E-banking products and services for agribusiness based eco-economy, with ways “from the farm to the fork” in forecasting the developed and developing countries on period 2020-2050-2100

Alexandru T. BOGDANβ, Brîndușa COVACIα, Violeta SIMIONβ, Denis L. DIACONESCUβ, Dan ṬEPUŞ, Sorin CHELMUβ, Doru GABORβ, Amalia-Geanina STRĂTEANUβ

β Romanian Academy, INCE, Centre of Studies and Researches for Agrosilvicultural Biodiversity, Bucharest, ROMÂNIA
α Center for Risk Studies in Economy and Social Sciences, Wien, AUSTRIA

Abstract: Before starting discussing about electronic banking services, we must believe of the revolution of electronic banking concept in rural area. The big challenge of the present is to render the power of the green concept in the context of e-economy development, especially e-banking. In this circuit the people of the future, the inhabitants of the farms and small villages, should be able to use a payment method for all the services. Commencement of electronic banking involves high costs, especially in developing countries. Getting a brand (brand) of trust this is very expensive and involves costs for commercial advertising, and in addition, high costs to purchase technology. However it is imposed for social development of electronic banking product development and not just in large urban communities, but also to rural and small urban areas too. This is required by the disparity between electronic banking culture in cities and representation of it in rural areas. This disparity needs a national, regional and global plan for developing rural area because the population of the world is increasing meaning the need for food is increasing; as we know the food is made in rural area, especially growing the livestock – this is the reasons for developing rural area. Beyond their direct role in generating food and income, livestock can be a valuable asset, serving as a store of wealth, collateral for credit and an essential safety net during times of crisis. Livestock are also central to mixed farming systems. Demand for livestock products in the future could be heavily moderated by socioeconomic factors such as human health concerns and changing socio-cultural values. There is considerable uncertainty as to how these factors will play out in different regions of the world in the coming decades [4]. The paper is divided into two sections. The first part makes a short presentation of the electronic banking products in general and then in rural area and the second part is a short description of the livestock production effect on food security at a global level through the analysis of official statistic data on the evolution of livestock production up to the present as well as an incursion into world data regarding events forecast by experts from FAO, OECD and other known research institutes for alimentary security at a global level up to 2050 and 2100. In the paper are presented new concepts, terms, and methodological schemes about sustainable development of rural farms. This paper presents useful information on electronic banking, and trend information on electronic banking in rural areas in order to develop this area.

Keywords: network rural e-banking, global rural e-banking, green e-banking, green business e-banking, agrifood e-banking, agrituristic e-banking, livestock production between 2010-2100, sustainable rural bioeconomics, new ecobioeconomics paradigm

1 Introduction
Remote Banking, conducted by electronic means (electronic banking) have begun to develop since 1995, when the bank U.S. Presidential Mariland Bank launched its first banking services Internet. In mid 2004, over 17% of Americans use the services electronic banking (e-bank). Currently, electronic banking services are used, in particular, Europe: 48 million Europeans, compared to 21 million Americans or 20 million Japanese. In 2004, nearly 16,000 financial institutions around the world offer electronic banking for now to be over 137,000 financial institutions [9]. Electronic banking services using computer and electronic technologies that support payments transfers and other documents. By using Personal Computer Banking is not necessary that you go to the bank to raise your bank statements to make payments in domestic or currency and to verify that borrowers have honored their obligations. All of these may be made to the office via computer. In addition, service Personal Computer Banking is available 24 hours from 24 / 7 week. Electronic banking is banking that can be made available to individuals and companies by a bank which means electronic part, generally via a fixed or mobile and Internet [12]. These services
allow the total or partial a bank account made by the account holder, the account may be the current time or the card without needing to move to counter the bank account holder. Electronic banking services to access various banking and financial account information, in general, and allow transfers of funds and making payments account. Account holders can access these services if it is recorded in the receiving bank for this purpose and, after accepting the way unique identification (name, password, PIN - Personal Identification Number - expressions control, special equipment, etc.), to allow safe use of services [10].

In order to sustain the global rural area development, because the future is built in this area, it is necessary to resolve the disparity between this area and urban area in a lot of sector, including electronic banking. As Bogdan subscribe [2], this disparity needs a national, regional and global plan for developing rural area because the population of the world is increasing meaning the need for food is increasing; as we know the food is made in rural area, especially growing the livestock – this is the reasons for developing rural area. Beyond their direct role in generating food and income, livestock can be a valuable asset, serving as a store of wealth, collateral for credit and an essential safety net during times of crisis.

2 Concepts about electronic banking
In general, electronic banking can be classified into two categories: providing information and making payments and fund transfers. The electronic banking are provided information on bank account and general financial and banking information, such as those relating to exchange rate, current interest or fees, ATM network, the overall utility. Information about account concerns: the value of the current account balance, history of transactions and account statements situation. Transfers of funds from the account may be intra-bank transfers (account is receiving the transmitter with the same bank account) or interchange. Following registration approval, the computerized system of the bank (CSB) is recorded in list of those who have the right to access and provide a method of identification will be used by the applicant at the time of service call. In general, identification is via username and password, but there may be other methods, such as allocation of PBN (Personal Banking Number; useful when access to services is performed through several access channels to choose from), together with a PIN, the connection to computer internet access a smart card reader for identifying or providing a small safety device (token) that generates a code recognized by the bank’s server, code that is read from the device and introduced solicitant. The solicitant will pay for these services through a monthly subscription, which includes providing various information services that can be added fees some services, such as payments.

Electronic banking services are implemented by specific applications e-bank in your own CSB (programs, procedures) or, if the card accounts in CMS (Card Management System) bank. These applications receive service request, identifies the applicant, made a requested service, send a response message to the applicant and keep a record of the transaction. Applications of electronic banking can be developed even by the bank or may be purchased from suppliers specialized. If Internet access, telecommunications connections are secure (SSL-Secure Socket Layer), and if a connection via mobile phone messages can be encrypted.

General terms to describe the most frequent Internet Banking, Home Banking and Mobile Banking are taken from English; they do not designate the same think for each bank and often overlap with other terms such as Remote Banking, Online Banking, PC Banking, Electronic Banking, Telephone Banking, Web Banking (bank’s website) [11].

3 Electronic banking in global rural areas
The electronic banking system in rural areas also brings new issues and challenges, such as the imbalance between the capacity and workload. For instance, Rural Bank Online of Australia currently has about 750 customers who signed up for the Electronic banking services with about 1200 total accounts. While the online services save customers time and effort, the bank discovered that offering Electronic banking services is very labor concentrated on the administrative end. That is, though the inputs from traditional teller services are cut in a big way, the transactions must still be processed right along from the teller stations. Another challenge is about how to keep its traditional high quality services into its new electronic banking system. Being in the service industry forces the bank to compete using higher quality and greater levels of customer service. The quality of bank services is highly dependent on the training and actions of each employee, due to the fact that most banking services offered from bank to bank are very similar, with only the customer service and employees differentiating them. As knowledgeable employees with accurate transaction skills are the key to the success of the bank, Rural Bank Online of Australia has worked closely with its
outourced online service provider to provide high quality electronic banking services. Currently, providing electronic banking services has not been viewed as a really high priority to the management of Rural Bank Online of Australia, as the bank believes that its electronic banking now is costing more than savings, so far has not significantly contributed to the banks success in the marketplace. On another hand, while the bank has been satisfied with its current electronic banking services, suggestions and recommendations have been made to improve and streamline the system: other issues that are within Electronic banking in rural areas were, the bank has asked for its main page to be updated more timely and formatted in a manner of more user friendly; a more persuasive promotion of the electronic banking should be conducted more regularly; a company-wide training and customer service for electronic banking initiatives should be implemented; the bank should integrate more services into electronic banking operations and search the areas where electronic banking operations could further cut its daily operating cost; the bank should provide more useful links on its electronic banking website to its business partners; the large ‘dead space’ of its current website should be used to add more eye-catching pictures to make it more appealing to consumers surfing the net; finally, the bank should consider to take over its website from its current online service provider and running it in-house, so that the bank could have total control of its website and be able to make necessary changes more quickly and effectively.

Since 2007 the World Bank is increasingly interested in developing knowledge-based economic in the regional local communities. Implementation of projects is aimed at reducing the digital divide and to support the information society. In this respect, World Bank supports a number of development projects especially in the countries in the developing world. The same idea, in Romania, has launched an extensive project in 2007 - the project due to lack of funds is not being implemented at full capacity. Projects supported under the developing countries mainly concern the development of Local Community Electronic Networks which are accessible to the general public and provide basic services and value-added for sustainable development: public services delivered electronically assisted education computer, business management by computer, and make grants to encourage small and medium business development and technology. Competitiveness can be defined at the corporate or individual level, but must take a step forward in defining competitiveness in the communities. Projects of Knowledge Economy implemented in developing countries will contribute to creating competitive communities in Romania, which will be used generally to their advantage and benefit local development, in particular, the benefits of accession to the various unions and global society. The most important electronic bank coordinated development in rural areas is a good Internet connectivity to local communities: 77% no of subscribers to analog cable networks in urban area and 23% in rural area. Better internet connectivity is a powerful tool for stimulating rapid economic recovery, with eco-economic impact.

European Commission describes how it intends to use their own support programs to boost Internet networks and services in rural areas and invites Member States to do likewise. The approaches are, therefore, made at least in the European Community. A good Internet access can reduce the degree of isolation and enhance the competitiveness of farms and rural companies, especially small and medium enterprises (SMEs) in that it provides access to international markets faster and more efficient ways of doing business. Meanwhile, the European Parliament and the Council are discussing a Commission proposal aimed at making available an additional amount of EUR 1 billion through the European economic recovery for broadening access to high speed Internet in less developed regions of Europe. The main aim of the proposal aims to develop rural areas in terms of their becoming more prosperous and full of life to help everyone make the best of modern technology.

Broadband is an indispensable tool for businesses in rural areas, especially for SMEs, which depend on a high speed connection to the rest of the economy. The European Council help the countries in ensuring that these businesses are not through a strong signal in favor of broadband for all Europeans. Although, on average, 93% of Europeans can have access to high speed internet connectivity in rural areas the figure is only 70%, and in some countries (such as Greece, Poland, Slovakia, Bulgaria and Romania), networks of high-speed broadband serve no more than 50% of the rural population. In a communication adopted by the Commission describes the benefits of better access for rural areas to modern information and communication technologies, such as the Internet, can bring companies and individuals in rural areas such as farms and food producers. For example, 80% of Swedish farms already have Internet access, a third of them using the internet daily (also, one third use the Internet to submit applications for EU support). In other regions, however, such as Tuscany (Italy)
and Hungary, only a quarter of farmers use the Internet, which means it is more difficult to plan production, pricing and market products access to international markets, to check weather or to establish cooperation agreements with other market players. Farmers are not only deprived of the benefits of this technology: throughout Europe, only 22.5% of rural residents use e-government services such as filing tax returns, compared to 32.9% in urban areas. Therefore, the Commission calls on Member States, regions (including local authorities) to consider adapting their programs for rural development a priority in order to give appropriate information and communication technologies and Internet connectivity, especially in the mid-term review rural development plans, which is scheduled to take place in 2010. In order to realizing all this is needed, as we reminded before, to develop the rural area because of the disparity between this area and urban area in electronic banking field. This disparity needs a national, regional and global plan for developing rural area because the population of the world is increasing meaning the need for food is increasing; as we know the food is made in rural area, especially growing the livestock – this is the reasons for developing rural area. Beyond their direct role in generating food and income, livestock can be a valuable asset, serving as a store of wealth, collateral for credit and an essential safety net during times of crisis. Livestock are also central to mixed farming systems. Demand for livestock products in the future could be heavily moderated by socioeconomic factors such as human health concerns and changing socio-cultural values. There is considerable uncertainty as to how these factors will play out in different regions of the world in the coming decades.

4 Forecasting of livestock production between 2010–2100 based on integrated rural bioeconomics and eco-economics

In this section we propose a project for developing agribusiness ways from the farm to the fork through developing livestock in order to sustain the rural populations and this area which will be the sustainable society for the future of the humanity. We consider it is obvious that any kind of forecasting or prospective study regarding the dynamic of agro-food production on a period of several decades (in our study the interval is 2010-2050-2100) must begin with the presentation of the population dynamic at global and regional levels. It is a known fact that population statistics is well establish on scientific basis and as such we will present graphics and tables with the dynamic of global population levels, on the basis of the highest bibliographical sources authorized by known scientific documentation.

World livestock production has been analyzed in parallel with the official statistical data regarding the consumption of agro food products and nutrients respectively, as forecast up to 2050–2100 and correlated with population growth, production and consumption demands for vegetal and animal food products, level of poverty and risks on other vulnerabilities: economic, social, environmental, reduction of natural resources, pollution, atmospheric emissions, all correlated with farm production, etc. The analyses made are characterized by: comprehensiveness, reproducibility, certitude and consistency. Average annual rates of population change show that Africa has experienced considerably faster growth than any other major area, for most of the 1950-2000 periods. Growth rates reached a higher peak in Africa (2.86%) than anywhere else—in the early 1980s, at least 15 years after growth had begun to decline in every other major area [3].

Fig. 2. Regression curve to describe the dynamic of milk consumption for developing countries (correlation calculate by our working group coordinated by Bogdan A., using data base on The State of Food Insecurity in the World, 2004)

Fig. 3. Innovating project regarding the business center for rural sustainable development, based ecobioeconomy, for the most priority strategic national project and integrated through recently objectives of Lisabona 2020
5 Conclusions and future research

There will be significant progress in raising food consumption levels and improving nutrition. There will be significant reductions in the relative prevalence of undernourishment (percent of population affected), but these will not be translated into commensurate declines in the numbers undernourished because of population growth. Reduction in the absolute numbers of undernourished is likely to be a slow process. The number of undernourished in the developing countries is not likely to be halved by 2015 and further in the rest of the projection period.

The projected slow progress in reducing undernourishment will reflect the inadequate progress of many countries towards rapid economic development and poverty reduction. However, empirical evidence suggests that in the countries with high dependence on agriculture, assigning priority to the development of food production holds promise of overcoming the constraint to better nutrition represented by unfavorable overall economic growth prospects. This prospect underlies the projection that the countries with long histories of stagnant food consumption levels and high undernourishment could make some progress in the future. Poor agricultural resources may represent a serious obstacle to such prospects, particularly in countries with high demographic growth. Despite this slow pace of progress in reducing the prevalence of undernourishment, the projections imply a considerable overall improvement. In the developing countries the numbers of well fed (i.e. not classified as undernourished according to the criteria used here) could increase from 3.9 billion in 1999/01 (83% of their population) to 5.2 billion in 2015 (90% of the population), to 6.2 billion (93%) in 2030 and to 7.2 billion (96%) by 2050. That would be no mean achievement. In conclusion, in many countries, including some of the more populous ones, the relative prevalence of undernourishment (percent of the population) will decline significantly. Fewer countries than at present will have high levels of undernourishment, none of them in the most populous class. The problem of undernourishment will tend to become smaller in terms of both absolute numbers affected and, even more, in relative terms, hence it will become more tractable through policy interventions, both national and international.

The livestock sector plays a crucial role in the provision of global public goods and services. There are opportunities to alleviate many of the risks associated with the expanding sector and to develop its full potential in ensuring benefits for the poor with a gender equality perspective, and to encourage a more responsible use of increasingly scarce inputs and natural resources. This will require dynamic generation and adoption of new technologies, products and services as well as networks and institutional development within an enabling policy and regulatory environment. The vigorous growth of the livestock sector, its importance for income
generation, food security, human nutrition and health, and its impact on various public goods and services require careful attention by the international community.

EU tackles discrepancy between urban and rural areas in terms of broadband Internet through rural development policy - which is part of the Common Agricultural Policy. Member States and regions can spend EU funds for modernizing, using new technologies, training, caring environment, setting up new companies and basic services in rural areas. In addition, under the EU Cohesion Policy for 2007-2013 to spend nearly 15 billion priorities in information and communication technologies, e.g. electronic public services and Internet infrastructure. Some of this money will be used for rural areas. On 28 January 2009, the Commission, in accordance with European Council conclusions of December 2008, proposed to earmark € 1 billion extra spending for investment in broadband services, in its proposal for European economic recovery plan in order to achieve 100% coverage of broadband Internet in Europe (MEMO/09/35). In addition to a communication adopted on better access to modern information and communication technologies for rural areas, the EU Commission is organizing a conference on broadband services in Turin (Italy) on 2-3 April 2009. This event will bring together the Commission, national and regional authorities and other stakeholders to discuss increased EU investment in broadband services within the EU recovery plan and policies will help achieve 100% coverage of the services broadband in rural areas.


References: