Sustainable Rural Finance Intermediation for Sustainable Development of Rural Areas

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Abstract: Rural financial services are key to enhancing rural economic development in rural areas. Rural financial services in Bosnia and Herzegovina, in many cases, have completely broken down as a result of the war conflicts, restructuring and privatization. Access to financial services such as savings, loans, payment services, trade credit, insurance and leasing is generally scarce and limited in rural areas as for households as for farm and non-farm enterprises.

The development of rural and micro finance institutions with an appropriate range of high quality financial services and products tailored to specific rural needs makes the availability of financial services in rural areas permanent. Favorable policies, improved and adapted legal and regulatory framework of Bosnia and Herzegovina which support the coexistence rural and micro finance institutions with other finance providers (formal financial institutions, informal financial service providers, NGOs and member-owned organizations) promise sustainable rural financial intermediation.

Key words: rural finance, micro finance, sustainable development, rural areas, and financial intermediation.

Introduction

Traditional approaches for agricultural development of rural areas are ineffective in accomplishing economic stability and efficiency, social equity and effective environmental protection of rural areas. Use and conservation of resources of rural communities with the aim of continuous, economical, ecological, and social way to meet human needs in the long term implies the need for multidimensional approach to development of rural areas.

Rural financial services are key to enhancing economic development in rural areas. Financial services for rural households, farm and non-farm enterprises.are either inappropriate or non-existent. A lack of local financial services tailored to specific rural needs harms the economic viability and sustainability of rural areas. Population in rural areas should have acceptable access to a wide range of financial services and facilities. In order to support change toward sustainable rural development, this paper discusses the concept of developing rural financial intermediation based on the sustainability.

Methodologies for Rural Micro Finance and Principles of Sustainable Rural and Micro Finance

There are different methodologies for providing financial services to households and their micro enterprises in rural areas such as village banking, solidarity group, credit unions and transformation lending (Otero & Rhyne, 1994: 117). These methodologies are not appropriate in every context. It is important develop a range of financial intermediaries in order to use sources of financing such as long term refinancing, equity, time deposits or debentures/bonds. A community credit and saving association organized by the members of village, with decentralized institutional structure providing community based savings and credit is village bank. If clients join a group to receive access to financial services, primarily credit and collectively guarantee loan repayment we have solidarity group. A cooperative financial institution that is owned and controlled by its members and provide credit and other financial services to its members is credit union. Transformation lending methodology turn micro enterprises into small businesses by providing working capital and fixed-asset loans combined with training.

Basic principles common to the rural and micro finance institutions are:
- Rural and micro finance services are demand-driven and meet the needs of households and their enterprises in rural areas.

- Customers need access to a variety of financial services such as saving credit, payment transfers, insurance, etc. in rural areas.
- Saving is equally important as credit.
- Services is simplified, customer-friendly and located close to client.
- Repayment are motivated by saving, group solidarity and joint liability.
- Saving is an effective tool for achieving self-sustainability and decreasing vulnerability of rural client.
- Credit is not always appropriate, private capital can be complemented by grant.
- The governments support an enabling environment.

State Estimation

Agriculture is still an important activity for the economic growth in rural areas of the Bosnia and Herzegovina. Rural sector is facing low population density, undeveloped public infrastructure (transportation, communication, electricity, health, education, etc,), low and irregular income flows from agricultural production.

Rural financial services, in many cases, have completely broken down as a result of war conflicts, restructuring and privatization. Access to financial services such as savings, loans, payment services, trade credit, insurance and leasing is generally scarce and limited as for rural households as for farm and non-farm enterprises. Because of small size of the transactions, high transaction costs, less affluent clients, lack of adequate security and information on borrowers' credit history, banks have little or no presence in many rural areas in Bosnia and Herzegovina. Finance providers such as micro credit organizations promote credit services as the most important financial services to rural clients. Micro credit organizations in the Bosnia and Herzegovina are not allowed to mobilize savings. Credit is not always appropriate. In order to decrease their vulnerability and accumulate lump sums for purposes specific to their needs, poor and low-income households and their micro enterprises in rural areas such as small farmers, small-scale traders, artisan producers want to save and save in various forms such as cash, gold, land, animals, etc. They want to entrust their savings to financial institutions but they do not have access to those institutions. If they have it, it is limited access with inappropriate products and delivery services. Many of them keep money at home or entrust their savings to relatives or friends.

On the basis of researched sources that elaborate rural and micro financial intermediation and taking into account the state estimation, it is necessary to develop a range of financial intermediaries in order to use sources of financing such as long term refinancing, equity, time deposits, debentures and bonds.

Research Results

On the basis of researched sources that elaborate rural and micro financial intermediation and taking into account state estimation, it is necessary to develop a range of financial intermediaries, in order to use sources of financing such as long term refinancing, equity, time deposits or debentures/bonds. Favorable policies, improved and adapted legal and regulatory framework of the Bosnia and Herzegovina which support the coexistence of rural and micro finance institutions with other finance providers (formal financial institutions, informal financial service providers, NGOs and member-owned organizations) promise sustainable rural financial intermediation.

The development of rural and micro finance institutions with an appropriate range of high quality financial services and products tailored to specific rural needs makes the availability of financial services in rural areas permanent. These institutions that are authorized to mobilize savings have either the legal form of savings and credit unions or of mini banks.

Conclusion

Because of elemental and partial approach to developing of rural finance access to financial services such as savings, loans, payment services, trade credit, insurance and leasing is generally scarce and limited in rural areas as for households as for farm and non-farm enterprises. Rural population needs access to a broad range of financial services, appropriate products and delivery processes.

Sustainable rural and micro finance intermediation that supports both agricultural and non-agricultural activities with appropriate financial services, such as savings, credit, payment transactions and insurance etc. can contribute to sustainable rural development and vulnerability reduction and use synergies with other rural development measures. Supervised financial institutions engaged in rural and micro finance can reach significant scale through mobilization of domestic savings. Other financial providers such as community-based savings and credit associations, self-help groups and NGO may support certain target groups that remain beyond the reach of

formal financial institutions. Savings mobilization is crucial for long-term sustainability of rural and micro financial institutions.

It is very important to work on environment, and create favorable policies and regulatory and legal framework which will enable the development of rural and micro financial institutions, rural savings and credit unions, the development of a wider range of rural financial products, appropriate industry standards and supervision.

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Assessment of Development Trend of Natural Stone Industry for Turkey

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Abstract: Natural stone is the oldest building material used by man. From ancient times until today, natural stones including marble, granite and other building stones have played an imprtant role in Turkish industry. The industry of natural stone, which has developed in an important trend since 1980, has become one of sectors supporting in country such as the potential of production, exportation and employment. For this reason, in this paper, the position of natural stone industry being in the last five years in Turkey has been considered, and exportation value has been analyzed with statistical technique. At the end of the study, results were interpreted for statistical approach. This study shows the necessity and usefulness of statistical assessment of large datasets in order to get better information about the development trend of natural stone industry.

1. Introduction

With approximately 73 million of population and 16th largest economy in the world, being a young, growing and EU candidate country, Turkey's economic policies have shown significant differences before and after 1980. Industrialization strategies based on an important substation policy had been left and the reforms were designed to transform the structure of the economy in the direction of an open, liberal and market-oriented since 1980's. The main components of the economic reform of turkey are diminishing government intervention and liberalizing economic sectors, implementing a floating exchange rate policy, loosening import and export regulations, encouraging foreign investments, deregulating financial markets and privatizing public entities (Anac and Tamzok, 2007).

Today, Turkey is far more integrated into the global economy and the Turkish economy has experienced a mean growth rate of almost 5 percent over the past 20 years (State Planning Organization, 2007).

Natural stones are an integral part of the human history in terms of ornamental and construction use. Dimensional stones are produced in more than 42 countries of the world while 12 of these procedures are dominant in the international market i.e. 6 European countries and 3 each from Asian and African. Technological advances in the last seventy years had increased the world production and consumption of dimensional stones to 49.5 million tons. Due to increase in world consumption the natural stone international trade is grows. Italy is the major player in the international market and exported 38% of the dimensional stone's exports, while its imports were 18% of the international imports. Other major exporters include Spain, Turkey and Portugal while major importers were USA; China, Germany and Hong Kong (Url-1).

Turkey has very diverse and large amounts of natural stone reserves. The total base reserves are about 13 billion m^3. The important Turkish marble reserves are found Afyon, Bilecik, Burdur, Denizli, Mugla, Elazig, Balikesir and Eskisehir. Turkey is also one of the world's most important natural stone procedures. Turkey's natural stone production has increased and Turkey has become one of the most important natural stone procedures in the world. Production and exports of natural stones have increased substantially in recent years, reaching value of $1 billion (Anac and Tamzok, 2007).

In this paper, exportation price ($) of natural stone being in the last five years in Turkey has been assessment with statistical technique including Mann-Whitney U test for two samples.

2. Mann-Whitney U Test for Two Samples

The Mann-Whitney U test for two independent samples is employed with ordinal data in a hypothesis testing situation involving a design with two samples. The Mann-Whitney U test is based on the following assumptions (Sheskin, 2000; Sprent and Smeeton, 2001):
-   The two samples or sample pairs are independent of one another;
-   The original observation values in the sample pairs are subsequently ranked;
-   The underlying distributions from which the samples are derived are identical in shape.

Hypotheses for each of the sample pairs are derived from these assumptions. Null hypothesis (H_0) claims that the sample 1 (θ_1), and the sample 2 (θ_2) represent the same population. Alternative hypothesis (H_1) claims that the sample 1 (θ_1) and the sample 2 (θ_2) do not represent the same population (Canyurek and Asan, 2001). The following protocol is used for the Mann-Whitney U test for two samples:
-   All observation values within sample pairs are arranged in order of magnitude;
-   Each observation value is assigned a rank;
-   If two or more observations have the same value, the average of the ranks involved is assigned to all observation values tied for a given rank;
-   Once all of the observations have been assigned a rank, the sum of the ranks for each of the sample pairs is computed;
-   After determining the sum of the ranks for both sample pairs, the values U is computed employing equation 1.

$$U = (n_1 \times n_2) + \left(\frac{n_1 \times (n_1 + 1)}{2} \right) - \sum R_1 \qquad (1)$$

where n_1 is the number of observations in sample 1, n_2 is the number of observations in sample 2, $\sum R_1$ the sum of the ranks for sample 1.

Interpretation of the test results; the smaller of two values is determined as the computed U statistic value. The value of U statistic is evaluated in accordance with the table of critical vales for the Mann-Whitney U test for two samples $(U_\alpha; n_1; n_2)$.

3. Case Study

As described by Mann-Whitney U test for two independent samples protocol, year pairs of natural stone exportation price ($) in Turkey were formed for four separate probabilities for five years' and the hypotheses were established. These data were obtained from Url-2.

The hypotheses for the natural stone exportation price ($) of the 2004 and 2005, 2005 and 2006, 2006 and 2007 or 2007 and 2008 year pairs are presented below.

H_0 : Year pair is identical in terms of the years.
H_1 : Year pair is not identical in terms of the years.

The total number of the exportation price ($) collected for five years is 95. The numbers of exportation price ($) for the years of the 2004, 2005, 2006, 2007 and 2008 were taken as $n_{2004}=19$, $n_{2005}=19$, $n_{2006}=19$, $n_{2007}=19$ and $n_{2008}=19$, respectively. Then, U statistical value for each year pair was calculated by using equation 1 and U statistical value was determined as shown in Tab. 1.

Table 1. Evaluation of U statistic for years

Year pairs	$U_{(0.05;19;19)}$	U-Statistic	Remarks
2004 - 2005	124	164.00	H_0 accepted
2005 - 2006	124	180.00	H_0 accepted
2006 - 2007	124	168.00	H_0 accepted
2007 - 2008	124	175.50	H_0 accepted

As presented in table, the evaluated U statistical value was compared with the critical value in Mann-Whitney U statistical table ($U_{(0.05;19;19)}$). As all the U statistical values calculated were higher than the two-tailed

critical value, the hypothesis zero was accepted. H_0 hypotheses were supported with 95% confidence interval as well. Therefore, the H_1 were rejected. As a result, it was determined in statistical terms that those five years were identical in terms of exportation price ($) for natural stone. Among the exportation price, five years were found to be similarities of these years. Thus, the fig. 1 is supported the Mann-Whitney U test for two samples results.
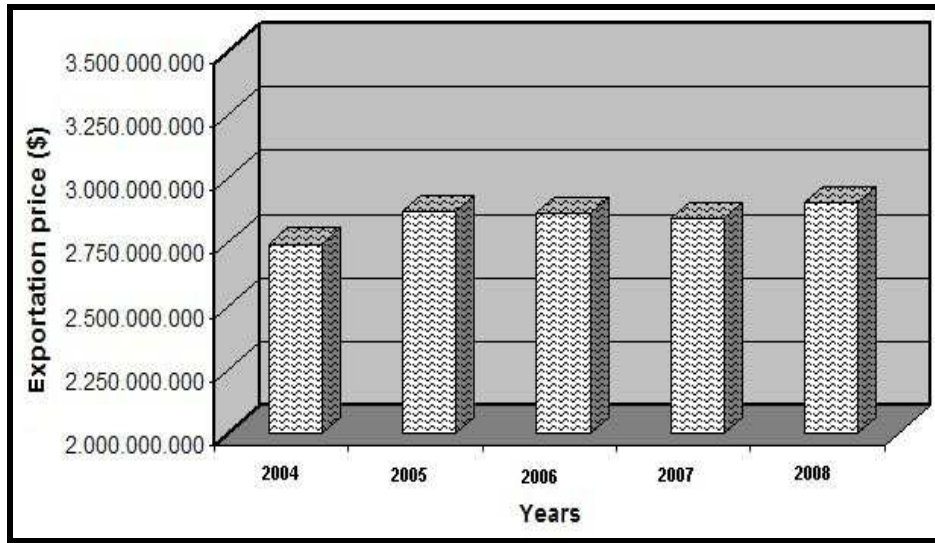

Figure 1. Exportation prices of natural stone in Turkey

4. Conclusion

In this study, it was shown that the identicalness of the years (2004-2008) in natural stone exportation price ($) could be determined by using Mann-Whitney U test for two samples. After, these years were applied block diagram for investigated development trend. As a result of the block diagram of the years were supported by Mann-Whitney U test for two samples. In conclusion, it was determined that Mann-Whitney U test for two samples technique and block diagram could be used as an efficient analysis technique for determining the similarities or dissimilarities of the years.

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