy and outlines some of the policy guidelines related to choosing an appropriate extension system, setting the objectives, and defining the scope of activities and the range of clientele, which should be taken into consideration in the setting up phase of an extension service in Albania. Next, it examines the linkage mechanisms needed for an integrated system of research, extension, education and farmer community (R-E-E-F), and identifies the main informal and formal linkages as well as the policy instruments for institutionalization of these integrated linkages. Finally, it concludes with extension implications for restructuring agricultural education.

The fourth section evaluates the incentive structure of private and public sector participation in providing agricultural extension in Albania. The analysis starts with a brief discussion of the main properties of private and public goods as well as externalities and their policy implications. This brief treatment serves as an economic framework for determining the current and perspective roles of the private and public sectors in providing an extension service for Albanian farmers. Then, it examines the determinants of the private sector's supply of extension. It concludes with the lessons that can be learned from the experience of many countries regarding the cost-recovery programs and the future of the private sector for providing agricultural extension in Albania.

Limitation of the Study

Institutional and technical change are important determinants of agricultural growth. On the other hand, both institutional and technical change are closely interrelated and affect each-other in many ways. The study of such relationships and their impacts is of special importance to the present and future development of Albanian agriculture. However, this study would require the use of econometric techniques and hypothesis testing regarding the relationship between agricultural institutions and agriculture performance, as well as the effects of institutional change on the long run sustainability of economic growth. These techniques and tests were beyond the scope of this study, but certainly constitute a possible extension of research in the future.

AGRICULTURAL DEVELOPMENT IN ALBANIA: AN OVERVIEW

This section provides a general background about the Albanian economy and its agricultural sector. It describes briefly the main stages of agricultural development for the period 1946-1996. Further, it examines the current situation of private farming, its performance, and new production structures and their level of commercialization. It concludes with the implications of the evolving structures of the agricultural sector for restructuring agricultural research and extension.

Background

Albania is located in the Balkan peninsula in south-eastern Europe, bordered by the Adriatic and Ionian Seas to the west, Greece to the south, Macedonia to the east, and Federal Republic of Yugoslavia to the north. The smallest of the Eastern European countries, Albania has an area of 28,748 square kilometres. The country is predominantly hilly or mountainous, with the exception of the fertile western plains beside the Adriatic sea. The population is about 3.4 million people. It is also the poorest country in Europe with per capita GDP estimated at US$ 623 in 1991 and US$ 400 in 1992 (Table 1 - appendix A; World Bank/EC, 1992).

Albania is well endowed with natural resources, including chromium, copper, iron and nickel, and petroleum. The agricultural sector is relatively large compared to other European countries, and about 60 per cent of the population lives in rural areas (Tables 2 & 3 - appendix A). Albania is mountainous and only about 32 percent (700,000 ha) of its total land surface is arable. About 48.5% of total agricultural land is forested, another 19% is counted as pasture land, leaving 704,000 ha of arable land for crops and orchards (World Bank/EC, 1992). More details on the gradual expansion of total agricultural land, and the corresponding growth in the size of arable land are presented in (Table 4 - appendix A). It is clear that there has been a

significant increase in the total amount of agricultural land. This increases has been due to major land reclamation and improvement programmes, carried out since 1946.

By 1990 the cumulative effects of Albania's central planning system had led to an economic crisis. The most salient characteristics were a high internal deficit (16% of GDP), the collapse of export markets, a large balance of payments deficit and substantial arrears with foreign commercial banks (IMF, 1992). As a result the country was unable to offset a growing shortfall in domestic supply with imports. This economic crisis, plus growing pressure for political change, led to the first economic reforms in late 1990.

During the last four decades and especially since 1970, agriculture has been considered as the base industry of the economy. It is the main source of food for rural and urban areas, a source of export earnings, a source of labour for urban industrial growth and a source of capital for financing urban investments.

The contribution of agriculture to Albania's economy is presented in several tables which appear in the appendix. These tables indicate the importance of the agricultural sector in the nation-wide economy, including its share in and use of land surface, its share of the Gross Domestic Product (GDP), employment, exports, and state investments, as well as some key indicators on the agricultural sector itself.

Agrarian Reform (1945-1946)

In 1946, when the first agrarian reform was carried out, Albania was the most backward country in Europe. At that period of time, some 87 percent of population was engaged in agricultural production, while less than 10 percent of land was arable and only 10 percent of this land was irrigated. Most of the population was illiterate and agricultural productivity was very low. The yield of the major agricultural products did not exceed 7-10 kv per ha. Farm households used very primitive tools and the only source of energy was people

and working animals. Land was considered the most problematic factor because of its scarcity (Pata & Osmani, 1994).

The structure of land ownership was characterised by semi-feudal relationships. The main features of the structure were: (i) a high degree of concentration in ownership and control of land. The majority of the peasants had on average 1.1 ha of land. Only 3 per cent of 21,544 large landowners owned 27 per cent of arable land, while 14 per cent of rural families had no land at all (Table 5 - appendix A). This skewed land ownership pattern was the most generally accepted indicator of the need for agrarian reform; (ii) the existence of large "latifundia" owners; (iii) a high proportion of farm labourers among the heads of the families which were dependent upon agriculture and pastoral activities. This was merely a reflection of the extreme degree of concentration in the ownership and control of the land, as well as of the general backwardness of the country as a whole; (iv) a low level of production per person employed in agriculture. This low level , in turn, was probably a reflection of socio-economic factors perpetuated by the concentration of land ownership. The persistence of this complex of factors that resulted in low productivity per worker and the wasteful and inefficient combination of the factors of production strengthened the need for agrarian reform; (v) a very low average level of living in the rural areas, and (vi) the extreme degree of social stratification, or a two class system.

Radical agrarian reform was carried out in 1945 and 1946. According to the law of agrarian reform, all the land was expropriated without remuneration. This phase was characterised by the slogan: "The land to the tiller". As a result, some 70,000 peasant family with little or no land received land from the application of agrarian reform. In total, 21,544 landowners were expropriated. A total of 155,159 ha of arable land, 474,227 olive trees and 5,923 working animals were distributed.

The peasant population generally supported the agrarian reform, expecting to become legal landowners. But in fact, the Albanian Communist

Party, by carrying out the agrarian reform aimed to eliminate any kind of the private ownership in agriculture. The law of agrarian reform prohibited selling, buying or mortgaging of the land which was distributed to the peasant families. In this way, the agrarian reform made the state the sole proprietor of the land.

Collectivisation (1946-1967)

Collectivisation, the process of pooling household lands to form agricultural cooperatives producing collectively was undertaken over a 20 year period. The collectivisation of agriculture began immediately after the land reform. The first seven cooperatives were set up in 1946. Albanian cooperatives and state farms were similar to the kolkhoz and sovkhoz in Soviet Union. By the end of 1954, 150 cooperatives had been formed, made up of 8900 families on an area of 31,500 ha. During the first stage of collectivisation the membership in cooperatives was voluntary.

The second stage of collectivisation began after the mid 1950s with the extension of cooperative production to the hilly and mountainous areas. In 1959, there were about 1,800 cooperatives, with 114,700 families, cultivating 290,000 ha.

The third and last stage in the process of collectivisation began in 1965 with the objective of completing the elimination of private property. The process of collectivisation of agriculture was considered finished by the end of 1960, despite the fact that the collectivisation of peasant families in the mountainous areas lasted until 1967. This year marks the end of collectivisation in Albania. In 1967, individual plots were reduced to 0.11 ha per family unit.

Concurrently, the state set up state farms. The first state farms were created in 1945-1946 on the land belonging to religious institutions, to foreign companies, and to large landowners. In the 1960s and 1970s, the main source of land for setting up state farms was reclaimed land. The state encouraged the

development of state farms for both technical and financial reasons. It was hoped that they would serve as the model of the benefits from economies of scale. The principal function of the state farms was to provide urban areas with vegetables, fruit and livestock products. Their number increased from 21, with an average area of 1,000 ha in the mid 1950s to 58, with an average area of 3000-4000 ha by the end of the 1980s. They differed from cooperatives in that they had their own machinery and equipment, they could obtain state subsidies, salaries were fixed and guaranteed.

The size of cooperatives has changed time after time, ignoring economic criteria. After 1957, the number of villages in a cooperative was two to three, with on the average 127 ha of land and 44 families. In 1960, these figures were respectively three to four villages, 212 ha and 78 families. This process of increasing the size of cooperatives continued until 1980, when the total number of cooperatives was reduced to 423. During that period, the cooperatives were large with, on average, 1000 ha; the size of state farms was, in some cases, even 4000 ha. After 1985, there began the opposite process, that of breaking up the large cooperatives into the smaller ones, in search of the new ways of spurring their development. As a result there were 1000 cooperatives in 1990 (World Bank/EC, 1992). The same process of expansion and contraction took place even with the state farms.

The role of cooperatives within the agricultural sector was predominant compared to that of state farms. The structural framework of the Albanian agricultural sector on the eve of the political and economic reforms in 1990 was as follows (Pata & Osmani, 1994):

- The 150 state farms varied in size from 500 to 2,000 ha, equivalent to double the average size of cooperatives. They contributed 29 per cent of the total agricultural production, cultivated 24 per cent (170,000 ha) of arable land, employed 21 per cent of the country's working population, and owned 37 per cent of tractors and 26 per cent of the combine harvesters.

- Cooperative farms (492 in 1989) provided 50 per cent of the total agricultural production, cultivated 72 per cent of arable land, and employed over 75 per cent of the agricultural active labour force.
- The private sector (332,000 units in 1989) consisting of partitioned land and individual plots which produced 21 per cent of the total agricultural production and cultivated only 4 per cent of the total arable land (Table 6 - appendix A).

During the 50 years of communist regime, agriculture, as was the rest economy, was led by centralised laws which gradually brought about economic and social stagnation. The cooperative performance was never satisfactory in terms of efficiency and progress (Tables 7, 8, and 9 - appendix A). There existed practices to produce everything within the economy because of the extreme isolation. Cooperative members were not interested in increasing agricultural productivity. Moral incentives were considered to be more important than the material ones. At both, the national and local levels, cooperatives led by bureaucratic and violent means of command. The size of private plots was gradually reduced to only 0.02 ha per family. Most of the cooperative members who lived in plain and hilly regions were not allowed to keep any domestic animals after 1980. The peasant market was abolished in the same year.

After the second half of 1980s, declines in the level of production and standard of living became apparent. This crisis could be attributed to some structural factors that were considered to be deeply rooted in the Albanian socialist system such as mismanagement, financial imbalances, degeneration of capital stock, the collectivisation campaign, bad structural policy, and misallocation of investments and resources.

The previous discussion is a summary of the historical development of the organisation of Albanian agriculture in the period 1945-1990. During this period, agriculture was considered the base industry of the Albanian economy. This gradual decomposition of the economy as a whole prepared the country for democratic changes.

Decollectivisation and Privatisation (1991-1996)

The restructuring of the economy began with agriculture, the main sector of the economy, and the first step, taken in 1991, was the abolition of the agricultural cooperatives. This restructuring was badly directed and monitored, and in most cases the distribution of cooperatives' assets was not carried out equitably. There was a great deal of theft, and furthermore the fundamental assets of the cooperatives such as machinery, fruit trees, farm equipment etc. were either simply grabbed or were sold to certain people at very low prices.

A law on land ownership was passed in July 1991 providing for cooperative land to be distributed to those people who actually lived in the countryside and had worked on the agricultural cooperatives. Land was given to peasant families without payment, while foreigners were to be allowed to rent agricultural land and buildings.

The land legislation is considered to be transitional: at the moment it is not the concept of ownership that defines the rights and duties of owners and of those holdings rights of tenancy and mortgage, but rather it is the constitution of the law which is regulating the transition from the cooperatives to a family-farm form of agriculture (World Bank, 1995). The land law states that all agricultural land shall be distributed as private property to the members of the cooperatives.

Nationally, there are some 531,000 ha of arable land, which formerly belonged to the agricultural cooperatives, which has been distributed to nearly 375,000 households. The ex-properties of the cooperatives were distributed and given to individual households according to the law, especially in the plain regions. Each family has received the land in 3-7 plots, including the 300 square metres on which the house is standing. Distribution was directed by the local District Land Commissions and the basic criteria which defined distribution were: the quality of the land, irrigation, the slope and the number

of people in the household. The law prohibits selling or purchasing of land[2], its use for non-agricultural purposes, and includes compulsory maintaining rules for it. It should be mentioned that the law on land distribution was a direct result of a broad consensus among the major political forces. It was considered deeply human and democratic because it takes into consideration the interests of the overwhelming majority of the people.

The problems concerning land distribution came from different sources. The most serious and general problem was disputes with original owners, who wanted their old properties back[3]. In fact, it is observed that most of the individual holdings, on the average, have more land than they had after the first agrarian reform in 1946. The size of the arable land is increased as a result of reclaiming virgin land and improving it through irrigation and drainage.

Another problem is that of defining the borders of the villages. During the consolidation of agricultural cooperatives that took place in 1960-1970, several villages were included in one cooperative. In 1991, the land was returned to the villages that had possessed it historically. The district land commission was responsible for arranging the borders in such a way that the amount of the land per capita in each village be equal. This procedure caused sharp conflicts between neighbouring villages (Table 10 - appendix A).

One of the main bases for the program of economic reform is the legal framework and the way in which laws are implemented in practice. Many studies have clearly identified the land reform legislation itself as a source of uncertainty. Compared to other Eastern European countries, Albanian land legislation might be classified as a general outline structure, leaving many details to the executive authorities. Perhaps, because of rapid rate of changes taking place and the need for laws to be made quickly, there are sometimes

[2] The law on land markets was passed in 1995

[3] In 1995, the parliament passed a law according to which the former land owners would be compensated by giving to them the land in coastal region with high potential for tourism.

inconsistencies between laws. The current situation described above may be the reflection of and related to the disordered operation of legislative and executive powers. Many laws and decision are not carried out at all, some of them being only partly applied (World Bank, 1995).

The above mentioned problems are closely connected with the stages through which the process of privatisation has passed, mainly in the ex-agricultural cooperatives. As far as the state farms are concerned, the government took the decision to privatise those that were set up on the basis of higher type cooperatives. For the state farms that were set up on the land and other equipment owned by the state, at first it was decided that they would have the same function as before, provided they would change their ways of organisation and functioning. In the years 1992-1993, they began to function in this way.

The experience of those two years showed that the remaining state farms were not efficient and could not survive in the new environment where private property was determinant. The slogan “common property belongs to everyone and at the same time to no one” can best explain what happened with the remaining state farms. Sometimes, the entire planted areas were destroyed by state farm members. In these conditions, in October 1992, by a special decision of democratic government the privatisation of the state farms began to move. By March 1993, all state farms were privatised.

New Production Structures

The dismantling of state and cooperative farms brought about new production structures composed of over 450,000 private farmers. During the past five years there have been some important changes with respect to the agricultural production and performance attained on the private farms. All farms have become primarily oriented to meeting consumption needs of the family. Consequently, the general picture of private farming in Albania is dominated by a large number of small-scale farms operating only on a

subsistence or semi-subsistence level. New production structures that exist at present may best be typified by four categories: (Civici at. al, 1994)

Subsistence Farms

These new small private farms are engaged in very low economic activity. They buy hardly any inputs and generally market very little or nothing. They are generally passive and dependent on the interventions of the government. The primary concern of the owners of these small farms is to meet the consumption needs of their families. In this respect, the situation has improved somewhat since the reforms began.

There are some other aspects of the new situation that the farmers appreciate very much: (i) to work for the benefit of their own families now, (ii) their independence in decision-making concerning crop patterns and livestock production and (iii) the increase of freedoms in every-day life in general. However, little dynamic activity with regard to the immediate development of the Albanian agricultural economy may be expected from this category of farm.

Semi-subsistence farms

The main difference between farms in this category and the previous one lies in the level of initiative of their operators. Generally, these farmers have come out of the distribution process in better shape than subsistence farmers. Individual farmers in this group have started market production. They concentrate on achieving some surplus production of relatively durable products, additional to what is needed for their own family consumption. This surplus consists especially of staples (mainly wheat and potatoes) and livestock products (particularly in mountainous regions). This surplus is then marketed. Alternatively, these farmers may produce a cash crop (e.g. tobacco, sunflower, melons etc.) that is marketed. Farmers in this group invest in good seeds, fertiliser, and sometimes mechanisation to maximise market production.

Commercial Farms

These are the farms that have extended their farming activities and, through the acquisition of a transportation vehicle or a tractor, have moved

into commercial services**.** Typically, these farmers are indicative of a much higher willingness to accept risk than of those represented in the previous categories. Often, short term credits have been used to finance investments. These credits have generally been repaid within the agreed repayment period through returns generated by their activities. Commercial farms can be found mainly in areas with high agricultural potential. According to a study carried out by Tirana Agricultural University, it is estimated that the commercial farms make up only 5 % of the total number of farms in Albania (World Bank, 1995). Nevertheless, the operators of these farms introduce a very essential dynamic element into the development of market institutions.

Farmer Associations

Some farmers set up Private Farmers Associations (PFAs) in order to support their efforts to farm privately. These associate forms of production are oriented primarily to the market.

Officially, there are now some 90 such associations in operation throughout Albania, but in fact many of them have been unable to survive not only due to the lack of experience, but also due to a kind of unwillingness among ex-cooperative members for co-operating together. This unwillingness comes, to a great extent, from their allergy toward the previous socialist cooperatives. In addition, some of the elements of the so-called subculture of peasantry such as: mutual distrust in interpersonal relationships, lack of innovativeness; familism; limited time perspective etc. might have a strong influence in farmers' decision to cooperate. It seems that the Albanian farmers place a high value on their newly acquired status. This phenomenon is the same for both small and large farms.

Nevertheless, it should be emphasised that these various associate farm structures benefit from size economies and introduce a healthy stabilising element to the creation of the market institutions. In this connection it would be of a great importance for Albanian farmers to receive advice from the farming communities of other European countries as to how such associations

should be put on to a sound legal and organisational base. Given the experience of Western countries, main resources and technical assistance should be concentrated on initiating the creation of marketing cooperatives. As a matter of fact, efforts are being made by government bodies and overseas associations to create new cooperatives in different regions of the country. But results in this direction are thus far insignificant, however.

Market Orientation

The analysis of the level of market integration of private farmers draws upon the results of the 1994 survey conducted by the Ministry of Agriculture and Food and SARA Project. These figures present a good indication of the recent trends of the changing farmers' attitudes to producing increasingly for the market. To describe the main features of the private farmers' performance and their level of commercialisation, the following indicators are employed:

The Sale of Product Ratio

This criterion implies the production/consumption or commercial/subsistence spectrum from pure subsistence at one extreme to pure commercialisation at the other, as given in the figure 1.

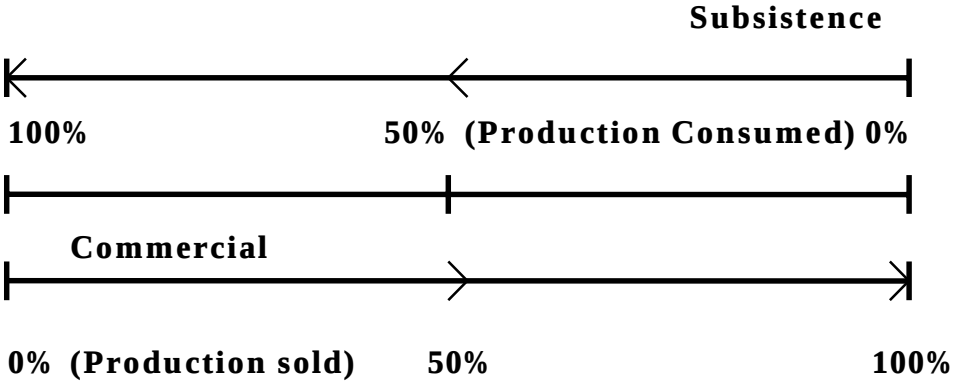

Figure 1. The Farmers' Market Integration Continuum.

(Source: Wharton, 1969)

As table 12 shows, the primary goal of the Albanian farmers productive activity at the present is for family food rather than for commercial sale. The main concentration is on securing family survival. Such farmers are therefore "subsistence producers" working for a "subsistence living".

Table 12. Proportion of Farms with Sales and Quantities Sold.

Selected crops	Farms harvested (No.)	Ratio of selling to harvested farms (%)	Total production (Ton)	Ratio of quantity sold to production (%)	Ratio of sales to production in coastal areas (%)
Wheat grain	278,800	13.1	380,500	13.3	19.5
Maize	287,600	5.1	161,800	6.2	11.4
White beans	162,900	10.5	18,000	15.0	24.1
Potatoes	57,400	22.3	27,910	40.9	45.8[4]
Alfalfa	196,800	5.2	1,220,870	5.0	3.2
Grapes	300,200	2.2	94,400	2.9	x
Olives	77,800	8.7	17,100	8.3	x
Citrus	307,700	6.7	421,000	1.3	x

Source: Special Agricultural Survey, 1994; Ministry of Agriculture and Food & SARA Project

It could be noted however, that among crops, potato should be considered as a cash crop rather than a subsistence crop. Over 20% of farmers market almost half of their potato production. These figures are higher in mountainous areas of Albania.

The low ratio of farms with sales could also be attributed to the lack of structured markets for farm products. Of course such a ratio should have been higher given the potential for agricultural development in most regions of Albania. In the case of livestock production, the situation is quite different. Looking at each livestock product marketed, the number of selling farmers in each case is relatively higher than farmers who sell crop products (table 13).

[4] Figure 45.8 is for upland areas.

The quantities and values of sales are in most cases modest: a few farmers sell large quantities.

Table 13. Proportion of Livestock Farms with Sales.

Species/livestock products	Proportion of livestock farms with sales (%)
Cattle	25.8
Goats	27.5
Sheep	29.4
Pigs/other livestock products	15.2
Albania	46.1

Source: Special Agricultural Survey, 1994; Ministry of Agriculture and Food & SARA Project

Analyzing the ratio of farms with sales to the harvested farms by quantity harvested, one comes to the conclusion that the larger the quantities harvested, the greater is the ratio of farms with sales and with quantities sold (table 14). The same could be said even for the ratio of quantities sold to quantities harvested.

Table 14. Ratio of Farms with Sales to Harvested Farms and that of Sales to Production by Quantity Harvested (main crops).

Crop	Quantity harvested (kg.)	Ratio of farms selling to harvested (%)	Ratio of sales to production (%)
Wheat	1 - 500	1/	1
	501 - 1000	4.2	2.6
	10001 +	23.9	17
Maize	1 - 500	1/	1/
	501 - 1000	1/	1/
	1001 +	23.5	13.6
White beans	1 - 200	7.4	6.6
	200 +	42.3	25.1
Potatoes	1 - 300	7.2	7.6
	301 +	57.6	48

Source: Special Agricultural Survey, 1994; Ministry of Agriculture and Food & SARA Project

(1/Essentially nil)

There are great differences among Albanian farmers with respect to quantities marketed by ecological zones. Most farmers in northern Albania operate self-sufficient farms, growing their own food, making their own implements, and selling each year a few pigs, sheep, calves etc. that are transported over twenty five kms to the nearest market.

The coastal farmers appear to be better off producing a sustainable commercial surplus. The sale of livestock and dairy products currently seems to be the principal way of creating capital within agriculture in the coastal region. This situation may change as other opportunities arise however. Table 15 indicates that farmers in coastal areas are engaged in sales more than farmers in hilly and upland zones. Potato sale is an exception.

Hired Labour or Purchased Factor Inputs Ratio

Another criterion employed is the ratio of the hired labour used in production and the ratio of purchased factor inputs to all inputs used in production. Both of these are considered useful indexes of farmer involvement and integration into the wider economy, since modernisation of an agricultural process necessarily requires increased purchase of inputs produced outside the farm.

Table 15. Ratio of Farms with Sales by Ecological Zones.

Ecological Zones	Selected crops					Livestock products
	Wheat	Maize	White Beans	Potatoes	Alfalfa	
Coastal	22.2	10.8	21.8	1/	6.6	60.4
Valley/hilly	1/	1/	1/	1/	1/	52
Upland	1/	1/	1/	26.3	1/	34.7
Albania	13.1	5.1	10.5	22.3	5.2	46.7

1/ Included in national totals only.

Source: Special Agricultural Survey, 1994; Ministry of Agriculture and Food & SARA Project

In the same way that the sale/consumption ratio measures degree of involvement in the wider economy on the consumption side, the labour or factor input ratio is a measure of involvement on the production side (Wharton, 1970).

The primary source of the labour for the farm comes from family. Table 16 indicates that the ratio of the hired labour to the total labour of farm family is very small. This ratio could be attributed to several factors such as small size of farms, limited opportunity for off-farm employment, low technology, subsistence level of production etc. Hired workers on the farms of upland area are almost non-existent.

Table 16. Proportion of Hired Labor to Total Farm Labor by Ecological Zones.

Ecological zone	Rate of hired labor to total labor (%)
Coastal	6.3
Valley/hilly	4.3
Upland	2.3
Albania	**4.0**

Source: Special Agricultural Survey, 1994; Ministry of Agriculture and Food & SARA Project

Data presented in table 17 make clear that changes in the organization of trade in inputs are occurring, with an increasing role for private channels. Based on a survey conducted by Agricultural University of Tirana in 1993, the level of input use in Albania was very low and large numbers of farmers did not report the use of inputs at all. It seems, however, that input use during the last two years is increasing. Still, almost half of the farmers do not report having purchased any inputs.

Table 17. Proportion of Farms which Use Purchased Inputs to Total Crop Farms by Ecological Zones.

Ecological Zones	Inputs purchased				Total crop farms
	Seeds	Chemical Fertilizers	Chemicals (Pestic. & Insect.)	Irrigation	
Coastal	56.5	66.0	33.8	56.8	136,400
Valley	43.5	65.5	23.6	44.8	83,400
Upland	29.3	56.4	14.5	61.3	200,200
Albania	41.0	61.3	20.0	56.0	420,000

Source: Special Agricultural Survey, 1994; Ministry of Agriculture and Food & SARA Project

Farmers in the upland zone buy and use very little chemicals and seeds. This lack of chemical and seed purchase could be attributed mostly to the lack of structured markets for inputs and to the weak financial position of farmers. Thus, the lack of local availability of inputs is one of the major constraints that farmers are facing. Other factors acting to the detriment of farmers are high prices of inputs and lack of access to short-term credit.

Level of Technology

The low level of technology is a distinguishing characteristic of any farming system in Albania. As table 18 indicates, a substantial part of agricultural operations in upland areas is carried out by hand or by draft animals only. At the same time, one can note that for the country as a whole farm mechanised operations are dominant (Table 11 - appendix A). Tractors are most commonly used for ploughing the land in the Coastal region. It seems that tariffs[5] for mechanised operation have become more reasonable recently. This tariff reduction is explained by both the improvement of the farmer income situation and by increasing rates of the agricultural production surplus, especially in coastal areas.

Table 18. Land Preparation by Ecological Zones.

Ecological Zone	Hand only		Oxen		Tractors		Total field crop Farms
Coastal	26,200	19.2%	11,900	8.7%	126,600	92.8%	136,400
Valley/hilly	37,500	45.0%	30,500	36.6%	55,300	66.3%	83,400
Upland	90,000	45.0%	79,200	39.6%	65,100	32.5%	200,200
Albania	153,700	36.6%	121,600	29.0%	247,000	58.8%	420,000

Source: Special Agricultural Survey, 1994; Ministry of Agriculture and Food & SARA Project.

As a summary of the above observations and analysis, it could be concluded that the main features of private farming performance during the transition are the following: (i) small farms are prevalent throughout Albania, with an average size of 1.4 ha; (ii) land and labour are the key factors

of production at the farm level; (iii) emphasis has shifted to livestock production due to the transfer of livestock ownership to the small-scale private sector; (iv) the adoption of subsistence farming systems among the small farmers, with the majority of wheat being grown for own consumption; (v) the low contribution of farming activities to farmer income and the lack of off-farm employment opportunities; (vi) the absence of land consolidation due to the weak functioning of land markets. Lack of credit, low technology, lack of continuous links between farmers and markets; poor infrastructure, and so forth are some of other obstacles to further development of Albanian agriculture.

[5] What farmers pay for when they hire machinery and tractors

THE ROLE OF EXTENSION IN ALBANIAN AGRICULTURE

This section starts with a brief discussion on the importance of extension in Albanian agriculture. It briefly analyzes the structural changes that have recently occurred with respect to the basic elements of Albanian agriculture and identifies areas of contribution that extension can make for fostering the country's agricultural development. The many facets of extension and its goals are viewed from a system perspective by examining its place within the matrix of support services and agricultural knowledge information system (AKIS). Finally, it outlines key principles for establishing an extension service, drawing implications for the Albanian situation.

Introduction

In a market economy, the government supports farmers by employing certain instruments of agrarian policy and setting up support services. The farmers must improve their agricultural technology and farm management skills in order to raise production and income. The development of the new technology and its modification is the task of agricultural research. As a rule, the diffusion and transfer of technology and administrative practices are facilitated by extension organizations.

Agricultural development begins with people's increasing control over the environment for expanding the output of plants and animals (Mosher, 1965). Generation and utilization of knowledge is the most important instrument for increasing this control.

Traditionally, extension has concentrated on improving production technology. In the last thirty years in the more developed countries where the technology was already efficient, extension has concentrated increasingly on business know-how and the economic, rather than technical aspects of production. In Albania it is likely that advice on both technology and economics will be needed. Agriculture's importance to national development

in Albania is unquestioned. As noted in section two, the sector provides the livelihood for more than 50 percent of country's population. Farm families make up 60 percent or more of Albania's population. Therefore, extension service can serve as a powerful accelerator for speeding up agricultural development.

The role that extension plays in agricultural development depends on how one defines extension. According to Van Den Ban (1996, p.9) "Extension involves the conscious use of communication to help people form sound opinions and make good decision".

Extension[6] is a system that provides farmers with technical advice required to increase their agricultural production and incomes, (including advice on credit, other inputs and markets) and provides agricultural service organizations (such as research and credit) with information about farmers conditions, constraints and priorities in order for these organizations to serve the farmer better (Baxter, 1989).

Agricultural extension is an educational process. Perhaps, the most eloquent definition of extension putting emphasis on its education dimension is given by Leagans (1961, p. 5), when he notes that "The process of extension education is one of working with people, not for them; of helping people become self-reliant, not dependent on others; of making people central actors in the drama, not stage hands or spectators; in short, helping people by means of education to put useful knowledge to work for them."

[6] Extension's many names reflect different national perspectives on its role. The English-language term "extension", like the French term "vulgarization" suggests the popularization of knowledge. The German term "forderung" means "furthering", while the Koreans think of extension as rural guidance. Both imply stimulation of desirable agricultural developments. The Dutch "voorlichting" means "lighting the way", and the Indonesian term "penyuluhan pertainian" is a more poetic "agricultural illumination" underscoring the insight and learning that extension brings. (Van Den Ban, 1996)

Why An Extension Service?

The adoption of new technologies and farm practices in farming activities is of crucial importance for Albania, a country with a rapidly increasing population and severe scarcity of agricultural productive lands. As shown in section one, the gradual expansion of agricultural land through land reclamation and improvement programs since 1946 has been one of the major determinants of the increase of agricultural production in Albania. As the sources for further expansion of agricultural land are exhausted, almost all increases in Albanian agricultural production will have to come from higher output per hectare. Therefore the trend of shifting from resource-based to technology-based farming systems requires also an explicit policy framework for providing new technologies and information to agricultural producers. These new trends imply new roles and responsibilities for agricultural extension in Albania.

In the previous command system, agricultural extension did not exist as a separate organization. There was no formal link between research institutions and agricultural producers. The transfer and dissemination of technology and agricultural practices were carried out directly between the research institutes and the state and cooperative farms. Such a pattern used to work reasonably well given the small number of farms. In the new situation, it is no longer feasible for the researchers to be involved directly in delivering new technology to private farmers. The organization and structure of the extension service as an element of a support system within the Albanian Ministry of Agriculture, based on Western models, is conditioned, by the following factors:

- The transition from a centralized system to a market economy brought about radical changes concerning the nature of basic elements of Albanian agriculture (the production process, farmers, the farm and farm business) as well as the functioning of essential support services.

- As described in section one, the cooperatives and state farms were large in size. Sometimes their size was over 4,000 hectare. They were then divided into sectors that, in most cases, were specialized in growing vegetables, crops, fruit trees, tending livestock, and so forth. Consequently, cooperative and state farm members were highly specialized in the above mentioned activities.
- In the communist forms of agricultural organization, Albanian peasants were denied the elementary rights to act as professional farmers. Working for more than four decades in those large and very specialized production structures, they lost their professional polyvalence. They were simply a huge labor force that lost the technical and managerial skills needed to manage a private farm. The indigenous knowledge structures about farming inherited for generations were destroyed. The master farmer was gone. In these circumstances, the new land owners respond with difficulty to the market situation. They are unprepared to manage private farms and be competitive in the world agricultural markets.
- The specialists under the previous system were narrowly specialized in response to the specialization of the economic unit where they served. Communication of the specialist with agricultural workers was based on the method of commanding. There was no room for a two-way communication between specialist and cooperative members. The feedback from people in the base was almost nonexistent. In a way, the communication process was a kind of propaganda through which specialists communicated to agricultural producers the party directives calling on them for sublime sacrifices on behalf of the “Final Goal”, that is, the construction of a communist society in Albania.
- The economic reform and privatization process of the Albanian agriculture brought new production structures, the existence of over 450,000 small farmers (compared to 420 cooperative farms previously), and as a consequence, the decentralization of the decision-making process.

The farmers themselves will now have to decide on the type of technology and the level of production factors on the farm.

- The private farmers need support in many areas of their activities related to: (i) marketing for their products; they need information about agricultural markets and especially about prices in local and central markets so that they can make comparisons with farm gate prices, (ii) land tenure issues and possibilities for off-farm employment, (iii) institutional technology, that is, to create cooperatives associations for buying inputs, marketing products, sharing agricultural machinery, administrating irrigation water and so forth, (iv) information about the policies issued by the government for agricultural development as well as the rules and limits set by the state, in order to take them into consideration for their own activities (McDowell, 1992).
- The agricultural policy makers will need to know what the farmers think about the development of agriculture, taking into consideration their opinions and remarks for the policies issued and for policy improvement in the future.

Lastly, but most important, the necessity of the organizational structure of this service also stems from the fact that nowadays there is talk about a new model of extension work and about the relations of extension agents to farmers (Van Den Ban, 1996). Most Albanian agricultural specialists are taught in school how to change the farm. In fact their task is to change the farmers allowing the latter to decide how to change the farm. Thus, these specialists have learned what to tell the farmers, but not how to tell them and how to increase their knowledge and abilities. Related to this, Roling (1991, p.128) writes “Extension workers work with farmers. They can only be effective through people ….extension needs both: (1) agricultural sciences covering human control of biological and other farm processes, and (2) extension science covering the systematic use of communication to help

farmers solve their problems. Extension therefore requires two types of knowledge, each with a different rationality."

Extension as A Support System

A support system is composed of a large number of varying elements. Its structures differ by country, but there are some commonly known services which are essential to the agricultural development and progress. In spite of their various organizational schemes and arrangements, they are encountered almost in each country. They include (Figure 2): agricultural research, agricultural extension, agricultural education and farmer's training centers, agricultural credit, marketing system for purchasing inputs and selling agricultural produce, transport facilities, irrigation and water management schemes, seed multiplication centers and agencies and so forth (Weitz, 1971, World Bank 1990, Umali 1994).

Institutional constraints are considered by many authors as a major barrier to technical change and to modernization of agriculture (Brewster, 1967; Hayami & Ruttan, 1985). In the absence of support systems farmers usually are reluctant to accept changes, particularly with respect to new crops and techniques. To some extent, their risk averseness is understandable, given their situation. The existence of an integrated support system helps farmers feel more secure in undertaking farm business activities that involve higher risk and uncertainty. As Weitz points out "..the function of the support system is to provide the farmer with the incentive to convert his farm from a closed economy operation to a market-oriented one" (Weitz, 1971).

Under a command system, as Albania had, all agricultural service institutions are designed to the benefit of the state, as the only proprietor of the farm land and other farm structures. Through those services, the state captures the largest part of returns generated from farm activities. Such an institutional design includes: compulsory deliveries of agricultural products

at nominal prices; the sale of farm products to the state at a lower fixed price; high monopoly prices imposed on cooperative farms for mechanized services offered by machinery and tractor stations.

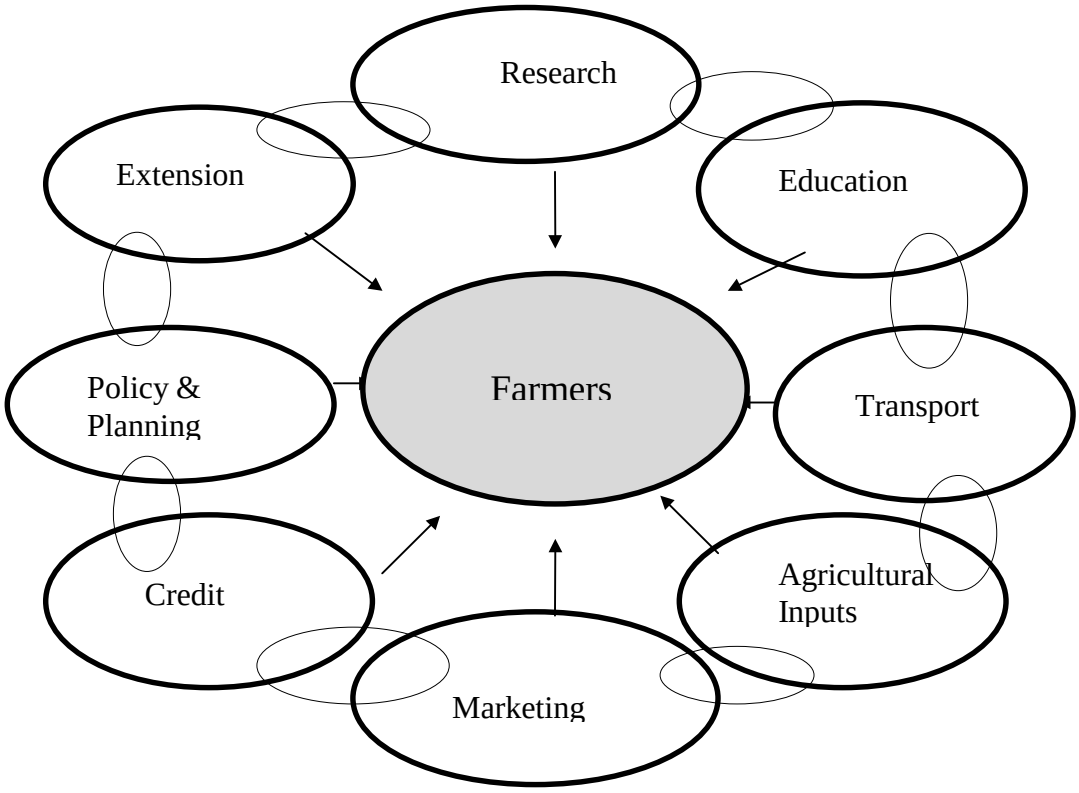

Figure 2. Services Supporting Farming Community
Source: Adopted from L. H. Watts (1984, p.22), "The Organizational Setting for Agricultural Extension" in B. E. Swanson (ed.) Agricultural Extension: A Reference Manual, (Rome: FAO).

In Albania, the state also determined fixed rates of savings and investment for state and cooperative farms. In this way, there was no room for the local managers of the state and cooperative farms to take the initiative to invest in technical change and farm practices improvement. This policy had a detrimental impact on the productivity of the state and cooperative farms. Their performance has never been satisfactory in terms of efficiency and progress. Therefore, the low level of agricultural development in Albania could be attributed partly to the institutional failure.

Following the radical changes that have been taking place, the question now is how to organize the support system and make it work

efficiently under conditions prevailing in an emerging market economy like Albania's. In order for the support system to be efficient and relevant to the new production structures of Albanian agriculture, its institutional design must be guided by the following principles proposed by Weitz (1971): first, maximum dispersal of service units; second, efficiency of services both as to price and quality; and third, concentration of services that function on a similar scale in a single physical location.

Within the matrix of support services, agricultural extension constitutes an important ingredient for agricultural development, but it alone can not insure the increase of farm productivity. To be effective, it needs a continuous flow of information from research institutions and must be combined with other support services and production factors such as land, inputs, labor, credit, transport, marketing, and income and price policies. Howell (1984) and Roberts (1989) have also emphasized the relative importance of extension which, however configured, is only part of an agricultural production system and is unlikely to lead to sustained output increase unless effective research, inputs, policy and infrastructure are also in place.

Extension as A Policy Instrument

Basically, it is assumed that extension agents are free to serve farmers in a way they (agents) consider most effective (Van Den Ban, 1996). Being a part of an organization, however, this status implies that the freedom is limited within the burdens, so to speak, put by national policies and goals.

National development policies and goals even within a country vary over time for a variety of reasons. These goals might include: (i) increasing food production, (ii) stimulating economic growth, (iii) increasing the welfare of farm families and rural people, and/or (iv) promoting sustainable agriculture (Hayward, 1989). National Policies and goals determine to a large extent the configuration of extension. The government uses extension

as a support service as well as a policy instrument for influencing farmer's behavior to achieve its policy goals. It depends on these policies and goals, whether extension would concentrate on commercial farmers and cropping systems that offer high potential for rapid production growth, or whether it would focus on food security, self-sufficiency, and/or raising export earnings.

Despite the need for extension to be neutral and objective when providing information, there is also a need for its objectives and goals to be compatible with national policies. Therefore, goals and objectives of research, extension and training institutions, roughly speaking, should not come in conflict with those of national development. Viewed from a policy perspective, the nature and philosophy of extension work is very complex. Extension can not serve as an exclusive advocate for farmers, nor can it be completely neutral when government's policies discriminate against farmers' interest. Here lies the special mission of extension acting both as a policy instrument and a direct contribution of the state for agricultural producers as well as a "warning device" in cases when the state applies discriminatory agricultural policies.

The experience of other countries indicates that there have been many cases when government development goals conflict with those of farmers. In these circumstances, extension, however efficient, can not compensate for the negative effects of discriminatory policies against agriculture. Discriminatory agricultural policies also lower the rate of return on investment in research and extension. Related to effects of distortionary policies on extension and research returns, Schuh (1987, p.61) points out:

> "Plausible as that may seem, one of the frustrating things about policy making is the general failure to recognize the extent to which there are spill-over effects from distortionary policies. When price relatives are distorted against agriculture, for example, it is not only that the output from the given set of resources is reduced and that land, labor, and other inputs used in the sector are thus undervalued. The rate of return to investments in research and extension and in educational programs is also reduced and the investment themselves are undervalued. Unfortunately, it is not only the policy makers who fail to recognize this problem. Professional observers also

> frequently overlook it, and consequently criticize extension and research programs for not being effective. They have failed to note that the price and policy environments discriminate very severely against those investments."

Having a clear understanding about the relationship between extension and national policy is especially important for Albania, which inherits no extension experience from the previous system, and where policy making was guided and addressed on a political basis with no attention to economics.

The following relationships have powerful implications for Albania: (i) in order to operate successfully, the country's agricultural extension service needs government policy support, be it explicit or implicit, (ii) extension mission, i.e. whether it should be production oriented, or whether the system should emphasize a range of basic needs in rural development, will be determined to a large extent by national development and goals, (iii) policies related to market prices, input availability, marketing of input and output supply, and access to credit strongly influence farmers in their decision to accept or reject extension recommendations, and (iv) extension should contribute considerably to support the Albanian policy makers by providing information on what agricultural producers think of the policies and programs offered to them by the government. Schuh (1987, p.64) suggests "…it is important to emphasize the need for a great deal more policy education in extension. We need to move extension programs away from the technology side alone and do a better job on policy education."

Extension as a Part of AKIS

During the early decades of this century, extension focused on how to get the message across to farmers. Farmers' resistance to change was explained as unwillingness to break out of the vicious circle of traditional practices, norms and customs. Lerner (1958) wrote, "They don't do what, on any rational course of behavior, they should do. They want consumption, but

the don't worry about saving and think little about productive investment. Instead of limiting their families.... They produce population explosion....its people problems." As a result, many years were spent studying the determinants of Farmers' resistance to change. These efforts are captured in Rogers' "diffusion model" (Rogers, 1962).

In the 1960s, Schultz's thesis characterizing peasants as "poor, but efficient" was very influential in paving the way for Western countries to start implementing large projects for promoting agricultural development in less developed areas. The so called "green revolution" provided many promising results of high yields due to the usage of new crop varieties and fertilizers in many developing countries. According to Schultz, (1964), third world farmers could be real "innovators" when it was in their interest to be; they are able to allocate their resources fairly efficiently in response to the dynamics of the physical and economic environments surrounding them; just give them access to advanced technology and they can improve considerably their situation.

In the late 1970s and early 1980s it became clear that "getting technology right" approach was not the only remedy to transforming traditional agriculture (Antholt, 1994). At that time, many studies had indicated high returns to investment in agricultural research (Hayami & Ruttan, 1985). Furthermore, concentrating on extension proved to be a low pay-off strategy for two reasons: "...first, the skill level of many early extension services was insufficient to enable the screening and testing of technology from outside the region. Second, the transferability of technology was more apparent than real.....for much technology, surprisingly small variations in soil and climatic conditions inhibit or block transfer" (Evenson 1985, p.68). So the profession began to consider more the nature of extension. The emphasis shifted to the research and much criticism was directed toward extension as having only minor importance in agricultural development.

The previous approaches failed to use a systems perspective in diagnosing farmers problems. As Antholt (1994, p.3) points out "...the diffusion approach and "getting technology right" generally reinforced the limited, linear, and sequential view of how information and knowledge need to be developed and made accessible to farmers - that is, from basic science to applied science to technology innovations to farmer recommendations."

The experience from the last three or four decades shows that an effective extension service can not be achieved unless research, technology development, and policy are in place. Furthermore, as Roling (1991, p.128) emphasizes "...such actors as policy, research, technology development, extension, and farmers should be seen as a system."

This was the trend in thinking that lead to the emergence of the agricultural knowledge information system (AKIS). The concept of AKIS was developed by representatives of the Dutch school, one of the most well-known schools of extension in the world. Representatives of this school, Roling and Engel (1991, p.125), define AKIS as:

> "The set of organizations and/or persons, and the links and interactions between them that are engaged in, or manage such processes as the anticipation, generation, transformation, transmission, storage, retrieval, integration, diffusion, utilization of agricultural knowledge and information, which potentially work synergistically to support decision making, problem solving, and innovation in agriculture or a domain thereof."

AKIS framework is useful in analyzing how farmers are supported by institutions involved in the process of generating and diffusing new knowledge, i.e. by research, extension, and education. The underlying feature of the AKIS is that farmers obtain the knowledge and information from many sources and that new knowledge is generated not only by research institutes, but also by many different actors, including farmers themselves (Van Den Ban, 1996).

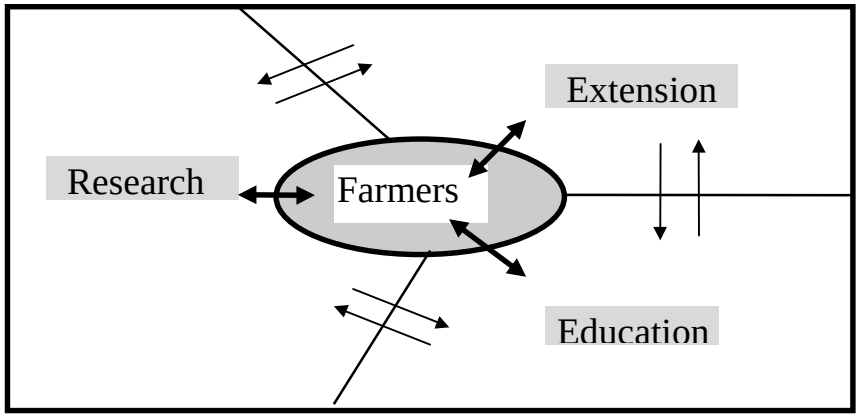

Figure 3. Elements of AKIS

Building an integrated system of research, extension, education, and farmer community is considered to be one of the key ingredients for promoting agricultural development. Related to this, strengthening the linkages among elements of AKIS constitutes a necessary condition for the well-functioning of the system. Within AKIS, farmers not only are the central element, but also contribute to the improvement of research and extension work, and to the policy formulation process (Figure 3). Therefore, the Albanian government's policy towards research, extension and agricultural education should all aim at the creation of an integrated system of agricultural knowledge and information with the central element being the needs and the problems of private farmers.

The main elements of this system in the case of Albania, as elsewhere in the world, should be:

- Agricultural research that develops methods and new practices, as well as their modification in compliance with local conditions.
- Agricultural education that trains the extension specialist and directly assists the short-term training of the farmers.
- Organization of extension services at the central, regional and local levels, all separated from the regulatory function of the Ministry of Agriculture.
- The farming or rural community.

- Mass media, through which information is spread, may be considered as a sub-element of the system.

Principles For Developing Agricultural Extension

The experience of both developed and less developed countries offers useful lessons for designing an extension service. Even though extension systems vary from country to country, there are some common characteristics that could serve as policy guidelines for setting up an effective extension service. Summarizing such lessons, the World Bank's policy paper "Agricultural Extension: the Next Step" (1990) provides some of the basic and critical principles that might be applicable even for Albanian conditions. As it is stated in this paper (World Bank, 1990, p.vii):

> "There can be no 'blueprint, for extension but...certain fundamentals are critically important (situation specificity, financial sustainability, system flexibility, and systemwide participation)...At first glance these fundamentals appear simple, but they mask a complexity which reflects the problems of any process as complex as extension which aims to change human behavior."

The four basic principles which apply even for establishing an extension service in Albania are (World Bank, 1990; Rivera, 1991):

Situation Specificity

The diversity of agro-ecological zones in terms of farming systems, farm size, resource endowments, location and infrastructure characteristics necessitates that extension develop a program which is specific to the needs of different situations. Though a small country, Albania is composed of many regions which vary greatly with respect to agro-ecological configuration, resources and farming systems. For example, forest management and the development of sheep and goat farming is of high priority in mountainous areas, while cropping system and consequently irrigation water management will be of particular concern in the Coastal plain of Albania.

The implication of this principle for Albania is that (i) the extension system must be appropriate to differing national resource endowments and farming systems; for this purpose a rapid appraisal of farming systems per each zone should be undertaken as a first step for formulation of goals and identification of target groups and of the areas where extension expertise is needed; (ii) specialized subsectors such as animal health, fisheries or irrigation water management require specialized extension units; also, in some sectors where benefits greatly exceed the extension costs, it may be profitable for private extension to substitute for public extension; (iii) extension units at local and regional levels should design and implement programs under multiple objectives reflecting the diversity of certain zones.

Financial Sustainability

Establishing an extension service from scratch, as in Albania, implies significant burdens on the national budget. The commitment of the government to recognize the importance of extension is not enough when it comes to allocating limited financial resources needed so desperately in all sectors of the economy. Even though extension often has a high payoff, it takes time for these returns to be realized. Payoffs return indirectly only in the form of export earnings, farmer profits, marketing margins and so forth.

Extension, as other support services, includes recurring costs and operational expenses. Covering these costs is not easy, especially in the initial setting up stage. Actually, the establishment of an extension service in Albania is being implemented by donor agencies. The ultimate danger is that the extension system will find itself no longer able to operate effectively after donors' withdraw.

The implication is that government agencies and policy makers must recognize the influence of these costs in the institutional design and consolidation of the extension service in the long run. Therefore, there is a need to look for alternative ways of covering investment and operation costs of extension in Albania. As the World Bank policy paper (1990, p.33) states

"….the most important implication of the principle of financial sustainability is that limited resources means limiting objectives, and limiting objectives means that priorities must be established. Government and donor agencies in their early dialogues should aim at matching goals with resources of time, human capacity, mobility, and money." Some of these alternatives will be discussed in section 4.

System Flexibility

Agriculture is always in transition. National goals and resource endowments change over time. Extension must reflect this dynamism. It must remain sensitive and responsive to farmers needs.

The implications of this principle for Albania are (i) once an extension service is set up, its organizational structure and approaches can not be suitable forever; on the contrary, the "system flexibility" requires that extension review its organization time after time and remain flexible in practice and principle; (ii) in the initial setting up stage, resources should be allocated to monitoring and guiding the progress of extension program implementation. This allocation approach is necessitated by the fact that program design related to institutional configuration of extension as well as increasing managerial and staff competence takes time and can be measured in decades rather than in years (Hayami & Ruttan, 1985).

Systemwide Participation

This principle refers to the application of a participatory approach in designing and implementing extension programs. The involvement of many agents of change within the extension system is essential in order for extension to be responsive to farmers' needs. The "systemwide participation" implies that (i) agricultural producers need to be involved in setting extension goals and its agenda; in this way their needs will be articulated and recognized; (ii) extension planners and policy makers should emphasize the feedback as a valuable source of information at all levels of the agricultural information network; (iii) extension field managers and subject

matter specialists should cooperate closely with researchers and participate in adaptive research; these joint efforts will make it possible to increase the professionalism of extension workers and their awareness to farmers' problems.

POLICY ISSUES IN AGRICULTURAL EXTENSION

Introduction

Policy refers to an intended course of action conceived of as deliberately adopted after a review of possible alternatives (Gould & Kolb, 1967). Tinbergen (1952) distinguishes between a qualitative and a quantitative policy. A qualitative policy seeks to change the economic structure through the creation of new institutions, modification of existing institutions and/or privatization of nationally owned companies. A quantitative policy seeks to change the magnitude of certain parameters, for example, change in the tax rate.

The establishment of an extension service in Albania involves both policy dimensions, qualitative and quantitative. This policy introduces a change within agricultural institutions structure as well as brings about income opportunities for the farming community and the specialists involved in extension work.

There are many policy questions about extension that need answers. How should the extension service be organized? Are the efforts for setting up an agricultural extension service in Albania guided by a clear and comprehensive strategy? What extension systems should be applied in response to diverse needs of the great number of small-scale farmers prevalent in Albania? Should and can the extension service address the needs of all groups of farmers? What kinds of mechanisms are needed to institutionalize the links between extension and research and education? What are extension implications for restructuring agricultural education? Most of these questions are interrelated and accordingly the answers to them should reflect their complexity.

This section emphasizes the need for an extension strategy and provides some policy guidelines for establishing an agricultural extension service in Albania.

Extension Organization

Under the socialist system it was assumed that market forces do not play any significant role in shaping the individuals' production and consumption decisions and that the influence of these forces tend to diminish as the propriety rights pass gradually from the individual to the society as whole. Instead, it was "the social planner" (i.e. Party representatives) that determined almost everything. Based on this socially "enforced behavior", people were accustomed to acting collectively for achieving their economic goals and waiting from above to be told what to decide and how to act.

After 1991, with the collapse of the socialist system, the price structures were liberalized by letting prices be determined to a large extent by demand and supply. Finally, the former state farm and cooperative members already transformed into private farmers were free to decide what to produce, how to produce and for whom to produce on their own farms. However, the biggest problem was that they did not know how to use their freedom and make it work for their own interest. They had entered "free markets" when instead they needed "open markets". In the context of farming activities and agricultural producers' performance, the latter differ from the former in that a set of rules and regulations and of support structures and policies are needed in order for the market forces to work to the benefits of private farmers. Indeed, one such condition is information.

"The watermelon" Case

During 1991-1992, farmer needs for technical and economic aspects of production became obvious. There was virtually no formal source of information, but the word of mouth. This information vacuum affected considerably farmers' economic performance. One illustration is the so called "the watermelon case".

Most farmers in the Coastal plain cultivated watermelon expecting to get high profits. But it did not happen, watermelon supply exceeded considerably its demand. Marketing structures were almost nonexistent.

Transport cost was very high and unaffordable for farmers. Moreover, domestic markets were unable to absorb the overproduction. There was no possibility for export to other countries. Most of production became priceless and either was left to rot in the field or was fed to animals. Consequently, farmers earned so little that some of them did not even cover their production costs and hardly managed to meet their own family needs for staple food.

The next year farmers adjusted their behavior. Few of them grew watermelon. As a result, a watermelon shortage was apparent even in the markets close to watermelon growing regions. As expected, the watermelon price went up several times compared to one year earlier. Not surprisingly, most farmers regretted not cultivating watermelon again and consequently not being able to take the advantage of high prices. The saying “one who never plays, never wins, but never losses” describes very well their legitimate risk-averseness behavior.

Albanian farmers are facing these new realities everyday. In the course of these realities they have come to draw a lesson: any discriminate introduction of cash crops, will result merely in the substitution of subsistence living for subsistence production.

A market economy does not necessarily imply just letting prices be determined by demand and supply. Of course, Albanian farmers have to modify their actions according to the market forces and to do that, they need support. The importance of information in this regard is unquestionable. They are already aware of the indispensability of a decision-making supporting system. Therefore the following idea presented in the National Seminar on Extension in Tirana in November 1995 is wrong “…they [farmers] should get convinced of the importance of extension service before the extension service undertake large programs” (MOAF, 1995; p.9). It is true that farmers need to be convinced to adopt an innovative practice and/or technique that they have never heard of before. As far as basic technical and economic information is concerned, what they need is access to information.

As the watermelon case shows, Albanian farmers are moving faster than the top policy makers and specialists in their perception regarding the need to know the market rules. Perhaps it is not surprising that instead of farmers, it is policy decision makers that need to be "convinced" of the role that the public sector has to play in institutional design in agriculture in general, and in building an integrated system of research, extension, and education in particular.

Current Organization of Extension Service

The extension service in Albania is in the organizational structuring stage. The law on extension adopted in January 1992 establishes the extension service as an independent agency under the Ministry of agriculture that would provide technical, marketing and business advisory services.

The first step was taken during 1993, when on the basis of a pilot project financed by European Union, this service was structured for the six biggest districts, mostly in the plain regions (Shkoder, Durres, Fier, Lushnje, Korce, and Elbasan). These districts were selected for the following reasons (MOAF, 1995): (i) they are among those with the highest potential for agricultural development and the need for extension was more pressing than in other areas; (ii) another project funded by the European Union, PICU Project, was underway in those districts, so that its well-trained staff could be used as a supporting group for the implementation of the pilot project.

During the pilot phase, an extension unit was set up and the coordination of the project was centered in the Ministry of Agriculture, Tirana. Meanwhile in each district a regional extension coordinator and an extension officer were appointed to work closely with project foreign advicers. Each commune has one to two extension specialists for crop production and livestock. The extension work with farmers was organized mainly through contact farmers that were selected in each commune.

The main efforts, in this phase, were concentrated on demonstrations of wheat, maize, and feed for livestock. The results of the pilot project were

quite impressive and promising. The farmers assisted by the project, as expected, achieved higher yields in most crop and livestock activities.

The period of 1994-1995 marked the second stage of organizing and structuring extension service. From 6 districts in the beginning it was extended to 18 districts, including 4 districts in the mountainous regions. The new program was coordinated by a four-person team from the Netherlands in close collaboration with the national extension coordinator and regional managers. In addition, other donor projects whose programs included extension activities started to cover some districts.

The main focus, during this period, was the consolidation of the organizational structure of extension into national and district levels. It took time, however, until the extension unit became part of the ministry structure, because of the conflicting interests within the Ministry of Agriculture. Finally, this integration occurred around the end of 1995 when an extension section was set up within the department of crop and livestock production. In this way, the persuasive and problem-solving functions of extension were mixed up with the regulatory functions of this department. Including the extension section into the structure of a department whose primary functions were enforcing rules and regulation, runs the danger of diluting the extension message and lowering farmers' acceptance of extension at the local level.

The achievements of the second stage include (Ylli, 1995): (i) the establishment of the extension service in a wider area, from 6 to 18 districts by recruiting about 600 extension agents mainly at the district level; (ii) the involvement of extension staff in on-farm research and the increase in the number of demonstrations; (iii) formulation of a mid-term strategy for extension; and (v) organization of the in and out of the country training courses for extension staff in which 545 specialists were trained by the end of 1995.

Ten more districts were included in the extension program in 1996, while it is planned that coverage of all districts with the extension service be completed in 1997 by including the remaining nine districts[7].

During the period 1993-1997 there have also been other efforts to improve information dissemination for private farmers on a project basis. These efforts include (i) International Fertilizer Development Center (IFDC) developed a newsletter for its dealers and other development specialists in Albanian (2000 copies) and English (300 copies); (ii) the extension work of a NGO - the Land O'Lakes (LOL) dairy development program - reaches almost 4000 village women through a system of unpaid, volunteer key women workers in a village, each working with 15 village women; this organization has also provided about 60,000 brochures on various dairy topics to support its extension work; (iii) the Zootechnic Research Institute in Tirana being supported by GTZ (Germany) has initiated an extension unit for strengthening the linkages between research staff and extension efforts for the livestock sector (MOAF, 1995).

Need for An Extension Strategy

The organization and structuring of an extension service in Albania, demands first of all the formulation of a clear medium and long term strategy. Such a strategy can not work out detailed guidelines for the system, but the national extension strategy for Albania should reflect the country's agricultural development policy. It should be formulated in a comprehensive policy framework and indicate the major steps in how the institutional configuration of extension will evolve over time.

In spite of the remarkable efforts made so far by domestic and foreign specialists in setting up an extension service, the country still lacks a well-defined and comprehensive extension strategy. In October 1995, a National Seminar on extension was held in Tirana. The proceedings of this seminar

[7] The social turmoil which occurred in Albania during this year has made it impossible to achieve this objective.

include, among other extension-related presentations, a medium-term policy for an agricultural extension service in Albania. Except for the objective, which is well-defined, this strategy is incomplete and does not address most of the basic elements of an extension system that are needed. Furthermore, it does not even attempt to define an extension system that is tailored to the Albanian situation. This incompleteness may result from a lack of a clear understanding among domestic decision makers about the role that extension plays in agricultural development.

The weak coordination of the efforts between foreign experts and domestic specialists also affects considerably the process of setting up an extension service. It is true that foreign experts through donor agencies have provided a significant contribution in shaping the institutional configuration of extension in Albania. However, they alone can not provide a coherent extension policy unless the country's own specialists and decision-makers are fully involved in institutional design. There is no doubt that the leading role in institutional design for agriculture belongs with domestic specialists and decision makers. Unfortunately, the latter have not been able so far to lead the important, but very complicated process of institutional design of an extension service in Albania.

A comprehensive extension strategy for Albania should address the following: (i) define its professional and technical orientation, that is, the scope of the activities in which it will be involved, (ii) specify basic work responsibilities, management principles, and its organizational structure in the central, regional, and local level (iii) identify target groups and define the best possible approaches for working with different types of users, (iv) emphasize the extension contribution to the national policy formulation and implementation, (v) offer basic institutional arrangements linking extension with other development services such as agricultural research, education, input supply, agricultural marketing and processing, and social services, (vi) define financial arrangements for public funding of extension, (vii) evaluate

the incentive structures for providing extension and anticipate how extension is likely to evolve in the medium and long run by emphasizing the increasing role that the private sector should take on for technology transfer (Baxter, 1989; Ameur, 1994).

Extension System

Organized extension systems have been functioning in most Western European countries, Canada, and the United States since the beginning of this century. During the last three decades, more than a hundred countries have established national extension systems similar to the systems in the West (Rivera, 1991).

The organizational forms, objectives, administrative leadership, the clientele, financial support, available technology, linkages to other technology institutions, and other related elements of an extension system vary widely in both scope and quality. Over the past five decades, many different models for organizing agricultural extension have been used. A comparative analysis of the key features of these alternative models of extension is important when it comes to choosing the appropriate extension system that should be applied in Albania. The aim here is to critically and briefly discuss the most prominent extension systems with their advantages and disadvantages and then to come up with some policy implications for the Albanian situation.

Conceptual Issues

The overall extension system in a given country includes all extension strategies undertaken by various organizations involved in extension work. Hayward (1989, p.137) distinguishes between an extension process and an extension system indicating that "An [extension] system involves an organized entity, which at any time is carrying out the functions of the process… The process of extension can be undertaken using many interlocking, complementary systems."

Royen (as cited in Roling, 1982) defined extension system as an organized entity with the following basic elements (Figure 4):

Figure 4. The Elements of An Extension System
Source: C. N. Royen (1972),

(1) the organization of extension refers to both the internal structure and the linkages with related organizations and target groups;

(2) the target refers to the clients to whom the extension service intends to serve;

(3) offering refers to the content of the message and/or product the extension service offers to its clients;

(4) methods refer to the ways for communicating the extension message to target groups, and

(5) extension objectives are the central element within the extension system; if the objectives are changed, the other elements must be adopted, otherwise the system will be inconsistent.

As Figure 4. shows, these elements are interconnected through systematic linkages and have to fit with each other, so that the system can function effectively.

Types of extension systems

Several authors have described extension systems[8]. The classification of extension systems and approaches is based on different criteria. Typologies offered and terms used are often contradictory (Rivera, 1991). Nevertheless, there are four types of extension systems that are extensively mentioned as being the most influential and commonly applied in most countries. They are: Conventional System, the U.S. Land-Grant system, the Training and Visit (T&V) system, and Farming System Research and Extension system (FSR/E). The following is a brief discussion of their key features, organizational schemes, advantages, and disadvantages as derived and elaborated from the experience of many countries.

Conventional System

This category includes a wide range of national extension systems encountered in many less developed countries. These organizations were generally established under the ministry of agriculture. They are characterized by a variety of organizational structures (Figure 5 - Appendix B). Also, the scope of activities differs from one country to another.

In addition to delivering information and new practices, extension workers in this system perform all types of government activities at the local level. As Swanson & Claar (1984, p.8) point out “They [extension personnel] become the local agricultural representatives of government rather than a full time agricultural extension worker.” These assignments, contrary to the educational nature of extension, have negatively influenced extension workers in carrying out their mission to help farmers find timely solutions and solve problems. Therefore, a number of other systems have been applied in search for better solutions.

U.S. Cooperative Extension System

The U.S. Land - Grant system combines research, extension, and education in one institution (Figure 6 - Appendix B). It was established in the

mid-1800s when the U.S. federal government granted to the individual states tracts of land to be used to finance the establishment of "agricultural and mechanical" colleges in the states. These "land-grant" colleges (universities today) carry on teaching, research, and extension activities. (FASNA, 1956). This system is characterized by cooperative relationships, a broad scope of the subject matter taught, a broad nature of clientele, and a focus on human development.

There have been many attempts to transfer the land-grant system to other countries like India, The Philippines, and Nigeria (Goldsmith, 1990). Often, these attempts have not been very successful. One reason for this failure has been the lack of autonomous and well-organized agricultural universities in respective countries. It took the United States a hundred years to develop the concept of an autonomous university responsible for teaching, research, and extension in agriculture. Among other reasons Beal (1989) mentioned: (i) the transfer of the system was made paying little attention on adaptation to the new environment, (ii) cross-cultured differences were not analyzed in depth, (iii) the place of extension within the system of technology institutions in terms of organizational arrangements was not defined carefully, and (iv) the extension system was often blamed for not being efficient when there was little appropriate technology available to deliver.

Training and Visit System (T&V)

The training and Visit (T&V) extension system has been one of the most prominent extension systems in the last three decades (Figure 7 - Appendix B). Designed by Daniel Benor and promoted with billions of dollars by the World Bank, T&V system has been widely adopted in more than 40 countries, first in South and South East Asia and later in Africa (Hayward, 1989).

The T&V extension system as defined by Benor (1987, p.138) requires:

[8] A comprehensive list can be found in Rivera (1991)

1. a professional service with a full-time trained staff, supported by resources required to perform their professional functions;
2. a single line of command where staff are technically and administratively responsible to one authority;
3. staff efforts to be concentrated on extension activities with staff members performing clearly defined and monitorable tasks;
4. time bound work and training programmes including regular farm visit schedules;
5. field and farmer orientation with special reference to meeting farmers on their own fields;
6. regular and continuous training at all levels to up-grade professional skills, and
7. a procedure for insuring a two-way flow of information between research, extension, and education.

Although the system was widely adopted, many studies have shown that it was not always successful. In many cases, the T&V progress is hindered by a misunderstanding of its fundamental principles on which it is based and confusion between those principles and implementation details. Roling (1982), Kesseba (1989), Roberts (1989), Albrecht at al. (1990), and Van Den Ban (1996) have identified the following weaknesses of T&V system:

- The selection of contact farmers. Contact farmers are supposed to represent various socio-economic groups within a given community. There has been observed a selection bias of contact farmers in favor of the richer and more powerful farmers. Consequently, the flow of information has reached only a small portion of farmers.
- The target group problem. The T&V has been criticized as top-down or supply-driven approach focusing more on a rigid management structure than on improving its offering tailored to different situations of farmers.

- Feedback. Weak feedback due to reasons explained above and to poor performance by subject matter specialists (SMS).
- Financial Problem. In most cases the T&V system has been introduced in developing countries in the form of projects financed by the World Bank and other donor agencies. The cost associated with this scheme is problematic for the long-term financial sustainability. It remains doubtful whether the recipient country can continue running the system with its own budget after the withdrawal of donor agencies.

Most South and South-East Asian countries are not using the T&V system any more due to the above shortcomings. They are trying to switch to more participatory approaches. Antholt (1994) provides several examples of the widespread dissatisfaction with the T&V extension system in Asia. He points out that this model is too narrow for most situations.

The Farming System Research and Extension (FSR/E)

This system operates at the farm level and attempts to diffuse the results of research in farmers' fields through informal extension. It emphasizes the role of constraint diagnoses and on-farm trials.

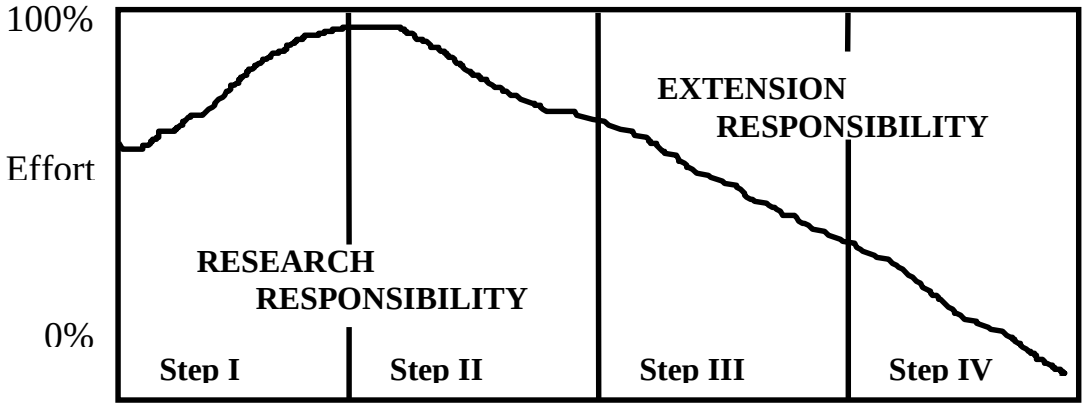

Figure 9. Division of Efforts in FRS/E

Source: (Johnson & Kellogg, 1984)

Shaner at. al (1982) defined the FSR/E as an on-farm research and development approach to farming systems which comprises the following steps (Figure 8 - Appendix B): (i) site selection and diagnoses - target and research area selection, the problem identification, and development of the research base, (ii) design - planning on-farm research, (iii) research - on-farm research and analysis, and (iv) extension - diffuse the research results among farmers. As Figure 9 shows the extension efforts increase especially in the last two steps.

FSR/E raises other questions as Rivera (1991, p.6) points out "Should extension be freestanding institution providing information to farmers about the entire agricultural development process? Or should it be a component of farming systems research projects and essentially serve to transfer only adaptive technology."

Which System is Appropriate for Albania?

There exists wide disagreement about the role and shape of extension systems. According to a World Bank study (1990), the system "model" controversy is one of the major developments that confronts extension internationally.

Historically, different countries have employed different extension approaches and arrangements, ranging from conventional top-down extension systems to the World Bank's T&V system. However, a consensus has recently emerged among extension theorists that there is no one ideal extension system. Each extension setting has its strengths and weaknesses. The latest development regarding the extension system is (World Bank, 1990; p.9) "extension designers attempt to devise country specific combinations of various extension approaches." Following this line of reasoning, Hayward (1989, p.146) points out "Flexibility and adaptability are key words in building extension systems……Holding rigidly to any one

extension system is as unwise as dogmatically adhering to a specific crop variety"

Albania needs an extension system that must be "demand" as well as "supply-driven". The implication is that the top-down transfer of technology can not be successful unless the system insures a wide participation of farmers in designing, implementing, monitoring, and evaluating extension programs. Roberts (1989), Moris (1983), Rivera (1989) and others have suggested a "hybrid" system combining the principles and strengths of the T&V and FSR/E approaches. This "hybrid" system is appropriate and fits even the Albanian situation. This conclusion is consistent with the implications of the principles for establishing an extension service discussed in the previous section.

Some Prerequisites for an Effective Extension System

Agricultural development is considered a "systems problem" involving the interaction of a large number of variables, both economic and non-economic. As Hapgood & Millikan (1985) indicate, two complexities are involved: the very large number of interrelated factors and the unique importance of any one factor or series of factors in any given situation.

In spite of the fact that the basic elements of an extension system vary widely in scope and quality, the experience of many countries shows that extension needs some preconditions before it can function effectively. Summarizing such experience Leagans (1971), Swanson (1984), and Phocas (1985) list several prerequisites for a successful extension system in a given country. These are:

- Recognition and acceptance by government of agriculture as priority concern and as core sector of the economy.
- Formulation of income, price, input, marketing, and credit policies in support of market orientation of farmers.

- Development of science and technology that are technically sound, economically feasible, and socially compatible.
- Recognition that extension system is one of the ingredients or accelerators of agricultural development (Mosher, 1966).
- Realization that an effective extension system is highly complex, costly, and time consuming enterprise.
- Integration of the extension system with research center and colleges of agriculture which support and benefit from each-other.
- Adequate field offices, transportation and communication strategies.
- A competitive salary system with incentives for professional developemnt and advancement.

Objectives and Goals

As it is stated in the medium term policy, the objective of the Albanian Ministry of Agricultural and Food with respect to extension is:

> "To set up nationwide a cost effective public extension service delivering free of charge services to small and medium farmers, responding to their technical and economic needs in the process of their integration in the market economy. This service will be supported by a limited research network for technology development and integrated in an Agricultural Knowledge Information System (MOAF, 1995).

There are many views about the functions that extension should perform. These views range from seeing extension as a purely technology transfer function, to seeing it as a non-formal agricultural education or as rural human capital development function (Rivera, 1991). Generally speaking, the functions and goals of an extension service in Albania are determined by three factors. One is that of coping with a large number of small farmers, i.e. coverage problem. The second is the farmer diversity in

terms of resource endowments and other conditions. The third is limited financial and human resources available for extension work.

These three factors have important implications for institutional design of agricultural extension service and setting the right objectives. In addition to these factors, the following considerations are also important in defining the extension objectives and goals:

- Extension objectives are conditioned by the agricultural policy and development goals. The national agricultural development policy and goals reflect, in turn, the country's diversity with respect to agro-ecological and socio-economic conditions, resource endowments, farm size, farming systems and cultural factors. Given such diverse conditions, an agricultural extension service in Albania should design and implement programs under multiple objectives. Therefore, one can not talk of just one general objective of extension, but rather of alternative objectives for different regions within the country.
- Generating and delivering the right technology for small farmers based on a resource endowment criterion is crucial and has significant implications for agricultural development in Albania. As shown in section one, land and labor are the only available factors of production at the farm level. The land is very scarce, whereas labor is abundant and consequently cheap. Given the relative prices of these two factors of production, that is, land and labor, the research and extension institutions should provide land-saving technologies, rather than labor saving technologies. The former will lead to more labor-intensive farming systems and may involve multiple cropping techniques. This type of agricultural technology will favor small-scale producers by absorbing the excess labor of farm families.
- Setting goals and objectives can not be done unless the farmers' situation is diagnosed. Goal setting processes have to be based on a careful analysis of the problems and constraints farmers face in farming activities and beyond. As World Bank (1990, p.35) emphasizes "Extension is largely the

marketing of information and skills; diagnoses provides the market analysis that is needed to assure that useful and attractive products are in sale."

Scope of Activities

In a subsistence-oriented agriculture, almost all inputs needed in the production process are provided from within the farm. Land, labor, draft animals, seeds are all present on the farm (Mosher, 1966; Weitz, 1971). In this situation the economic productivity of resources is almost the same as their physical productivity. Consequently, it is quite obvious that the advice sought by farmers is of a technological nature, if they need it at all. As agricultural technology advances and becomes more sophisticated and as farmers become more and more market-oriented, the alternatives offered to them regarding new inputs and farm practices increase in number. The purchased inputs produced by non-agricultural sectors become predominant. The cost of each new input has to be compared to its benefits. Thus farmers have to make a choice. They have to decide whether to use the new inputs and how much of them to use. There is no doubt that farmers need a decision-making support system.

Needs of farmers for advice from extension service are not static. They change as the agricultural sector develops to higher stages. Nevertheless, the scope of extension does not depend on the stages of economic development only. Other factors such as historical and political background of a given country, cultural and social situation affect the extension scope as well. In the United States, for example, the scope of extension is very wide covering the increase of farm incomes, the improvement of social life, the development of leadership, the development of opportunities for rural youth, vocational training, fostering of cooperation, and home economics (FASNA, 1956)

Given the limited resources, the role of extension in Albania should be viewed in narrower terms. The main focus should be the provision of

assistance, both technical and economic, to small-scale farmers in the management of their farm businesses.

The professional and technical orientation of extension should not be restricted just to the introduction of innovations in techniques of production, even in the setting up phase of this service in Albania. The broadening of activities to management, socioeconomic and institutional affairs, thus widening the scope of extension from a purely agricultural to a rural advisory service, has better prospects of success with small farmers in particular, because it corresponds more to their actual circumstances. Thus agricultural extension in this sense of comprehensive rural counseling providing support for target groups embraces the following areas of activity (see also Table 19):

- Market information: commodity prices at farm gate, wholesale, and retail agricultural markets, seasonal commodities, prices and quantities of imported goods, prices of farms input such as fertilizer, pesticides, and equipment. It is not the function of extension, however, to provide the market information, but rather to help farmers know how to interpret and incorporate this information into their decision making process.
- Techniques of production: the introduction of new production techniques and the communication of essential knowledge and skills to improve the subsistence base, to produce marketable surpluses and to achieve a higher income. Technical information about varieties, crop treatments, livestock feeding, health and so forth.
- Farm management: the improvement of farm organization by the efficient use of existing factors of production. Information about crop budgets, financing, and costing.
- Socio-economic questions: the improvement of nutrition and the running of the household, discussion of opportunities for off-farm employment for the members of the family, taxation questions, environmental problems and so forth.

- Institutional questions: the promotion of organized cooperation and other means of raising the capability of self-help (Van Den Ban,1996).
- Counseling about new legal requirements, marketing possibilities, projects, credit.

Recently, a new issue related to extension involvement in agricultural marketing has emerged. According to Narayanan (1991, p.154): “The aspects of marketing agricultural products that have become the focus of extension include: (i) decision-making as to the choice of crops, (ii) government policies and programs related to agriculture and marketing system, (iii) ensuring marketable qualities, (iv) harvesting and post harvesting practices, and (v) markets and prices....marketing extension then, has to cover aspects of numerous processes and activities, from the production decision to consumer response to products.”

Clientele

Extension can not assist everyone. As Roling (1982) once put it “One can not be everything for everybody.” Financial limitations generate decisions concerning the group of customers for services. Few countries can afford nationwide public extension systems that address the needs of all groups of farmers (World Bank, 1990). Assessment of preferred "clientele" will determine qualifications of specialists and advisors to be employed so that extension programs can be realized effectively. The support which is needed by farmers will vary in different regions with different socioeconomic conditions.

Swanson at. al. (1984) provide the following criteria for identifying target areas and socio-economic groupings: (i) agro-ecological conditions - rainfall, soil type and slope, and geographic configuration; (ii) access to resources - land, water, labor, fertilizers, pesticides, markets, credit, and (iii) differentiation based on sex and age.

One indicator of farmer coverage by extension is the extension agent-farmer ratio. This ratio continue to be inadequate throughout the world. The FAO study (1990) estimated these ratios to be 1:325 in North America, 1:431 in Europe, 1:1809 in Africa, 1:2661 in Asia, 1:2940 in Latin America, and 1:3499 in The Near East. In more than 20 FAO case studies on different extension approaches, the reported actual contact with farmers was about 400-500 farmers per extension worker annually.

Attempts to increase farmer coverage by extension are associated with several trade-offs: (i) maximizing farmers' coverage by extension vs. minimizing costs, (ii) emphasizing control through firm management structure vs. ensuring bottom-up participation, and (iii) efficiency vs. equity criteria. Efficiency requires that extension focus on commercial crops and farmers. Whereas equity implies that extension must consider multicropping systems and the needs of poor-resource or/and disadvantaged farmers.

Increasing farmer coverage of extension, while recognizing these trade-offs, is a real challenge for Albania with over 400,000 small-scale farmers, limited financial and human resources, and with very diverse agro-ecological and socio-economic conditions. Nevertheless, there is a need to formulate new strategies and extension methodologies for increasing farmers coverage by extension. These strategies include: (i) use of mass/media and support communication techniques and (ii) use of contact farmers and group methods;

From the rural and agricultural development point of view, Albania may be divided roughly into two main regions: (i) in the coastal plain where there is good agricultural potential, and the support services required by farmers are mainly concerned with agricultural production and marketing; (ii) in the mountain areas with low agricultural potential, poor infrastructure, and where livestock is more important and there is a related need to focus on better management of pasture and forest resources and on integrated rural development rather than simply agricultural development. Taking into consideration this fact as well as the other constraints which

spring from the transition period, the first priority in extension should be the farmers on the coastal plains, who have the capacity to increase production and to produce for the market.

The clientele of extension can be divided into two distinct groups. The first group includes all the various categories within the farming community that center around the farm family. The second group represents the clients of the inward delivery system, including various support institutions and governmental departments. Extension help them by providing feedback about farmers' situations. In this respect, one can assume the following groups of clientele for the extension service in Albania:

- Progressive farmers for whom improvement in farming and marketing efficiency constitutes the main sources of income.
- Small-scale farmers running farms with no chance for further development who are capable of having proceeds from some kind of work outside the farm, apart from returns they derive from the farm itself.
- Old farmers who should have access to the following services: legal assistance concerning transference of farms; optional sources of income.
- Private farmers' associations, especially in the first years of creation. Owners and managers of such associations will require professional assistance in: managing, banking and book-keeping in agricultural and enterprise budgeting; marketing, promotion and quality control of agricultural commodities; environmental problems in agribusiness.
- Country youth in the period of being educated for a job and acquiring practical skills. Although this group will not constitute a significant recipient of extension advice in short run, it will make use of the assistance of the extension service during practical vocational education. It follows from this that extension centers must cooperate

closely with vocational (primary, secondary and high) agricultural education.

- Leaders of village communities, who should avail themselves of training and extension services in: issues concerning the development of local committees and leadership abilities; policy-making in local, regional and national levels; stimulating the processes of democratization of life and social development.
- Another homogeneous group, composed of those who have agricultural education from middle schools (equivalent to high schools in the West) or agricultural universities deserve special attention from extension. Overall, about 18,000 specialists have graduated in agriculture-related majors and more than 150,000 people, mostly in rural areas, have middle school agricultural education (World Bank/EC, 1992). After the dismantling of the cooperative and state farms, most of the agricultural university graduates lost their jobs. They are scattered now throughout the country either running their own farms, or doing other businesses. Even though they lack, relatively speaking, the practical knowledge and skills required in a market economy, this group represents a powerful knowledge base for recruiting extension workers. Also they represent a real and equal partner for extension to facilitate the process of diffusion of new knowledge and practices among farmers.
- Other groups such as agro-processors, investors, MOAF staff, research scientists, aid donors/project personnel, planners, policy makers, politicians, input suppliers, credit managers, and data analyzers all are potential clients of extension.

As far as the relationships of extension with clients of the inward delivery system are concerned, it can be noted that they should be harmonious and complementary rather than competitive.

Linkage Problem

Need for An Integrated AKIS

In most Third World countries, agricultural research and extension services function as separate public institutions with different organizational structures and operational procedures.

It has been recognized that the presence of technology institutions including research, extension, and education is not enough. These ingredients alone are not sufficient to provide a country with a modern agriculture. They need to be linked and integrated in order to function successfully. As Axinn (1971) emphasizes "The additional input - the crucial input which converts the farmer from peasant to a business manager, which convert the nation from deficit to food exporter, and which brings dignity to farm life - is the integration of research, extension, and education with governance, and with supply, production and marketing."

As is known, the elements of AKIS, have functioned in Albania as separate structures even in the past. Should there be radical modifications within the agricultural knowledge and information system in support of a great number of very small farms? The integration of the above elements is considered a key problem for the proper functioning of the whole system. Up to now, there has existed vertical integration while horizontal integration of all research structures and the extension and agricultural education in three levels, i.e. central, regional and local has been lacking.

The institutionalization[9] of integrated links among research, extension and agricultural education, as well as among these three elements with the farming community is an imperative task.

Strong horizontal links among extension, education and research, along with supportive vertical linkages from central, regional and local levels

[9] Institutionalization refers to the degree to which a patterns becomes routine and follows a set of rules.

constitute key feature of an integrated institutional framework serving agriculture.

From the case study conducted in August 1996, it appears that working relations between new structures of extension, research institutes, and agricultural universities are in the state of flux. There have been some attempts to create joint research-extension committees, but still the informal links are prevalent. Even in the National Seminar on Extension organized in Tirana, it was concluded that "The links between extension service and research institutes are informally organized. At the district and national levels, extension services or extension units make contact with research institutes and stations if they want to organize a training course for extension staff or test a new technique (MOAF, 1995, p. 31).

Also the relations of the Ministry of Agriculture staff, including researchers and extension workers, with the Agricultural University are not satisfactory. There exists jealousy in these relationships. It seems that both sides put a high value in their own views, jobs, and status. On the university side, the professor research programs are mainly related to problems in which they are personally interested. On the other side, the ministry specialists seem to believe that by simply being informed about what is happening at the farm level, that is enough to offer sound solutions.

In a sense, both the university and Ministry of Agriculture have not managed to establish effective working relations, but rather they work in isolation from each-other. Through close collaboration, they could enrich each-other. The question is how to change their working behavior in the newly established socioeconomic environment.

Actually, in Albania, agricultural research and extension service are the responsibility of the Ministry of Agriculture, whereas the university level and vocational education structures are under the responsibility of the Ministry of Higher Education and Scientific Research and the Ministry of Education respectively. Falling under different ministries, these institutions

can not develop any cooperation unless a coordinating board with representatives of research institutes, extension services, and agricultural universities is set up. This board can: (i) coordinate and update representatives of research, extension, and education about the continuing activities within AKIS, (ii) regulate the exchange of information among researchers, extension workers and farmers, (iii) monitor the implementation of joint activities, and (iv) set the research and extension priorities for providing relevant technologies consistent with situation of different groups of farmers.

Mechanisms for Strengthening Linkages

The relation of extension with agricultural research should provide an efficient two-way flow of information: Researcher - Extensionist - Farmer. These relations should be orientated toward the realization of research at the farm level in response to the needs and priorities of farms, and the long-run strategy of the state for agricultural development. Institutionalization of this linkage demands that each research institution has its unit of extension. These units will serve as bridges between research institutions and the extension service. Besides, these institutions in cooperation with extension services will provide information in support of practices recommended to the farmers.

In theory, an extension organization is supposed to be a bridge or link between scientific researchers and farmers, providing two-way communication and "feedback" (Van Den Ban,1996). In practice, however, most extension systems emphasize dissemination of information from scientist to farmers, and do not adequately carry information from the farmer to the scientist (Stavis,1979). If the extension system does not provide feedback about the needs of small, subsistence farmers, it is unlikely that appropriate technologies will be produced for them. Thus, any extension system, and especially one designed to serve the poor and small farmers in Albania needs to emphasize feedback, particularly from small farmers.

Communication between extension and scientific researchers is not the responsibility of extension personnel alone. The organization and values of the agricultural science research units influence how much scientists are receptive to feedback.

Kaimowitz (1991) identifies five mechanisms to enhance linkages between research and extension: (i) put research and extension in the same organization, (ii) establish liaison units, (iii) organize committees for coordination purposes, (iv) have members of respective institutions carry out joint activities, and (v) communicate better through publications and training. Kesseba (1989, p.202) adds other conditions for insuring effective linkages. These conditions include: (i) common interests and goals; (ii) mutual respect; (iii) mutual inter-dependence, and (iv) common funding.

Given the mechanisms proposed by Kaimowitz as well as the experience of other countries, strengthening of the linkages among elements of AKIS in Albania includes the following measures:

- Encourage extension workers be involved in on-farm research and organize a directly paid for participation of scientific and educational workers in extension work as subject matter specialists. This involvement will allow for a better understanding of the requirements of agriculture by the scientific didactic teams;
- Create an appropriate system for training the specialists needed by extension at agricultural universities;
- Establish formal links between research, extension, and education institutions. Formal links[10] mentioned in the literature include: committees, task forces, liaison units and officers, agricultural communication units, subject matter specialists, joint activities, contracting research by development agencies, farming systems programs, publications, presentations and demonstrations, staff exchanges,

[10] A link is formal when it is given official sanction whereas informal links refer to the exchange of resources and information without official sanctions or through personal contacts.

interagency agreements, service provision, joint plans, shared supervisors, policy mandates and meetings.

- Change the attitudes of professional staff toward each-other as well as the attitudes of rural population through education. As it was noted, researchers, extension workers, and academics work in isolation from each-other. Creating formal links contributes greatly to avoiding this isolation.
- Introduce a reward system based on the performance of programs undertaken when assessing the activity of researchers and extension workers.
- Enhance participatory planning and collaboration from the project design stage. Creating interdisciplinary working teams constitutes a key element for successful results.

Implications for Restructuring Agricultural Education

The Economic Importance of Education

For agricultural development to reach higher stages, the contribution of agricultural education is considered as an essential element. Many growth models indicate that the major part of economic growth lies in the investments in generating new knowledge and promoting technological progress. Part of this factor is the investment for developing human capital in agriculture through education.

Most classical and neo-classical economists have emphasized the importance of education as a source of economic growth. Though Adam Smith never uses the term “human capital”, he considers the quality of human behavior patterns improved through education as a part of “fixed capital” (Smith, 1976). John Kenneth Galbraith (1962) wrote that “when we think of education as a consumer service, it becomes something on which we should

save.... But when we think of education as an investment, it becomes something we should emphasize."

Schultz (1961) in his theory of human capital considers the acquired knowledge through continuing education as one of the major ingredient of economic growth from agriculture. He points out that "The failure to treat human resources explicitly as a form of capital, as a produced means of production, as the product of investment, has fostered the classical notion of labor as a capacity to do manual work requiring little knowledge and skill."

Some Directions of Change

The radical changes Albanian agriculture is undergoing, its new production structures, the new propriety rights, all urgently require the quick development of financial services in rural areas, new structures of self-management, marketing structures, and an extension service. As a consequence, radical transformation of the agricultural education system in all levels is necessary. Agricultural education should aim more at raising the quality of training than at increasing the number of trainees.

This qualitative transformation should procede to the restructuring of Albanian agriculture toward a market economy. The existing agricultural education system does not respond to the new private agricultural structures in Albania. Unlike agricultural universities whose restructuring is driven by a clear strategy, restructuring of secondary professional education is happening in separate segments.

Actually, there exist 20 agricultural middle schools. Two of them, those of Korça and Berat are reformulating their curriculums with assistance of the American School of Thessaloniki. The school of Golem, is being supported by the German GTZ and that of Fieri by a Dutch project. At the same time, in the framework of an agreement between the Ministry of Agriculture, the Ministry of Education and Agricultural University of Tirana, a new department in the Agricultural University of Tirana was created in 1992. This department serves as the main center of training for the

specialists of the extension service and the teachers of agricultural middle schools. New technology, knowledge and administration of agribusiness and the methodology of extension service have all been provided. Up to now this department has organized four training courses. The results of this effort show that both financial support and technical assistance are needed for restructuring agricultural education.

Viewed from the AKIS context, the following measures should be recommended for restructuring agricultural education:

- A working group should be set up to evaluate the situation of agricultural education in Albania by determining its medium and long-term strategies at all levels.
- The basic model needs to be determined on which Albanian agricultural education will be based. Basing the restructuring of agricultural education on many models and experiences of different countries would lead to a disequilibrium between the elements of tradition, and the elements of new systems that are considered suitable for the Albanian situation.
- The wrong practices followed in the past by setting up agricultural schools, even in the remote regions, with the only aim of giving a massive character to the vocational education must be avoided. The market economy and the private agriculture ask for practical contemporary skills, as well as the adoption of ways and methods that lead both to an increase in production and in farmers' income.
- A system of training centers of intermediate level should be added, which will certainly have a lower or higher status than the existing agriculture middle schools. They may be organized like colleges, similar to those in the Western countries. These colleges would offer various training courses to the farmers and young people engaged in agribusiness, extension, banking service, accounting, agricultural food processing and so forth. These colleges could be organized:

- within the University structure;
- within the University structure, organized in various regions;
- independent colleges based on the transformation of the existing agricultural schools.

- The creation of a new curriculum connected with agriculture (accountancy and finance, farming, rural household etc) will be necessary in the agricultural middle schools. It is advisable to define the statuary duties of the educational system in relation to agricultural extension.

It is necessary to make changes also within the agricultural education system. There is a need to look back at the old traditions, but certainly on a new basis. The well-known Agricultural middle schools throughout Albania, like those in Kavaja, Korça, Peshkopia, Delvina, Berati, etc., need to be supported and even further strengthened. Their curriculum needs to be orientated toward the agricultural sectors within the regions where they are situated. For this purpose, the capacity of their boarding-schools should be larger so that pupils from the neighboring districts can find a place in them. Their specialization, along with the existence of production and experimental centers, equipped with modern equipment, would change these schools into powerful centers which have adopted advanced and effective methods as well as agricultural practices for the training of farmers.

INCENTIVE STRUCTURES FOR PROVIDING EXTENSION

Introduction

An extension service, whether provided by public or private sectors, provides certain benefits and involves certain costs. Like agricultural research, agricultural extension has attributes of public goods. Many elements of agricultural technology and information provided to agricultural producers by extension are of pure or mixed public good nature.

While the provision of public goods and services involves the movement of resources through political action, there is also room for economists to contribute in analyzing the incentive structures that drive their provision by different actors. As Johnson (1987, p.7) put it "The economist contribution stems from (1) their dichotomous view of theory (normative and positive)[11], (2) their chief contribution to rationality (the concepts of marginality, opportunity costs, and incentive systems), and (3) their growing preoccupation with an institutional view of economic phenomena and processes."

The incentives refer to the concept used to relate normative and positive theories of private good production and the changing elements when the good is public in nature. Whereas the institutional view emphasizes that the political constitutions, the system of propriety rights, tradition, and socio-cultural structures determine the system of incentives for providing a given good or service (North 1992).

The provision of extension by public and private sectors is driven by different incentives. The involvement of the private sector is largely guided by profit-oriented motives. There is no doubt that the private sector will not provide extension unless the economic returns from the service offered exceed

[11] The normative theory of public goods deals with the issues of efficiency and equity while the positive theory of public goods deals with the use of limited or imperfect information related to preferences, relative prices, and cost functions to make investment decisions.

significantly the costs. In addition to the efficiency criterion, the public sector participation is conditioned by social and equity concerns.

This section seeks to evaluate the incentive structure of private and public sector participation in providing agricultural extension in Albania. The analysis starts with a brief discussion of the main properties of private and public goods as well as externalities and their policy implications. This brief treatment serves as an economic framework for determining the current and prospective roles of private and public sectors in providing extension to Albanian farmers. Next, it examines the determinants of farmers' demand for and private sector supply of extension. Finally, it concludes with the lessons that can be learned from the experience of many countries regarding cost-recovery programs and the future of private sector for providing agricultural extension in Albania.

Public and Private Goods

Welfare economics provides the conceptual framework for examining the private and public good dimensions of agricultural extension. Public goods are distinguished from private goods based on the two key principles (Loehr & Sandler, 1978; Head, 1974): excludability and substractability. Excludability implies that the potential consumers, those who have not paid for the good and/or services offered, can be excluded from the appropriation of that good or service. Substractability applies when the increased consumption by one individual reduces the quantity available to other individuals by an equivalent amount.

Private Goods

A pure private good is characterized by high excludability and substractability. The private good is perfectly divisible among different individuals. Being perfectly divisible, it is also substractable. Therefore, the consumption of an additional amount of a certain good involves some marginal costs. An example of pure private good is an orange. Once I eat it,

you can not eat it. The high substractability and excludability of a given good and/or service allow its producer to price it and sell in the market. Therefore, private firms can capture the full benefits for the good produced or service offered and achieve an efficient use of resources.

Public goods

A pure public good is characterized of non-substractability and non-excludability in consumption. Unlike pure private goods, pure public goods are perfectly indivisible in that they can not be divided up to individuals. As Samuelson (1955, p.350) put it "...each man's consumption of a public good is related to the total by a condition of equality rather than summation". The classical example of a pure public good is the national defense. Non-substractability or joint supply property means that once a good is supplied to one person, it is available to other persons without limit at no extra costs. In other words, the marginal cost of letting the additional individuals consume the given good or service is virtually zero. Consequently, a pure public good can not be priced and sold in the same way as a private good. Due to impossibility of exclusion and substractability, the market mechanism fails to supply a pure public good. It can not impose any price to those users who have not paid for goods supplied.

In the presence of public goods, consumers have an incentive to give false signals regarding their preferences. They are fully inclined toward self-interest and thus free riding emerges as a predominant behavior. They try to consume the public good as much as possible without paying for it. Furthermore, it might happen that for some consumers their marginal rate of substitution between private and public goods is zero, that is, they are unwilling to substitute the private for public good.

The free rider problem leads to inefficient allocation of resources. The implication is that the private sector will not supply a public good, because it is difficult to restrict its use only to those individuals who have paid for it. If the market fails to provide the good, it frequently falls to the public sector to

undertake its provision, where through the tax system, it can force the users to pay for it.

Mixed Goods

In reality, many goods and services fall somewhere in-between the two extremes of the spectrum occupied by pure public and private goods, exhibiting the properties of publicness and privateness. Examples are education, research, law enforcement, information systems, communication networks that are partially divisible and partially appropriable.

For most mixed goods, the excludability and substractability are possible due to accessibility and crowding. Crowding generates congestion costs. One example is the bridge. In the absence of congestion, the marginal costs of letting an additional car cross the bridge is zero. In the presence of the congestion, it is still possible to introduce a toll for crossing the bridge. Then the bridge is called an excludable public good with low substractability. These goods are known as toll goods (Buchanan, 1965; Umali & Schwartz, 1994). The high excludability of a toll good enables the private sector to exclude from the consumption of the good offered those who have not paid for it. Therefore, this property provides an incentive for the private sector to supply toll goods. Nevertheless, the public good regulations related to establishing well-defined property rights, enhancing competition, pricing and quality standards are necessary (Head, 1974).

There is another kind of mixed goods that are substractable, but with low feasibility of exclusion. These are called common pool goods (Umali & Schwartz, 1994). Being a common property, they are characterized by low excludability, but are highly substractable as more and more people make use of them. One example is a swimming pool that is available to all citizens in a given area. The implication of common pool goods is that they do not provide incentives for the private sector to supply them, due to their low excludability property. Therefore, there is a greater role for the public sector to supply common pool goods. The state may subsidize part of the

expenditure of the private sector that provides those goods and services. In addition, the presence of well-defined property rights is required.

Externalities

An externality may occur when the well-being of an individual or the production possibilities of a firm are directly affected by the actions of another agent in the economy (Mas-Collel, Whinston, & Green, 1995). Externalities are also called spillover effects or external economies. According to Pigou (1932) an externality arises when a person in the course of rendering some services to another person for which the payment is made, incidentally also renders services or disservices to other persons.

A positive externality arises when the service provided by someone to one individual, also spills over to others who have not paid for the service. A negative externality arises when the services provided to one individual causes harmful effects to others.

The central features of an externality are unenforcability of compensation (Head, 1974) and unavoidability (Coase 1960). In the case of positive spillover effects, the unenforcability of compensation property is close to the public good concept of the impossibility of exclusion. That is, people that do not pay for the service can not be excluded from benefiting from it. (Musgrave, 1959; p. 8). Likewise, those who provide such services can not capture any payment from the beneficiaries.

The case of negative spillover effects is similar to the concept of a public bad. That is, those who cause negative effects can not be charged for the damage they emit (Head 1974). Nevertheless, unlike public goods, these incidental services need not be identical in nature or quantity to the services for which the payment is made.

The unavoidability implies that the third party affected is unable to avoid the negative spillover effects. Like enforcement, avoidance of external

effects is possible, but at very high costs and therefore, economically unjustifiable (Coase, 1960).

The externalities arising from a particular activity create a divergence between private and social costs (or benefits) resulting from that activity (Pigou, 1932; Papandreu, 1994). Whenever private agents do not consider the social implications of their actions, this may lead to a loss in the social welfare. Therefore, the equilibrium allocation of resources and the Pareto optimum will not be achieved[12]. Externalities are considered as deviations from an attainable Pareto optimum, when markets are unable to cope with these side effects.

The implication is that if costs and benefits arising from external effects are not incorporated into allocative decision processes, the inefficiency results in the form of undersupply of activities that generate positive spillover effects and oversupply of activities that generates negative spillover effects.

Due to the inability of market forces to deal with externalities, some other non-market mechanisms are needed to internalize these external effects. Internalizing externalities refers to a process, usually a change in the property rights, that enables these external effects to bear (in a greater degree) on all interacting persons (Demsetz, 1967; p.348). Thus, internalizing externalities avoids the divergence between private and social costs.

When markets fail to achieve the Pareto optimum allocation of resources, it follows that government intervention or other non-market mechanisms can be used as an alternative. Government can impose taxes on those who emit negative externalities and subsidize those who cause positive externalities. This is the well-known Pigovian tradition of the tax-subsidy scheme for internalizing externalities (Pigou, 1932).

[12] The point of reference for the misallocation effects and other distortion of externalities is the Pareto optimum of the Walrasian model with zero transaction costs.

Public and Private Good Dimensions of Extension

The outputs of agricultural research and extension are generally considered to be public goods. Unlike agricultural research which lies almost in the extreme of a pure public good, extension output has dimensions of both, public and private goods.

Despite the wide scope of activities in which agricultural extension is involved in different countries, information and technology transfer constitute its main outputs. Agricultural information transmitted through the two way communication channels within the extension system is divided into two categories: pure agricultural information and agricultural information embodied in agricultural technologies (Umali & Schwartz, 1994). Pure agricultural information is related to production techniques, farm management practices, market information and institutional development (farmers' associations). Agricultural technologies include agricultural inputs, marketing and processing technologies, and package technologies for certain crops.

The information provided by agricultural extension is not exclusively a pure public good. Within the above two broad categories of agricultural extension output, one can find elements of agricultural information with various degrees of publicness and privateness (Figure 10).

Albania lacks well-developed infrastructure and communication networks. Therefore, it is likely that the transfer of agricultural information and technologies will be facilitated mainly through extension agents. Nevertheless, the communication of general information via mass/media will play a significant role in the condition of highly dispersed farm units throughout the country.

Agricultural information related to farm inputs such as agricultural machinery, agricultural chemicals, hybrid seeds, veterinary supplies and pharmaceuticals are considered private goods due to their high excludability and substractibility. These properties allow a greater role for the private

sector to provide such information. However, in order for the private sector to capture the full benefits, some preconditions are required. Some of the legal mechanisms needed include: seed and breed certification, copyrights, trade secrets enforcement, patents, inventor's certificate, and plant variety protection (Umali, 1992).

SUBSTRACTABILITY	EXCLUDABILITY: Low	EXCLUDABILITY: High
Low	**Public Goods** General Agric. Information (LT) Agricultural Information communicated via Mass/media	**Toll Goods** General Agric. Information (ST): --Cultural and Production Practices, Farm Management, Marketing and Processing. Specialized Agr. Information --Cultural and Production Practices, Farm Management, Marketing and Processing.
High	**Common Pool Goods** Modern Technologies: --Self-Pollinated Seeds (LT)	**Private Goods** Modern Technologies: -- Agricultural Machinery, Agricultural Chemicals, Hybrid Seeds, Self- Pollinated Seeds (ST), Biotechnology Products, Veterinary Supply and Pharmaceuticals

ST - short term
LT- long term

Figure 10. Public-Private Good Spectrum of Extension Output

Source: Umali & Schwartz, 1994

Often, some of the technologies related to veterinary pharmaceuticals, agricultural chemicals and so forth generate negative or positive spillover effects. Consequently, there is a need to internalize these external effects, due to inability of market forces to cope with them. According to Carlson

(1989), the internalizing of negative externalities requires industry regulations that include safety tests, residual analysis, animal feeding and crop injury tests. These tests should be conducted for approval of the product prior to its entering the market.

General agricultural information related to improved production techniques, farm management practices, marketing and processing techniques when diffused via mass communication channels is a public good. Unlike many physical goods, this kind of information is characterized by high non-substractability. This non-substractability implies that one can share the information with others while still keeping that information himself. It is also highly non-excludable when provided by mass/media.

Based on the speed of the diffusion, Umali & Schwartz (1994) call this kind of information a toll good in the short run and a public good in the long run. The implication for the case of Albania is that due to the impossibility of charging a fee on the users of this kind of information, there is no incentive for the private sector to provide this information. It will therefore fall to the public sector to provide this public good type of information, if it is to be supplied at all.

Determinants of Private Supply of Extension

According to neoclassical economic theory, private firms will produce a product and/or provide a service as long as they generate profits. Like with any product or service, the private sector will provide agricultural extension service in Albania if the service offered generates economic benefits sufficient enough to justify its costs. There are several factors that determine the private sector supply of agricultural extension (Figure 11). The following is a brief examination of the demand-side and supply-side groups of factors.

Demand-side Facors

The private sector will provide agricultural extension if there is a market demand for it. That is, if the group of farmers that are willing to pay

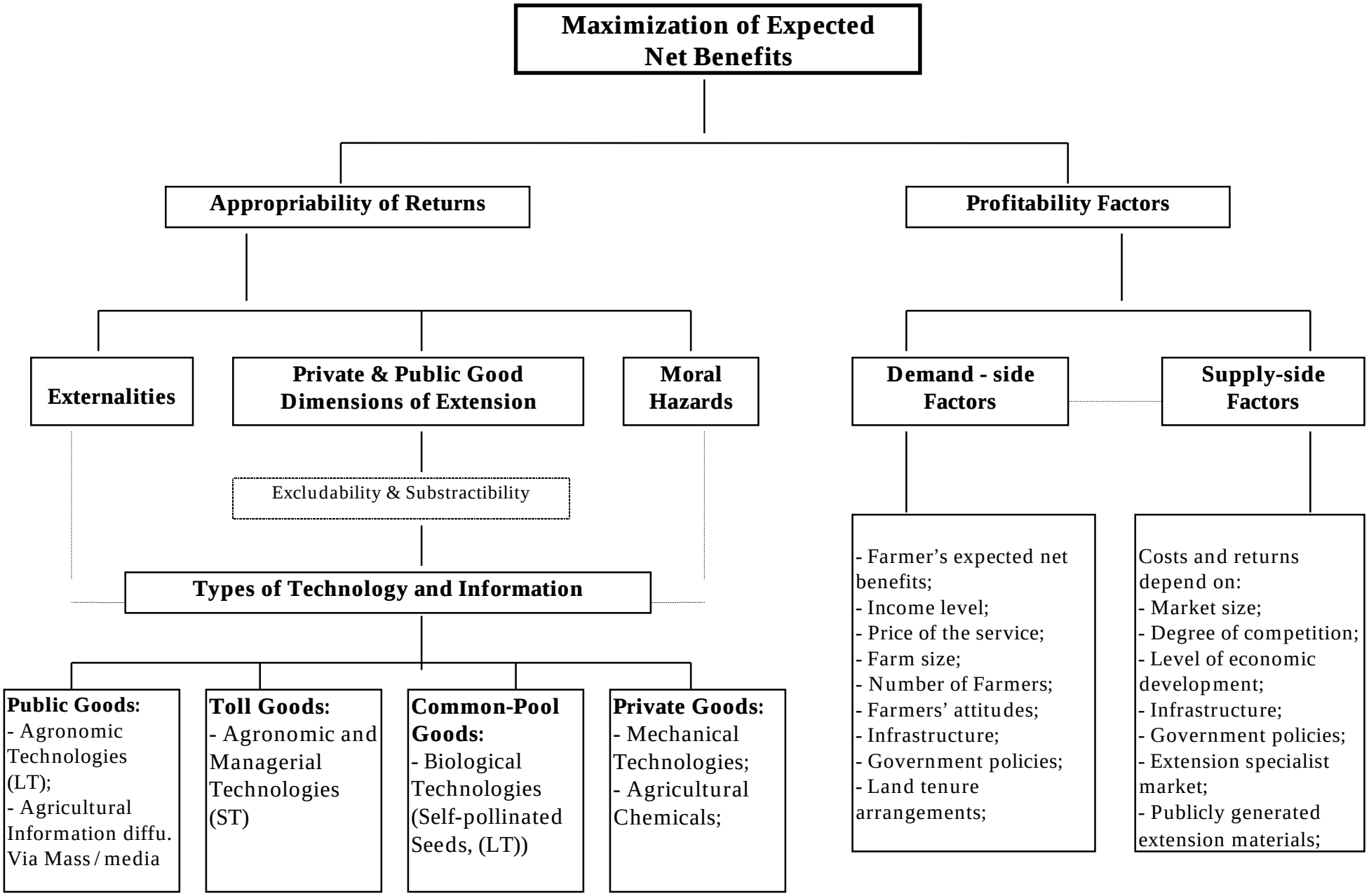

Figure 11. Determinants of Private Supply of Agricultural Extension

for the service is large enough, then private firms will have a strong incentive to provide this service. On the other hand, farmers' decision to spend for the new information will depend on the expected net benefits generated from the use of that information which materialize in the form of higher agricultural output and income.

The farmers' demand for a "fee-for-service" extension depends on many factors such as income levels, price of the service, type and the number of farmers, farmers' attitudes, infrastructure, government policies, land tenure arrangements and so forth. Of these, service prices and income levels constitute the most influential factors affecting the farmers' demand for private extension.

The farmer demand for agricultural extension will vary with income levels. Income levels, in turn, depend on the type of farmers, resource endowments, farm size, and land quality. As noted in section one, most Albanian farmers are subsistence-oriented, producing a small marketable surplus. However, in the regions with high agricultural potential, the bulk of farmers are market-oriented, despite their small-scale operations. Those farmers with a high degree of commercialization will constitute the greatest potential clients for a "fee-for-service" extension in the years to come.

The attitudes of farmers also influence the demand for private extension. The level of education and other socio-cultural factors affect to a great degree farmers' adoption of innovations (Roger, 1962). Given the low level of the development of Albanian agriculture and the relatively high level of education among the youngest generation of farmers, it is likely that in the short run, the attitudes of farmers will not be a stumbling block with regard to the farmers' demand for extension. As Albanian agriculture reaches higher stages of development, there will be a greater demand for specialized information. In these new circumstances, farmers' attitudes may become an inhibiting force to the farmers' demand for more qualified extension services. There is a need to undertake special programs of continuing education and

training aimed at changing farmers' attitudes in order for them to be more responsive to advanced technologies and farm practices offered by either public or private extension.

The implication of this discussion is that the demand for a private extension service will come primarily from farmers situated in regions with high agricultural potential. One such a region in Albania is the Coastal Plain where farmers are producing increasingly for the market, the land is productive, and the improvement of the infrastructure requires less investment. One can also find microzones that have traditionally specialized in producing a certain product, for example dairy or sheep products. Indeed, such zones may be found especially in the mountainous regions of Albania. It is likely that the private sector will have good chances for success, especially in providing specialized information related to processing and marketing of the specialty livestock products.

Farm size is another determining factor of farmers' demand for private extension. The present small farm size in Albania which averages 1.4 ha, the lack of off-farm employment opportunities, farmers' high risk averseness, the large size of farm family, the undeveloped agricultural markets, all contribute to the low level of the land market operations. Also, land tenure arrangements, like leasing out and in of land or sharecropping contracts are not occurring with high intensity.

Therefore, the process of differentiation among farmers will take a long time. Consequently, the only way out for the resource-poor, small-scale farmers is to organize themselves into associations. In this way, the association can either provide extension advice to its members by using its own resources or can obtain the specialized information from the private sector (Weitz, 1971).

Supply-side Factors

The profitability of the private sector from providing extension depends on the returns and costs generated from this activity. The returns

and costs in the provision of extension services are determined by several factors such as market size, degree of competition, level of economic development, infrastructure, government policies, extension specialist market, and publicly generated extension materials (Umali & Schwartz, 1994).

The market size, i.e. the number of farmers that are willing to pay for the private extension, is an essential factor that affects directly the private sector participation in extension activities. It depends, however, on how the determinants of Albanian farmers' demand for private extension evolve over time, so that the private sector has strong incentives to provide extension.

The degree of competition in the extension service market is another important factor that governs the incentives of private firms to undertake extension activities. The experience of many developed countries shows that, in addition to the public sector, there are several private organizations that do provide agricultural extension services. These include: input suppliers, trade associations, agro-processing and marketing firms, farmer associations, credit associations, private consulting firms, non-government organizations, universities and other non-profit organizations, many of which "collect" for the services provided through other than "pay-for-service" mechanisms (Van Den Ban, 1996). Given the present status of such organizations in Albania, which either do not exist at all or do exist but are in the infancy phase, initially, it is not expected that there will be strong competition among private sector actors. One exception is the Albanian Trade Associations of Agricultural Inputs Suppliers (AFADA) which has started trade activities in 1992. According to a report of the Tirana-based International Fertilizer Development Center (IFDC), AFADA is considered to be the most successful among Eastern European countries' trade associations. Given the promising results achieved in delivering agricultural inputs, it is likely that in a not too distant future this association will find it profitable to also provide advice related to the use of inputs it trades.

The competitiveness of the private extension service depends, in part, on its quality. If the public extension service is highly responsive to the farmers' needs for information and most of all if it is provided free of charge to the farmers, then there will be no room for private sector participation. Nevertheless, the public extension service can not be "the best substitute" forever. Like other services, even the public extension service will have "to compete" for more financial resources from the state budget. Therefore, financial limitations often require that some decisions be made toward narrowing the scope of activities and the range of the clientele to be served. Also, as emphasized earlier, the increasing need of highly commercial farmers for specialized information will necessitate that the service provided by private firms be preferred to that provided by the public extension service. The implication is that the number of the providers of the private extension service and the quality and the responsiveness of public extension service, among other factors, will determine the degree of competition and the price that the private providers of extension will charge.

A subsistence farming system is self-sufficient in terms of information and technological needs, whereas a modern agriculture has to keep up with technological change and progress and is always in transition (Schultz, 1964; Mosher, 1966). The level of economic development of a given country determines to a large extent the development of agricultural input and output markets. Farmers' demand for new technology and improved practices changes with economic development. The higher the level of the economic development of a given country, the higher the farmer demand for improved technology and information, and the stronger the incentives for the private sector to provide the new technologies and information.

Public vs. Private Service

Should the extension service in Albania be provided by the public sector or by private agencies? If provided by government, should farmers pay for the advice?

The organization of an agricultural extension service must be tailored to the specific conditions of Albanian agriculture. The transition process that Albanian agriculture is undergoing, the existence of a great number of small farmers, where most of them operate subsistence farms, the poor financial position of most of the farmers, the influence of traditional factors and the mentalities inherited by the previous system, and the lack of experience in organizing and running an extension service, all necessitate that this kind of support be provided by the public sector. This point is also based on the experience of many developed countries, which have adopted this form of assistance and direct support by the state for private farmers.

The public sector plays a leading role in providing an agricultural extension service because of the state's duty to create social justice and social equality and secondly because an adequate supply of food and other development goals can not be attained unless the mass of agricultural producers can be activated.

Extension is dependent on research with respect to research findings. On the other hand, it is commonly accepted that agricultural research needs to be supported by financial funds from the public sector. Therefore, the extension dependence on research findings is a strong argument for extension to be a public service, at least at early stages of agricultural development of a country, as is the case of Albania. Of course this is not to say that the public extension service will comprise the only source of advice for Albanian farmers.

The experience of developed countries shows that along with public extension there have emerged other alternatives that provide advice to private farmers. The extension units of commercial firms giving advice about

the products they market and private consultancy groups concerned mainly with farm business planning are a few, but convincing examples of such alternatives (Van Den Ban, 1996). Since the work of a public extension service tends to be group-oriented, it is likely that many such private consultancy groups will emerge in Albania in the future (Figure 12).

Another issue is whether farmers should pay for the information provided by a public service. Many arguments both for and against payment by farmers have been put forward from time to time. Thomas (1973) mentioned the following arguments in favor of payment: (i) the free-riders problem - there is a need to avoid the inequity regarding the benefits from free advice where some farmers benefit more than others; (ii) the extension efficiency – the work of the public extension service will be improved by securing more financial support; (iii) farmers' receptiveness to extension advice- they will only seek advice when they really need it.

The strongest argument against the payment by farmers is related to the fact that poor resource-scarce farmers will not have access to extension simply because they can not afford it. This is true in the Albanian situation. Poor and subsistence farmers comprise the majority in Albanian agriculture and they are the ones who should benefit most. Therefore, the provision of this service free of charge would be socially productive.

Last, but not the least, the public sector will be the only actor to provide agricultural extension service in Albania as long as there is no incentive for private sector participation so that it can fully appropriate the benefits generated from the service offered.

<table>
<tr><td>PUBLIC SECTOR</td><td colspan="3">Governmental extension services
Departments of Ministries of Agriculture and Food, Education, and Science and Technology, etc.
National research institutes
Universities
International agricultural research centers</td></tr>
<tr><td rowspan="5">PRIVATE SECTOR</td><td>Non-Commercial</td><td colspan="2">Non-government organizations (NGO's)
Foundations
Aid and donor agencies
Universities
Commodity boards</td></tr>
<tr><td rowspan="4">Commercially Oriented</td><td>Input Manufacturers & Suppliers</td><td>Seeds
Feeds
Pesticides
Veterinary pharmac.
Machinery & equipm.</td></tr>
<tr><td>Farm Sector</td><td>Farmers
Farmers' associations
Cooperatives
Commodity institutes</td></tr>
<tr><td>Food Sector</td><td>Marketing & Agro-processing firms</td></tr>
<tr><td>Technical Assistance</td><td>Consultancy & management firms
Agricultural media agencies</td></tr>
</table>

Figure 12. Public and Private Organizations Providing Agricultural Extension

Privatization vs. Cost-Recovery Programs

After 1980, many Western countries started adapting a mixed system of public and private financing for extension services. This was a turning point in the evolution of public extension service. William Rivera (1991) characterized this period as "the end of the beginning" meaning that it marks the completion of a phase and suggests preparation for taking the next step. Public extension was criticized for being incomplete, ineffective and irrelevant (Rivera,1991). In these circumstances, a number of developed countries reassessed the performance of the public extension service and responded to this criticism in different ways. For example, the United States made efforts to improve the relevance of the land-grant system; The Netherlands reorganized the structure of extension and privatized one-half of its public extension; New Zealand introduced user-pay, commercial criteria (Rivera, 1991). Other countries have been following the same path during the last decade.

The role of public extension service in Albania needs to be elaborated in the light of these worldwide changes. Albania, like other Eastern European countries, has a great advantage not only regarding the establishment of the extension service, but also in other aspects of institutional reform in agriculture. It can benefit from the experience of other countries. It can draw lessons from the successes and failures in the historical development of this institutional form all over the world.

The privatization of the public extension service is not simply an administrative matter. As discussed earlier, many conditions must be met in both supply and demand factors related to farmers' demand for private extension. Passing from public to a private extension involves a transition period, during which some cost-recovery programs may be applied. Given the experience of other countries, such a transition period is measured in decades rather than in years.

Some of the cost-recovery programs of extension applied in different countries include (Wilson, 1991; p.14): (i) reducing the intensity of coverage over time to specific farmers, (ii) using mass/media to increase coverage and reduce unit costs, (iii) linking research activities directly to farmers through mass/media and training of private extension, and (iv) stratifying farmers by income level and charging high income producers.

Another issue is that private extension is not the best substitute in every situation. As elsewhere in the world, there is a role for the public extension service to play even in Albania. Sims and Leonard (1990, p.49) identified several shortcomings of private extension organizations such as: (i) weak integration with research, (ii) unresponsiveness to poor-resource farmers' needs and highly biased efforts toward commercial farmers, (iii) the relationship with farmers are in the form of patron-client, where, in many cases, the primary objective is not solving farmers' problems, but rather "getting rid of" products.

CONCLUSIONS AND POLICY IMPLICATIONS

The purpose of this study was to provide a policy framework for designing an effective agricultural extension service in support of the market orientation of small farmers in Albania. The specific objectives were to:

1. identify areas of contribution that an agricultural extension service can make to fostering the country's agricultural development,
2. examine the main instruments of the agricultural extension policy and suggest ways to improve its relevance and responsiveness to Albanian agriculture's conditions, and
3. evaluate the incentive structure for private and public sector participation in providing an agricultural extension service.

The following are major findings, policy implications and action points derived from this study:

1. The transition from a centralized system to a market economy brought about radical changes concerning the nature of basic elements of Albanian agriculture (the production process, farmers, the farm and farm business) as well as the functioning of essential support services. The state-controlled cooperatives and state farms were broken up and new production structures composed of a great number of small-scale farms emerged. The new entrepreneurs are operating in a highly uncertain environment and in the absence of an adequate institutional framework. The previous planning and support structures are dismantled and not yet replaced by market institutions. The present private farm units in Albanian agriculture suffer from a lack of balance between production factors available to each farm and institutional structures needed to support efficient agricultural operations.

2. It has been recognised that institutions do play a crucial role in any economic system. The creation and/or configuration of market-framing institutions constitute a central component of the program of reforms in emerging market economies of Central and Eastern Europe, including Albania. Institutional constraints are considered as a major barrier to technical change and to modernization of agriculture. The existence of market-framing institutions is a sufficient basis for the co-ordination of actions of different actors in a market setting. Only a well designed institutional framework in general and an integrated support system in particular help farmers feel more secure in their future and enable them to make the transition from subsistence to a market-oriented farming. In this context, institutions serve as a risk-buffer. An emerging market economy without an adequate institutional framework runs the danger of having high transaction costs and lacking the rules of the game for economic agents. The implication of the above considerations is that the requisite change in agricultural institutions should be explicitly stated as a key element within the program of reforms related to the agricultural sector in Albania. Two conditions are essential to the process of building agricultural institutions: (i) a clear understanding by the policy and decision makers of the role of agricultural institutions in agricultural development, their nature and functions, organisational structures, and their integration and (ii) a new vision on how the creation and/or configuration process of agricultural institutions is going to take place over time.

3. Raising agricultural productivity through new technology is essential to the alleviation of poverty and to assurance of long term economic growth of Albania. Equally important over the long term is helping farmers adopt less intensive and more environmentally sound agricultural practices. Research, extension and agricultural education are crucial elements of the support system. As the main approach for generating and diffusing new technologies and information in the agricultural sector, they comprise the main support

and direct contribution of the state to Albanian private farmers. As the sources for further expansion of agricultural land are exhausted, almost all increases in Albanian agricultural production will have to come from higher output per hectare. Therefore the trend of shifting from resource-based to technology-based farming systems also requires an explicit policy framework for providing new technologies and information to agricultural producers. These new trends imply new roles and responsibilities for agricultural extension in Albania.

4. Based on the discussion in this study, it is argued that agricultural extension should be considered an accelerator rather than an essential component for fostering the country's agricultural development. Yet, the discussion underscores the need for the many facets of extension and its goals to be viewed from a system perspective by examining its place within the matrix of support services and agricultural knowledge information system (AKIS). In order for agricultural extension to be effective, it needs a continuous flow of information from research institutions and must be combined with other support services and production factors such as land, inputs, labor, credit, transport, marketing, and income and price policies.

5. National Policies and goals determine to a large extent the configuration of extension. The government uses extension as a support service as well as a policy instrument for influencing farmer's behavior to achieve its policy goals. Viewed from a policy perspective, the nature and philosophy of extension work is very complex. Extension can not serve as an exclusive advocate for farmers, nor can it be completely neutral when government's policies discriminate against farmers' interest. Therefore, it is argued, the mission of extension is to act both as a policy instrument and a direct contribution of the state for agricultural producers as well as a "warning device" in cases when the state applies inappropriate agricultural policies. The policy

implications are that (i) agricultural extension service needs government support, be it explicit or implicit, (ii) the extension mission will be determined to a large extent by national development and goals, (iii) policies related to market prices, input availability, marketing of input and output supply, and access to credit strongly influence farmers' decision to accept or reject extension recommendations, and (iv) extension should contribute to the policy making process by providing information on what agricultural producers think of the policies and programs offered to them by the government.

6. Contrary to the "diffusion" and "getting technology right" models widely applied in the 1960s and early 1970s, which failed to use a system perspective in diagnosing farmers' problems, this study concludes that agricultural extension institution in Albania should be designed by considering it as an integral part of AKIS. Except for agricultural extension, other elements of AKIS, that is, agricultural research and education have functioned in Albania as separate structures in the past. Up to now, there has existed vertical integration while horizontal integration of all research structures and the extension and agricultural education at the national, regional and local levels has been lacking. Strong horizontal links among extension, education and research, along with supportive vertical linkages from central, regional and local levels constitute the key feature of an integrated institutional framework serving agriculture. Therefore, there is a need to set up a coordinating board with representatives of research, extension, and agricultural institutions. This board can: (i) coordinate and update representatives of research, extension, and education (REE) about the continuing activities within AKIS, (ii) promote the exchange of information among researchers, extension workers and farmers, (iii) monitor the implementation of joint activities, and (iv) set the research and extension priorities for providing relevant technologies consistent with the situation of

different groups of farmers. Another important issue is that strengthening of the linkages within AKIS should be done by focusing on REE functions, rather than just their organizational structures.

7. The experience of developed and less developed countries and extension theorists do not offer a clear notion of a formal extension policy, nor do they provide an adequate framework about the content of such policy. This study represent an effort toward refining the scope and content of extension policy by focusing on issues related to designing an appropriate extension system, setting the right objectives, defining the scope of activities and the range of clientele, and examining the institutional arrangements for linking extension with other development agencies.

8. The organization and structuring of an extension service in Albania should be guided by a well formulated extension strategy. The national extension strategy for Albania should reflect the country's agricultural development policy and the diversity of new production structures in terms of resources available at the farm level. It should be formulated in a comprehensive policy framework that lays out how the institutional configuration of extension will evolve over time. Specifically, a comprehensive extension strategy for Albania should address the following: (i) define its professional and technical orientation, that is, the scope of the activities in which it will be involved, (ii) specify basic work responsibilities, management principles, and its organizational structure at the national, regional, and local level, (iii) identify target groups and define the best possible approaches for working with different types of users, (iv) emphasize the extension contribution to the national policy formulation and implementation, (v) offer basic institutional arrangements linking extension with other development services such as agricultural research, education, input supply, agricultural marketing and processing, and social services, (vi)

define financial arrangements for public funding of extension, (vii) evaluate the incentive structures for providing extension and anticipate how extension is likely to evolve in the medium and long run by emphasizing the increasing role that the private sector should take on for technology transfer.

9. Defining an appropriate extension system constitutes the central element of an extension policy. In designing the extension system, five major elements have to be addressed: (i) what are the objectives of the extension service, (ii) who are the clients to whom the extension service intends to serve, (iii) the content of the message and/or product the extension service has to offer to its clients, (iv) methods and channels through which the extension message will be conveyed to the clientele, and (v) what the institutional arrangements are, that is, the internal structure of extension and the linkages with related organizations and target groups. Based on the comparative analysis of the most eminent extension systems worldwide, it is concluded that Albania needs an extension system that is "demand" as well as "supply-driven". This will be a "hybrid" system combining the principles and strengths of the T&V and FSR/E approaches. The implication is that the top-down transfer of technology can not be successful unless the system insures a wide participation of farmers in designing, implementing, monitoring, and evaluating extension programs. Such an extension system needs to be designed based on the following basic principles: situation specificity, financial sustainability, system flexibility, and systemwide participation.

10. Public and private good dimensions of extension output, that is, agricultural technology and information, generate different incentives for the public and private sector participation in providing agricultural extension. The involvement of the private sector is largely guided by profit-oriented motives. There is no doubt that the private sector will not provide extension

unless the economic returns from the service offered exceed the costs. In addition to the efficiency criterion, public sector participation is justified by social and equity concerns. The public good dimension of extension creates the grounds for free-riding as a predominant behavior of extension clients. The free rider problem leads to inefficient allocation of resources. The implication is that the private sector will not provide public good-type information, because it is difficult to restrict its use only to those individuals who have paid for it. If the market fails to provide the good, it frequently falls to the public sector to undertake its provision, where through the tax system, it can force the users to pay for it.

11. Market failure arises in the case of agricultural extension due to externalities, moral hazards, and economies of scale. Some of the technologies related to veterinary pharmaceuticals, agricultural chemicals as well as extension demonstrations generate negative and/or positive spillover effects. Seeds and agricultural chemicals involve moral hazards in the absence of regulations and quality control. The implication is that if costs and benefits arising from external effects are not incorporated into allocative decision processes, the inefficiency results in the form of undersupply of activities that generate positive spillover effects and oversupply of activities that generate negative spillover effects. Consequently, there is a need to internalize these external effects, due to the inability of market forces to cope with them. The internalizing of negative externalities requires industry regulations that include safety tests, residual analysis, animal feeding and crop injury tests. These tests should be conducted for approval of the product prior to its entering the market.

12. Agricultural information related to farm inputs such as agricultural machinery, agricultural chemicals, hybrid seeds, veterinary supplies and pharmaceuticals are considered private goods due to their high excludability

and substractibility. These properties allow a greater role for the private sector to provide such information, because of the appropriability of returns in supplying these goods. However, in order for the private sector to capture the full benefits, some preconditions are required. Some of the legal mechanisms needed include: seed and breed certification, copyrights, trade secrets enforcement, patents, inventor's certificates, and plant variety protection.

13. General agricultural information related to improved production techniques, farm management practices, marketing and processing techniques when diffused via mass communication channels is a public good. Unlike many physical goods this kind of information is characterized by high non-substractability. It is also highly non-excludable when provided by mass/media. The implication for Albania is that due to the impossibility of charging the users of this kind of information a fee, there is no incentive for the private sector to provide this information. It will therefore fall to the public sector to provide this public good type of information, if it is to be supplied at all.

14. Despite the incentives for providing "private good" and "toll good", the private sector will provide agricultural extension if there is a market demand for it and if the rate of return to investment on extension will be sufficiently high. That is, if the group of farmers that are willing to pay for the service is large enough, then private firms will have a strong incentive to provide this service. The profitability of the private sector from providing extension depends on the returns and costs generated from this activity. The returns and costs in the provision of extension services are determined by several factors such as market size, degree of competition, level of economic development, infrastructure, government policies, extension specialist market, and publicly generated extension materials. The implication is that

the private sector will concentrate on providing information for high value commodities and/or cash crops. However a word of caution needs mention. Several shortcomings of private extension organizations have been identified in many countries such as: (i) weak integration with research, (ii) unresponsiveness to poor-resource farmers' needs and highly biased efforts toward commercial farmers, (iii) the relationship with farmers are in the form of patron-client, where, in many cases, the primary objective is not solving farmers' problems, but rather "getting rid of" products.

15. Farmers' decisions to pay for new information will depend on the expected net benefits generated from the use of that information which materialize in the form of higher agricultural output and income. The farmers' demand for a "fee-for-service" extension depends on many factors such as income levels, price of the service, type and the number of farmers, farmers' attitudes, infrastructure, government policies, land tenure arrangements and so forth. Of these, service prices and income levels constitute the most influential factors affecting the farmers' demand for private extension. The implication of this discussion is that the demand for a private extension service will come primarily from farmers situated in regions with high agricultural potential. One can also find microzones that have traditionally specialized in producing a certain product, for example dairy or sheep products. Indeed, such zones may be found in the mountainous regions of Albania. It is likely that the private sector will have good chances for success, especially in providing specialized information related to processing and marketing of specialty livestock products.

16. Should the extension service in Albania be provided by the public sector or by private agencies? The transition process that Albanian agriculture is undergoing, the existence of a great number of small farmers, where most of them operate subsistence farms, the poor financial position of most of the

farmers, the influence of traditional factors and the mentalities inherited from the previous system, all suggest that this kind of support be provided by the public sector. The extension dependence on research findings is also a strong argument for extension to be a public service, at least in early stages of agricultural development of a country, as is the case of Albania. Another rationale for the public support of extension is the infant industry argument, that is, high start-up costs and the lack of experience in organizing and running an extension service. Finally, the public sector will be the only actor to provide agricultural extension service in Albania, as long as there is no incentive for private sector participation when it can not fully appropriate the benefits generated from the service offered.

17. Another issue is whether farmers should pay for the information provided by a public service. Many arguments both for and against payment by farmers have been put forward from time to time. The free-riding problem, the extension efficiency, and farmers' receptiveness to extension advice are some of the arguments in favor of payment. The strongest argument against the payment by farmers is related to the fact that poor resource-scarce farmers will not have access to extension simply because they can not afford it. This is true in the Albanian situation. Poor and subsistence farmers comprise the majority in Albanian agriculture and they are the ones who should benefit most. Therefore, the provision of this service free of charge would be socially productive, at least in the immediate future.

18. The privatization of the public extension service is not simply an administrative matter. Many conditions must be met in both supply and demand for private extension. Passing from public to a private extension involves a transition period, during which some cost-recovery programs may be applied. Some of the cost-recovery programs of extension applied in different countries include (i) reducing the intensity of coverage over time to

specific farmers, (ii) using mass/media to increase coverage and reduce unit costs, (iii) linking research activities directly to farmers through mass/media and training of private extension, and (iv) stratifying farmers by income level and charging high income producers.

19. Another issue emphasized in this study is that private extension is not the best substitute in every situation. As elsewhere in the world, there is a role for the public extension service to play in Albania. The need for a public and private extension balance implies that: (i) the public sector should withdraw from areas that can be serviced by private sector, (ii) cost-sharing programs with other non-profit organizations and/or subcontracting with commercial agencies should be designed and applied, and (iii) the government should support input suppliers and other trade organizations to provide more technical advice to their clients, that is farmers.

20. The role and future of the public extension in Albania needs to be elaborated in the light of worldwide changes that have been taking place since the early 1980s with regard to extension. Albania, like other Eastern European countries, has a great advantage not only regarding the establishment of the extension service, but also in other aspects of institutional reform in agriculture. It can benefit from the experience of other countries. It can draw lessons from the successes and failures in the historical development of this institutional form all over the world.

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Appendix A

Table 1. Macroeconomic Indicators

Share of GDP (based on current prices)	**1980**	**1985**	**1988**	**1991**	**1994**
Agriculture **(%)**	33.6	34.6	31.5	39.6	55.5
Industry **(%)**	45.0	43.3	46.3	38.2	25.4
Services **(%)**	21.4	22.1	22.2	22.2	19.1
Total **(%)**	100.0	100.0	100.0	100.0	100.0
Share of Employment in:	**1975**	**1980**	**1985**	**1991**	**1992**
Agriculture **(%)**	51.2	49.8	49.7	-	-
Industry **(%)**	20.2	21.2	21.6	-	-
Services **(%)**	28.6	29.0	28.7	-	-
Total (**%)**	100.0	100.0	100.0	-	-
Growth rates	**1975 - 1980**		**1980 - 1985**		**1985 - 1990**
Population **(%)**	2.2		2.1		2.0
Labor Force **(%)**	3.9		3.1		2.7
Nation. Income **(%)**	-		-0.1		-1.5

Source: World Bank/EC, 1992.

Table 2. Share of the Economically Active Population Employed in Agriculture in East European Countries, 1988

Country	**% of Population Employed in Agriculture**	**Area per Agricultural Worker (ha)[13]**
Albania	49.8	1.5
Yugoslavia	23.6	5.6
Poland	22.2	4.4
Romania	22.1	5.9
Bulgaria	13.2	10.5
Hungary	12.7	9.8
Czechoslovakia	10.0	8.3
The Netherlands	4.0	8.3

Source: World Bank/EC, 1992.

[13] The agricultural area in hectares divided by the total number of people active in the agricultural sector.

Table 3. Albanian Population and Rural Population, 1923-1991

Years	Inhabitants (000)	Rural Share (%)
1923	804.0	84.1
1938	1,040.3	84.6
1945	1,122.0	78.7
1950	1,218.9	79.5
1955	1,391.5	72.5
1960	1,626.3	69.1
1969	2,068.1	67.7
1979	2,594.6	66.5
1983	2,841.3	66.2
1991	3,326.8	65.0

Source: Lienan, C.: Albanien im Uberblick, in: Berichte ausdem Arbeitsgebeit Entwick lungsforschung, No. 12, loc. Cit., 1986, pp. 91.

Table 4. Agricultural Land ('000 hectares)

Year	Total arable land	by use:		by ownership:		
		Crops	Orchards	State Farms	Co-operatives	Private Plots
1950	391	374	17	13	21	357
1960	457	415	40	65	330	62
1970	599	521	78	124	454	21
1080	702	585	117	151	532	19
1985	713	590	123	161	533	19
1990	704	579	125	170	504	30
1991	702	579	123	171	-	532
1992	703	579	124	171	-	532

Source: World Bank/EC, 1992.

Table 5. Distribution of Cultivated Land Before 1946

Land Tenure	Area in Hectares	Percentage	Number of Families
Large "Latifundia" Owners	14,554	3.70	7
State	50,000	12.70	n/a
"Rich" Landowners	91,133	23.20	4,713
Medium/Small Owners	237,660	60.40	128,961
Tenants	…..	…..	21,554
Total	393,347	100.00	155,235

Source: Arkivi i shtetit, Dosja No. 36(3).

Table 6. Breakdown by Origin of Agricultural Production, Selected Years, 1950-1991 (percent of value of total agricultural output)

Year	State Farms	Cooperative	Private	Total
1950	4.1	1.9	94.0	100.0
1960	12.7	41.6	45.7	100.0
1970	21.9	55.1	23.0	100.0
1980	25.3	55.5	19.1	100.0
1985	28.4	62.5	9.1	100.0
1986	29.7	61.5	8.8	100.0
1987	29.6	61.1	9.3	100.0
1988	30.3	60.4	9.4	100.0
1989	29.8	60.1	10.1	100.0
1990	29.2	49.9	20.9	100.0
1991	37.3	0.0	62.7	100.0

Source: World Bank/EC, 1992.

Table 7. A comparison of Agricultural Productivity among East European Countries

(tons per hectare)

Commod.	Albania		Bulgaria		Hungary		Poland		Romania	
	1988	**1994**	**1988**	**1994**	**1988**	**1994**	**1988**	**1994**	**1988**	**1994**
Wheat	3.20	2.93	4.01	4.14	5.45	4.55	3.48	3.08	3.58	2.67
Maize	-	3.52	-	6.63	-	4.30	-	3.50	-	3.48
Potatoes	5.41	8.69	9.73	14.99	-	15.53	18.60	13.01	-	16.20
Oilseeds	1.0	-	1.57	2.38	-	1.24	-	1.93	1.51	1.79
Sugar Beets	17.19	-	16.08	35.00	39.34	34.70	34.13	31.60	11.36	25.72
Milk yield per cow (liters)	1,274	2569.3	3,397	2808.2	-	4484.0	-	2848	2.074	2078
Eggs per chicken	96	120	170	230	-	-	-	120	154	200

Source: World Bank/EC, 1992; World Bank, 1995.

Table 8. Milk Production in Eastern Europe and Comparison with the Netherland, 1988

Country	Area per Cow (ha)	Milk Production per Capita (kg)	Milk Yield per Cow (kg)
Albania	3.7	143	1,412
Yugoslavia	5.4	203	1,811
Romania	3.8	414	2,150
Poland	7.6	187	3,121
Bulgaria	9.6	243	3,358
Czechoslovakia	11.2	265	3,894
Hungary	3.8	449	4,871
The Netherlands	1	781	5,832

Source: FAO Production Yearbook, 1988; World Bank / EC, 1992.

Table 9. Average Annual Growth Rates for Principal Agricultural Products

Commodities	1950-60	1960-70	1970-80	1980-85	1985-89	1989-91	1991-93
Wheat	- 3	14	8	4	0	-24	10
Maize	2	7	1	-1	3	-44	5
Vegetables & Melon	3	12	4	2	2	-6	73
Cotton	10	-1	1	10	-10	-58	0
Tobacco	23	4	1	9	-1	-31	71
Sugar beet	28	5	9	- 4	4	-43	12
Sunflower	n / a	n / a	5	4	-10	-54	50
Grape	0	11	0	4	0	-6	-21
Milk	4	3	6	-1	5	10	30
Meat	5	1	2	3	4	10	71
Eggs	5	3	8	6	8	-5	8

Source: World Bank / EC, 1992, Albanian Statistical Yearbook 1994.

Table 10. Grouping of districts by per-capita agricultural land, 1994

Groups (square meters)	Districts	% of population
- 2000	11	50.1
2000 - 3000	12	42.5
3000 - 4000	2	6.6
over 4000	1	0.8
Total	26	100.0

Source: World bank, 1995

Table 11. Development of Tractorization in Albania

Year	Number of Tractors	Cultivated Land (ha)	Average Area per Tractor (ha)
1961	2,900	479,000	165
1975	9,620	662,000	69
1989	10,565	711,000	68

Source: World Bank / EC, 1992.

Table 19. Issue Areas in Agricultural Extension

Issues related to: / Issues involved with:	Sector Linkages	Situation Specificity	Sustainability
1. Policy	with: -development goals -national strategies	Regarding: -importance of agriculture to national economy -government commitment	-Economic social, and political benefits and costs
2. Demand	Farmer linkage with: -research -input supply -markets -education	Regarding: -farmer characteristics -education levels -participation -social systems	-Financial profitability -cultural needs
3. Supply	Extension linkages with: -research -input supply	Regarding: -system management -leadership	-cost effectiveness

	-markets -farmers	-capacity -monitoring -controlled -unstructured	-evaluation
4. National Organization	Linkage management between: -policy makers -commerce -other sectors -knowledge systems	Regarding type of organization: -centralized -parastatal -public-private -commodity focused	-budget resources -management capacity -regional cohesion

Source: J. A. Hayward (1989)

Appendix B

Donor Contribution to Extension (MOAF, 1995**)**

European Union (EU)'s Phare Program

EU-Phare has supported the development of the national extension service in the Ministry of Agriculture and the district level. It has also supported on-farm research activities of eight agricultural research institutes.

International Fund for Agricultural Development (IFAD)

IFAD started a 5-year rural development program in four northern districts: Kukes, Has, Diber, and Tropoja in 1995. Extension was included as one of the components. A second IFAD program started in the districts of Bulqiza, Mat, and Miredite in 1996. Funds for extension are also included.

Dutch/STOAS

A Dutch bilateral program has supported extension in Fier district since 1993. Besides the support to Fier district, this program has supported the national extension section in the Ministry of Agriculture in developing extension messages through on-farm research with research institutes.

SWISS

A Swiss three year bilateral program started in Puka district in 1995. Extension is included.

AGRINAS

The Dutch non-government organization AGRINAS is supporting Pogradec district with several programs, one being the development of extension.

FRENCH

France has supported livestock activities in Korça activities, including some extension support.

AUSTRIA

Austria has been supporting a local research station of Zootechnic Research Institute in Skrapar district, including some elements of extension.

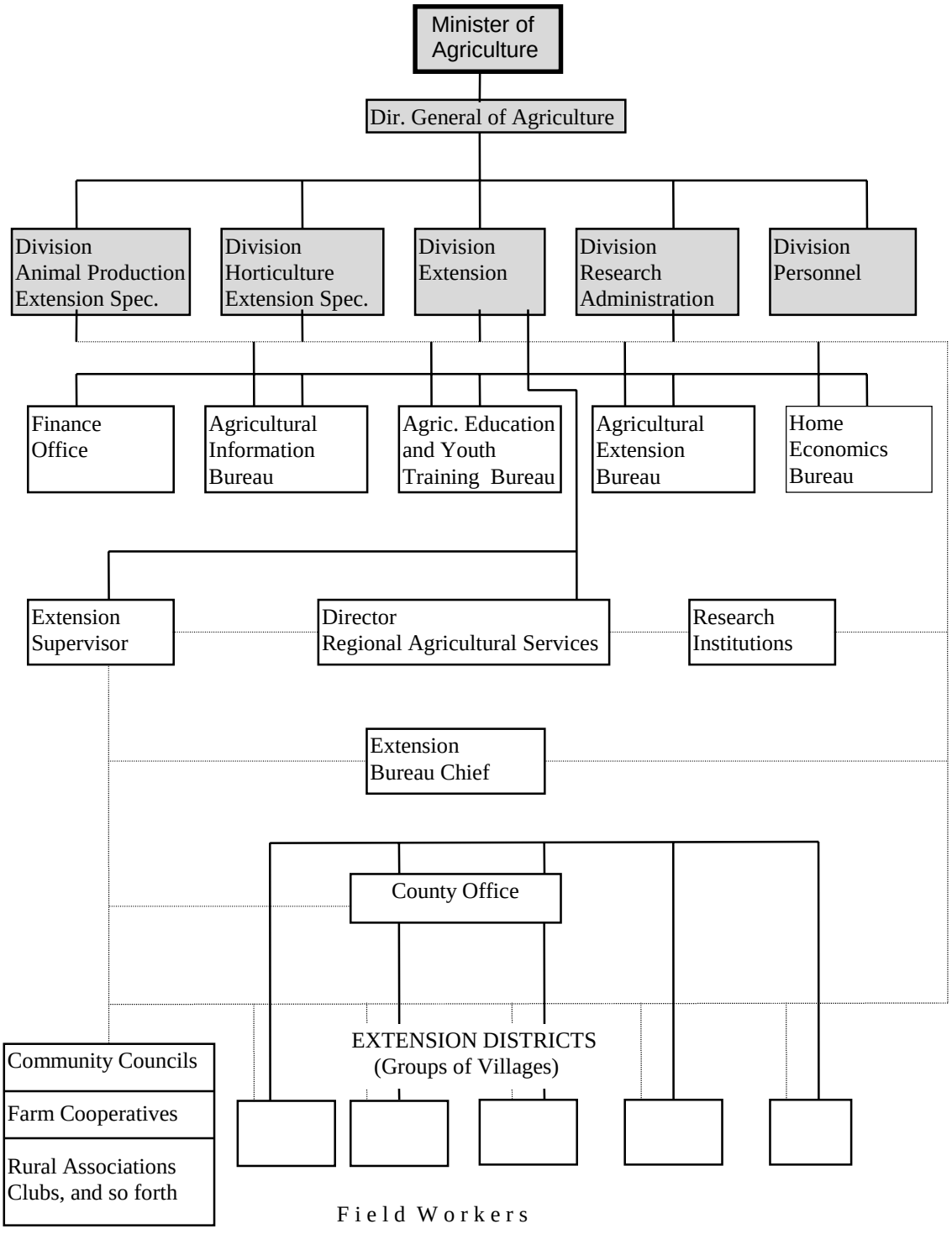

Figure 5. Organization Scheme of a Conventional Extension Service

Lines of Administrative Authority _____

Lines of Cooperation & Communication----------

Source: Claar & Bentz, 1984

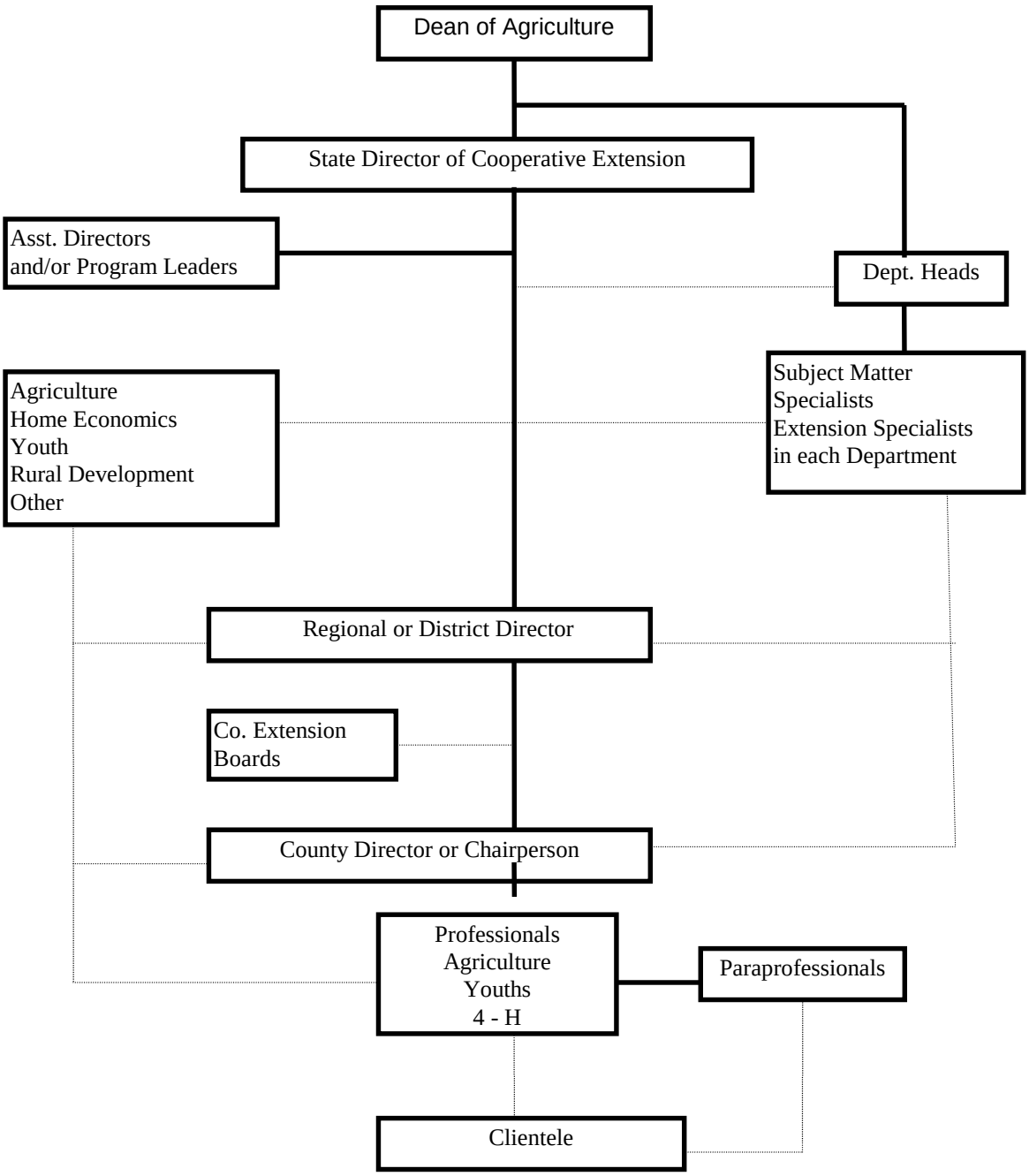

Figure 6. Organization Scheme of U.S. Land - Grant System

Lines of Administartive Authority_____

Lines of Cooperation & Communication----------

Source: Claar & Bentz, 1984

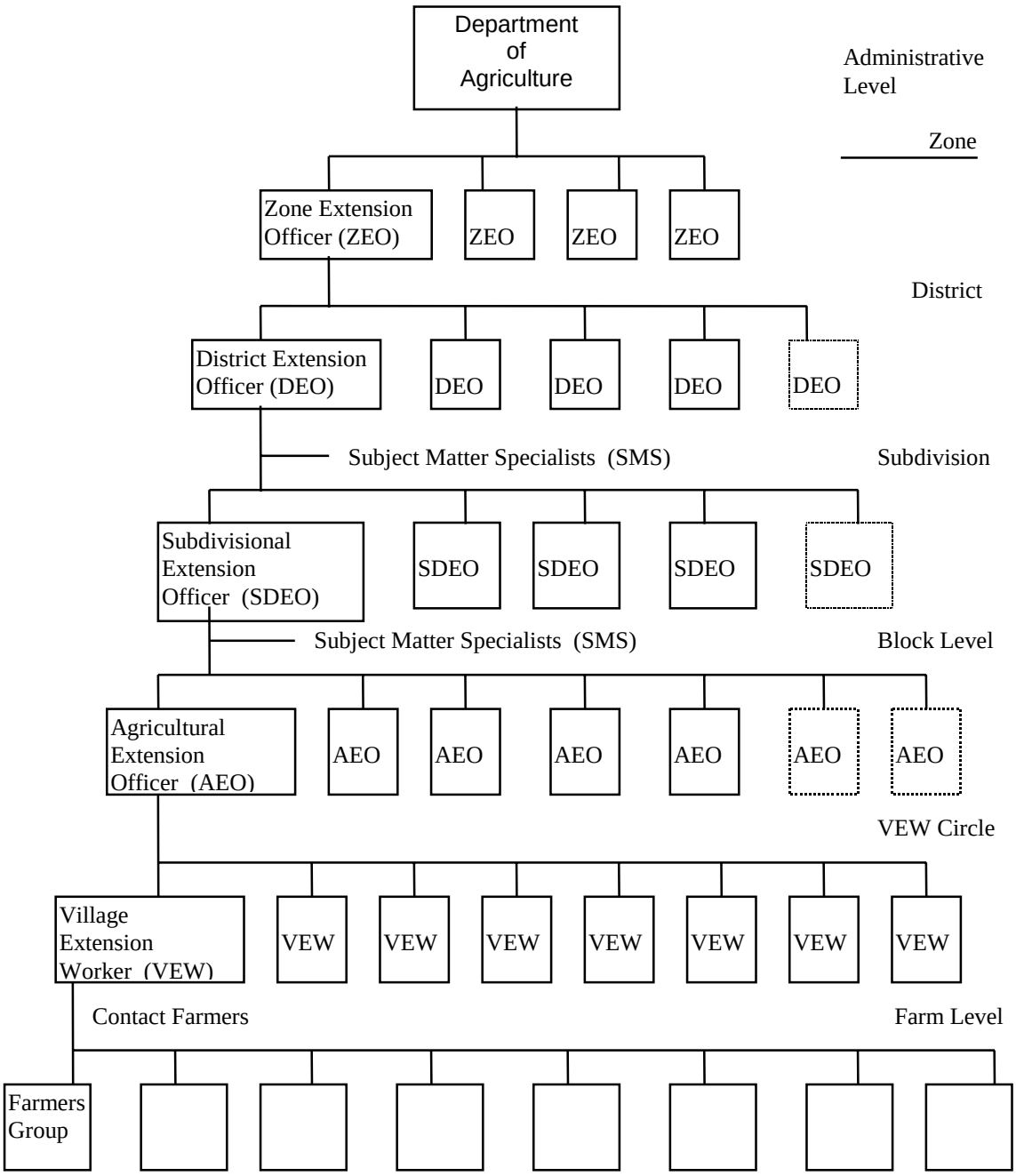

Figure 7. Organization Scheme of T&V System

Lines of Cooperation & Communication----------

Lines of Administrative Authority_____

Source: Claar & Bentz, 1984

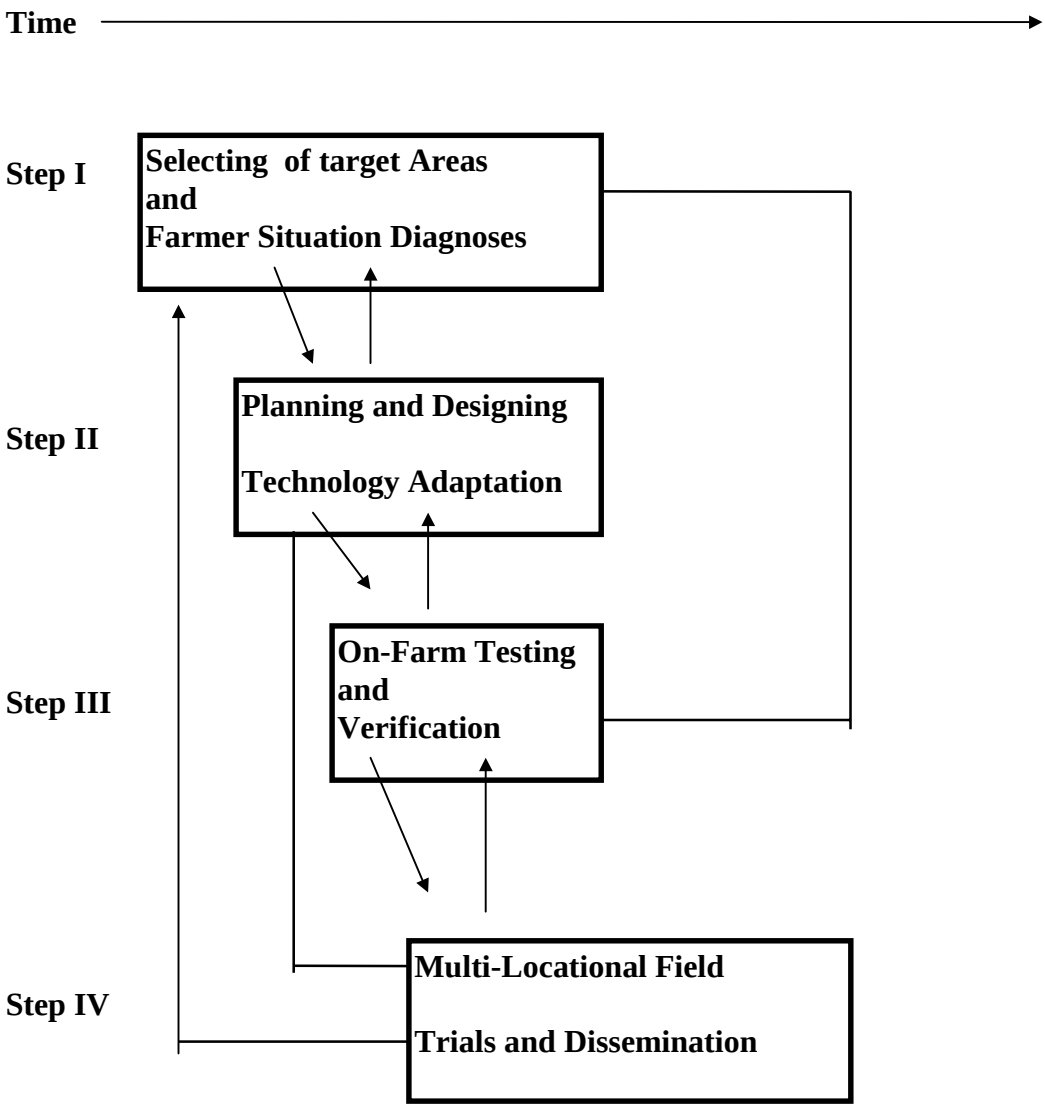

Figure 8. Steps in FSR/E to Adapting and Extending new Agricultural Technology

Source: (Kellogg, 1977)

VITA

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