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ERENET AUTOMN MESSAGE

Distinguished Readers and Friends,

COVID-19 (Coronavirus) has affected day to day life and is slowing down the global economy. This pandemic has affected thousands of peoples, who are either sick or are being killed due to the spread of this disease. This virus is spreading exponentially region wise. Still we do not have vaccine, this is why more and more people dye whether they are old or young.

Day by day more and more people – simply citizens, exerts and journalists – are convinced, that COVID-19 is not a pandemic, rather a planned world-scale operation. The US Secretary of State, Mike Pompeo made a remark, that COVID-19 is a real-time testing of a carefully prepared strategy. Only our Lord knows what is the truth behind this scenario. However, one is sure, that suck kind of desease do not occurs by spontaneously.

Globally, as of 2:43 pm CEST, 6 October 2020, there have been 39 596 858 confirmed cases of COVID-19, including 1 107 374 deaths, reported to WHO.

Presently the impacts of COVID-19 in daily life are extensive and have far reaching consequences. According to an NCBI paper – see at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7147210/> - these can be divided into various categories:

HEALTHCARE

- Challenges in the diagnosis, quarantine and treatment of suspected or confirmed cases
- High burden of the functioning of the existing medical system
- Patients with other disease and health problems are getting neglected
- Overload on doctors and other healthcare professionals, who are at a very high risk
- Overloading of medical shops
- Requirement for high protection
- Disruption of medical supply chain

ECONOMIC

- Slowing of the manufacturing of essential goods
- Disrupt the supply chain of products
- Losses in national and international business
- Poor cash flow in the market
- Significant slowing down in the revenue growth

SOCIAL EFFECTS

- Service sector is not being able to provide their proper service
- Cancellation or postponement of large-scale sports and tournaments
- Avoiding the national and international travelling and cancellation of services
- Disruption of celebration of cultural, religious and festive events
- Undue stress among the population
- Social distancing with our peers and family members
- Closure of the hotels, restaurants and religious places
- Closure of places for entertainment such as movie and play theatres, sports clubs, gymnasiums, swimming pools, and so on.
- Postponement of examinations

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PAPERS

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LESSONS FROM THE PANDEMIC: STRENGTHEN NEIGHBOURHOOD SELF-DEPENDENCY THROUGH SMEs ¹

ABSTRACT

The Covid-19 lockdown-induced supply side disruptions highlight the need for developing a robust manufacturing and agriculture production for each region. The Gandhian development approach and the concept of rural self-sufficiency emerge relevant in this context. Development approach based upon the concentration of manufacturing and production in a few industrial hubs is weakening the small and medium enterprise sector, whose strength lies in catering and providing for the local markets and ensuring that the needs of the neighbourhood markets are taken care of. Strengthening SMEs and their capacity to produce and meet the needs of local-neighbourhood economies is critical to rebounding from the current crisis. In this context governments may consider introducing a local manufacturing policy with significant role for local government institutions to manage essential goods production by SMEs operating in its jurisdiction.

Keywords: SMEs; regional development; International trade; policies;

JEL Classification: R1, R5, O240, F63, O180

The pandemic-induced lockdown around the world underscores the need to revisit the current economic development approach based upon the concentration of manufacturing and production in a few industrial hubs. This approach is weakening the small and medium enterprise sector, whose strength lies in catering and providing for the local markets and ensuring that the needs of the neighbourhood markets are taken care of.

Strengthening SMEs and their capacity to produce and meet the needs of local-neighbourhood economies is critical to rebounding from the current crisis. A balanced development and overall progress of all regions with a focus on essential goods production within each region seems to be the main takeaway from the Covid-19 pandemic.

Self-dependent neighbourhoods vs globalization

With governments around the world imposing lockdown and social distancing, the post- Covid pandemic world has to accept the role of small enterprises in ensuring the smooth supply of essential commodities during all kinds of emergencies and the need for developing a self-dependent neighbourhood economy rather than global supply chain driven operations and import dependence.

While MSMEs compete for a share in global market, it is critical that products and services are available for local consumption. During the Covid-19 induced lockdown, local markets in several regions around the world faced shortages due to supply chain disruptions, particularly in areas where little manufacturing and agriculture

¹ This is an updated version of an article published in Global SME News titled Time to revisit MSME Reservation policy, 26 April 2020, <http://globalsmenews.com/time-to-revisit-msme-reservation-policy/>

cultivation happens. Across the global value chain, from manufacturers and distributors, down to consumer- and packaged-goods companies and retailers alike, all faced its fall out and consequences. (Felix, et al., 2020)

The Covid-19 lockdown-induced supply side disruptions highlight the need for developing a robust manufacturing and agriculture production for each region or locality. The Gandhian development approach and the concept of rural self-sufficiency emerge relevant in this context. (Bhuimali, 2004;Gosalia, 1979) A more decentralized manufacturing strategy is the need of the hour, which calls for a reducing dependency on global manufacturing hubs. Similar lockdowns can happen again, where there can be major disruptions in supply chains. While interdependence between different regions of the world will remain, local self-reliance with regard to consumer goods, essential medicines and food products need to be strengthened.

Although the lockdown proved to be a boon for E-Commerce businesses, orders were often delivered late. In many cases, E-commerce companies even refused to accept orders. If the supplier is in the same region or where the trucks and courier is still in operation, the delivery was smoother. But when the product had to arrive from another region/state or a country there was a major disruption in delivery. In some cases, interstate- intra-regional truck movement too, was affected.

Here comes the need for strengthening local self-reliance. Village micro and cottage industries as well as small enterprises contribute by way of supplying goods to the local markets, but they often encounter several challenges in their operations: lack of demand, competition from cheap imported products, high labour costs and power disruptions are just a few.

High dependency on global manufacturing hubs

There is a high level of manufacturing concentration in certain pockets of the world. Just for instance, China leads the world in terms of manufacturing output, with over \$2.01 trillion in output, followed by the United States (\$1.867 trillion), Japan (\$1.063 trillion), Germany (\$700 billion), and South Korea (\$372 billion) (West & Lansang, 2018).

The Covid-19 pandemic has exposed the practical issues related to such high concentration of manufacturing in a particular region alone. During the time of emergencies these become more evident, more so during the kind of shortages witnessed during the lockdown.

In the case of Indo-China economic relationship, India depends heavily on China for the supply of a wide range of products, from simple ones like nails/tacks and umbrellas to sophisticated electronic products and pharmaceutical intermediates. (Dhar & Rao, 2020) The following table shows the dominance of China, US and Japan in the global manufacturing output.

Top 10 manufacturing destinations

Country	Manufacturing Output (USD in billions)	Percent of National Output	Percent of Global Manufacturing
China	\$2,010	27%	20%
United States	1,867	12	18
Japan	1,063	19	10
Germany	700	23	7
South Korea	372	29	4
India	298	16	3
France	274	11	3
Italy	264	16	3
United Kingdom	244	10	2
Taiwan	185	31	2

Source: UNCTAD 2015; Brookings Report, Global manufacturing scorecard

With repeated cases of zoonotic diseases and the latest Covid-19 pandemic, the need to have more local self-sufficiency of essential products is being understood. The local production of fruits and vegetables, food processing units, consumer goods and essential medicines and many other products can be done within a region. The supply shock that started in China in February and the demand shock that followed as the global economy

shut down exposed vulnerabilities in the production strategies and supply chains of firms just about everywhere. Temporary trade restrictions and shortages of pharmaceuticals, critical medical supplies, and other products highlighted their weaknesses. (Shih, 2020)

Reservation of products for manufacturing in small scale sector

In this context, it is appropriate to mention the reservation policy that existed till recently for production within small scale industries. The Industries (Development and Regulation) Act which statutorily comprised a reservation policy covering products for exclusive manufacture in the MSME sector, which was provided for in the Act. The Reservation policy was meant to ensure the increased production of consumer goods within the MSME sector. (DC-MSME, GOI, n.d.) Introduced in the year 1967 with 47 items, the list gradually expanded to include more than 800 items. This policy had a legal backing when the Industries Development and Regulation Act 1951 was amended in March 1984, empowering the Government to reserve items.

As a result of improved balance of payment situation, India was under obligation to remove quantitative restrictions (QRs) by 1st April 2001. (DC-MSME, GOI, n.d.) India removed QRs on over 700 items in 2001 after it lost a case in WTO against the US which had challenged these restrictions on import of large number of industrial and agricultural items. (Economic Times, 2010) Keeping up with the trend of liberalization and reforms, the government abolished the Small Scale Sector Product Reservation Policy by 2015 (DIPP, 2015). This policy was helpful and acted as a protective measure for the sector and helped large scale enterprises and corporates from encroaching into the MSME space.

In the seasons of pandemic, which may be more frequent in the upcoming days as points out in the UNEP report (2020), there is a strong case for developing a robust manufacturing base with a focus on essential goods and items that people consume on a day to day basis, essential products, consumer goods and food and beverages.

Local government institutions (LGIs) can play a role in this context and encourage small enterprises to make for their regions so as to make goods available for local communities. In this context, governments have to revisit their policies on protecting MSMEs.

With the small-scale sector primarily catering to local markets and regions, local government institutions and regional authorities such as grama panchayats and municipal governments can play a better role in protecting and promoting micro, small and village industries.

Also, the time has come to reintroduce a reservation policy for exclusive manufacturing in the MSME sector, with a focus on labour intensive technologies, to ensure local self-sufficiency and employment generation.

Suggestions for protecting MSMEs

- A new broad list of products needs to be identified for small scale sector manufacturing, that must be brought under reservation for exclusive manufacturing. Each local government in the region may be given authority to identify and decide upon products that are essential for that particular region, from that broad list.
- Each local government or regional authority may be authorized to formulate policies, promotional programmes, incentives and support for these lists of sectors/products which are in demand and needed for that region.
- Central government MSME schemes and programmes for the sector must be routed through LGIs in order to ensure better implementation.
- Technology relevant for the region and industries suited for the locality, with potential for job creation needs to be identified and encouraged at the local level.
- Mandatory procurement policy for retail shops from local manufactures: A reservation policy for retail shops in the region to procure and sell a certain percentage of products manufactured within that Panchayats or in the area falling under that particular regional government.

This approach will have the following advantages:

- More jobs within region itself
- Products that are in demand are promoted, therefore their availability is ensured.

- Mandatory procurement requirement from local manufacturers will ensure demand for local manufacturing industry.
- When people can find jobs within the region/local areas, migration in search of employment may come down
- Less global supply chain exposure and dependency on essential supplies from other destinations

To conclude, strengthening SMEs and their capacity to produce and meet the needs of local-neighbourhood economies is critical to rebound from the current crisis. While MSMEs compete for a share in global market, it is critical that products and services are also available for local consumption. The Covid-19 lockdown induced supply side disruptions highlight the need for developing a robust manufacturing and agriculture production for each region or locality. The Gandhian development approach and the concept of rural self-sufficiency emerge relevant in this context. Governments may consider introducing a local manufacturing policy with significant role for local government institutions to manage essential goods production for SMEs operating in its jurisdiction. Further, such a policy will ensure uninterrupted trade and availability of goods for consumption even when major disruptions occur.

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ROLE OF NGOs IN RURAL ECONOMIC GROWTH THROUGH MICRO FINANCE IN INDIA – A REVIEW ²**ABSTRACT**

Non-governmental organizations (NGOs) played an important role in rural economic growth, rural construction, and agricultural and rural development even during pre-independent era in our country. Also, in the post-independent period the NGOs became an alternative agency for the development activities of the Government. After the introduction of Microfinance through small agricultural credit, micro finance, self-help group (SHG) etc, the role of NGOs in rural economic growth and development is increasing mostly day to day. At present the NGOs are responsible for making micro finance through SHG, micro insurance, kisan credit card etc. are the largest programme in the world. This paper analyses the role of NGOs in rural economic growth and development through micro finance. The study reports that NGOs are playing an important role in the formation of SHGs and motivating rural women to join the group and linking the groups with various micro financial tools. The study makes the valuable contribution by providing a base to the micro finance for economic growth and development through NGOs.

Keywords: non-governmental organizations (NGOs), growth, development, agency, microfinance, self-helps groups

JEL Classification: F35, G21, G21, L25, O16

INTRODUCTION

NGOs have their origin in non-profit based voluntary organizations and have been working in the World for centuries mainly in the developed countries. The voluntary organizations have contributed significantly in reducing poverty, deprivation, discrimination through awareness, social mobilization, service delivery and training, literacy programme etc. They are the effective non-political link between Government and people. NGOs are playing an important role in the formation of self-help groups with rural women and motivating them to join in SHG for marketing of micro insurance among marginal peoples, awareness programme for primary education to rural child, health and nutrition, environment awareness etc. NGOs are committed for the upliftment of rural and urban poor, marginal people, under privileged, impoverished and they are close and accessible to their target groups. NGOs are flexible and independent functioning operation, prompt in decision-making, mass people concerned driven by social and humanitarian values and principles.

The NGOs are expected to convince and support SHGs in rural economic growth and development to motivate the rural people to organize themselves and to form into SHG; to help the SHG in identifying raw materials and local resources; to help the group members to upgrade their skills and technology to make best use of resources; to make available credit facilities and to act as a link between the rural poor and the bank and ultimately to act as friend, philosopher and guide to the SHGs.

OBJECTIVES OF THE STUDY

The study had the general and specific objectives as follows:

² Secondary issue from

https://www.academia.edu/31857564/Role_of_NGOs_in_Rural_Economic_Growth_through_Micro_Finance_in_India_a_review

A. General objective: The objective of the study is to determine the role of Non-Governmental Organizations (NGOs) in rural economic growth through micro finance.

B. Specific objectives: (i) Identify the existing status and services of Micro finance in India (ii) Establish the challenges faced by NGOs in micro finance transactions (iii) Identify ways of improving the access to and utilization of micro finance services to rural people.

Literature review

Dr. Rajendran (2014) showed that Non-governmental organizations play an important role in helping rural women to form Self-help groups and they motivated women to join Self-help groups. Approximately 55% of the respondents informed that Non-governmental organizations helped them to form Self help groups. It is concluded that NGOs and self-motivated women are the main motivational factors to join SHGs and Self help group members also influence other women to join the groups. Dr. M Rama Mohan Rao and M Pathania Biswas (2014) showed that the Indian micro finance sector has grown up rapidly during the first decade of the twenty first century. A lot of changes have been seen during the last ten years on how the MFIs function. SBLP has also grown exponentially and is considered as the single largest micro finance programme globally. However, in this case for growth and expansion the essence of micro finance as a programme for reaching the poor and excluded lost its focus. Dr. D Aravazhi & S. Porkodi (2013) showed that the micro finance institutions are an integral part of financial inclusion and instrumental in providing “last mile connectivity”. They concluded that financial inclusions would be real and successful only when the small, marginal and landless laborers have unhindered access to the financial services like savings, micro credit, and micro insurance and remittance facilities. Susy Cheston (2002) has examined that micro finance has the potential to have a powerful impact on women’s empowerment. Although micro finance is not always empowering for all women, most women do experience some degree of empowerment, as a result. Empowerment is a complex process of change that is experienced by all individuals somewhat differently. Cheston & Kuhn (2004) has concluded that micro finance programme have been very successful in reaching women. This gives micro finance institutions an extraordinary opportunity to act intentionally to empower poor women and to minimize the potentially negative impacts some women experiences. Eoin Wren (2005) has examined that micro finance creates access to productive capital for the poor that together with human capital, addressed through education and training and social capital achieved through local organization building, people to move out of poverty. Linda Mayoux (2006) has examined that micro finance programs not only give women and men access to savings and credit but reach millions of people worldwide bringing them together regularly in organized groups. Dr. Jyotish Prakash Basu (2006) has explained that the two basic research questions. First, the paper tries to attempt to study how a woman’s tendency to invest in safer investment projects can be linked to her desire to raise her bargaining position in the households. Second, in addition to the project choice, women empowerment is examined with respect to control of savings, control of income, control over loans, control over purchasing capacity and family planning in some sample household in Hooghly district of West Bengal. Mohammad Anisur Rahaman (2007) has examined that about micro finance and to investigate the impact of micro finance on the poor people of the society with the main focus on Bangladesh. Chintamani Prasad Pattanaik (2012) has examined that micro finance seems to have generated a view that micro finance development could provide an answer to the problems of rural financial market development. Bipasha Baruah (2007) has critically analyzed the experiences of MHT and SEWA Bank in partnering with the state, the private sector, funding agencies, urban local bodies and other NGOs in developing and delivering housing, water and sanitation programs for low-income urban families living in slums. . She has made also recommendations that would enable different actors to play an optimal role in partnerships designed to improve the living and working conditions of the poor. Bipasha Baruah (2015) has concluded that NGOs could play important roles as intermediaries between beneficiaries, governments, and international relief and donor organizations on post-disaster rural reconstruction projects. Ishrat Jahan and Md.Mamun-ur-Rashid (2015) has analyzed both monetary and social impacts of RDS microfinance and arrived at a general conclusion that this grossly has a remarkable impact on selected socio-economic aspects of the women beneficiaries Neelima Kumari (2013) has explained SGSY scheme which focuses on Group approach by organizing the poor into self help groups (SHG) through social mobilization process. Against this backdrop of this programme, the SGSY’s guidelines emphasis on the role of NGOs and their significant participation in mobilizing people and to creating awareness among the people for the successful implementation of the SGSY schemes. Dr. R Uma Devi (2013) has established the important roles played by NGOs against poverty through micro finance, capacity building, self-reliance, peace building, sustainable community development and specially women’s empowerment all-aiming at poverty alleviation. Mohammad A. Razzaque (2010) has made an attempt to overcome the issue i.e. the effectiveness of micro finance

in reducing poverty. Assessment of micro credit intervention is often flawed by the shortcomings associated with the data and empirical methodologies employed that fail to tackle such issues as non-random participation and self selection programme participants influenced by their unobserved characteristics. Dr. Suresh Kumar (2009) has focused on the determinants of participation in Self-Help Groups (SHGs) and its impacts on household welfare. The participation in SHG activities is influenced by various household level and contextual factors. The results of this study support that the public policies geared towards increasing women's participation in SHGs generate substantial income and have significance in household welfare.

Role of NGOs in Providing Microfinance

NGOs and their networks have a crucial role to play in microfinance because:

- i) NGOs have influenced central banks to take a broader, less formal approach to the regulation of MFIs, in areas such capital requirements.
- ii) NGOs also promote benchmarking and transparency among peers.
- iii) NGOs are often more creative in how they establish and fund Micro finance banks.
- iv) NGOs recognize that best practice requires a business approach but NGOs are able to provide grant funding to 2 Tier and 3 Tier micro finance institutions to enable them to migrate to the stage of being able to receive equity and wholesale debt.
- v) While they must compete in terms of funding, NGOs are often more prepared to set up discussion groups or conduct research projects, to the benefit of the industry as a whole.

Role of NGOs as promoter

- i) Act as linkage -SHG and Banks (Grameen bank, Co-operative bank or Co-operative societies)
- ii) As promoter of SHG empowered model among villagers
- iii) As monitor intra-group credit and savings behavior
- iv) As promoter of Co-operatives or Federation
- v) As a corporate agent of General insurance or Life insurance
- vi) As an agent of micro insurance through Gram panchayet and panchayet samity.

Role of NGOs as facilitator

- i) It has ability to fulfill capacity building, financial management, book keeping, audit with ensure ownership, self reliance of a co-operative
- ii) It may establish forward linkage with state Government, central Government and other departments
- iii) It has capacity to build strategies for empowerment and generating mutual trust and respect amongst groups.

How Micro finance helped rural economic development

The People of rural India are mainly depending upon agriculture and small business units like fishing, earning through domestic animals, small business units etc. They are not making the agriculture and business profitable because due to lack of monetary resources, poor experience etc. Only few people of rural India are using capital-intensive method to cultivate their lands. The most of the rural people are not sustaining in their small business for a long period of time due to insufficient fund available with them.

Microfinance in one of the important tools that plays a significant role in poverty elimination and economic development of rural poor. The need therefore, is to share experiences and materials, which will help not only in understanding success and failures but also, provided knowledge and guidelines to strong them and expand microfinance programme. NGOs may be in this case act as a chief promoter and facilitator. The Development process through a typical microfinance intervention can be understood with the help of the following chart. The ultimate objective is to attain social and economic empowerment. Successful intervention is therefore; dependent on how each of these stages has been carefully dealt with and also the capabilities of the implementing organizations in achieving the final goal e.g., if credit delivery takes place without consolidation of SHGs, it may have problems of self-sustainability and recovery. A number of Schemes under different banks, Central and State governments offer direct credit to potential individuals without forcing them to join SHGs. compilation and classification of the communication materials in the directory is done based on this development process.

NABARD-NGOs joint activities

Priyadarshini Programme:

NABARD is the Lead Programme Agency for implementation of Women Empowerment and Livelihood Programme in Mid Gangetic Plains, known as 'Priyadarshini Programme'. International Fund assists the programme involving a total outlay of US\$ 32.73 million for Agriculture Development (IFAD) and Ministry of Women and Child Development (MWCD), Government of India. It is being implemented in five districts of Uttar Pradesh (Bacharach, Rae Bareli, Shravasti, Sultanpur and Amethi) and two districts of Bihar (Madhubani and Sitamarhi). It envisages holistic empowerment of around 1.2 lakh rural poor women and adolescent girls through formation and nurturing of around 12,000 SHGs over a period of eight years. NABARD engaged resource NGO for the purpose of capacity building of the programme staff and field NGOs for implementation of the programme at the grass root level. A total number of 47 Community Service Centers, each covering about 200-250 SHGs, have been set up in the programme area. The field NGOs have formed a total of 9,129 SHGs as on 31 March 2014, of which, 6,861 SHGs have been savings linked and 3,071 SHGs credit linked. An amount of 394.81 lakh was released as seed capital to 3,122 SHGs. A total number of 3,020 training programmes on group dynamics, social issues, book keeping, skill development, life skill development, legal aid, gender issues, exposure visit within the State, etc, were conducted covering 79,813 SHG members. MWCD, Govt. of India, IFAD and Senior Management of NABARD review the progress under the programme regularly. Two funds viz., Innovation Fund and Community Asset Fund have been set up under the programme for promotion of community level institutions and livelihood activities. A sum of 32.05 lakh was spent out of the Innovation Fund as on 31 March 2014.

Rajiv Gandhi Mahila Vikas Pariyojana:

NABARD continued to support Rajiv Gandhi Mahila Vikas Pariyojana (RGMVP), a special initiative of the Rajiv Gandhi Charitable Trust (RGCT) for promotion and credit linkage of SHGs and formation of SHG Federations in select districts of Uttar Pradesh in association with participating banks. There were 1,05,996 women SHGs promoted under this programme till 31.3.2014, of which, 34,417 were credit linked. Further, 4,142 cluster level organizations and 115 block level organizations were also set up under the programme.

STATUS OF MICRO FINANCE IN INDIA – 2014-15

The Self Help Group Bank Linkage model is a shining star the galaxy of microfinance. The SHG programme in India is the world's largest microfinance programme by an enormous margin. It is potentially the best microfinance programme in the world for a variety of reasons and the key reasons for its success are its link with the poor people, its innovative practices, trust building at different levels between stakeholders and its capacity to enable people's participation in development. The SHG-BLP is also the largest coordinated financial inclusion programme and NABARD has always strived to broad base the ownership of the programme amongst different stakeholders like Banks, NGOs, and Govt. etc. It is not simply a loan interface with the poor but a holistic social contact programme with mutual benefit for the banks as well as the SHGs. This saving led model of microfinance is a successful empowerment tool which has covered almost 10 crore households in the country. It is also important to note that 86% of the groups are exclusively women groups, which are a big, push to the women empowerment programme. The SHG members have learnt how to become a good customer of banks. The important USPs of this programme are that NABARD has championed the programme taking other stakeholders as partners, developing savings habits, smoothening the systems for financial inclusion and meeting the financial deficits of the poor household and recognizing that though not all the members of the group will be entrepreneurs but most do need credit to meet their emergent requirements. NABARD has been a key architect of the Self Help Group Bank Linkage Programme (SHG-BLP) and the most important player in the development of the microfinance sector. It is playing a vital role in enrolling civil society organizations, NGOs and state government for social mobilization and encouraging the bankers to appreciate the business opportunities that exist. In this endeavor NABARD and SIDBI have extended support to the micro finance institutions who are also playing a significant role in this sector. The key object of NABARD has been to facilitate sustained access to financial services for the unreached segments of the population viz., the poor in rural through various products and delivery channels in cost effective and sustainable manner. Retrospectively, in the context of exclusion of

about 30% of the population from the outreach of banking sector. NABARD initiated a series of action research projects. Studies brought out the mismatches between the needs of the poor clients and the products in offer with the banking system. It also came up that what the poor really needed was a better access to the financial services and products rather than cheap subsidized credit. In this backdrop the SHG Bank Linkage Programme started from a pilot of linking 500 SHGs of rural poor more than two decades ago and has crossed 8 million groups. It has reached a number of milestones. A total number of 8 million SHGs have been formed and the programme boasts of group savings of 37,000 crores and credit outstanding of 51,545 crores. The SHG BLP model has thus emerged as the most successful model of reaching the unreached for financial services. Some of the initiatives of NABARD in this journey of two decades were creation of funds like Micro Credit Development & Equity Fund, Women SHG Fund, Refinance to banks, support for training and capacity building, support to partner agencies for promotion or nurturing SHGs. The other initiatives taken by NABARD are financing of Joint Liability Groups, skill development for Micro Enterprise Development (MED), supporting SHP is for maintenance of SHG books, mobile based e-book keeping, implementing special programmes like Priyadarshini, setting up of Centre for Microfinance Research, conducting studies, action research, etc.

Performance of NGOs comparing with other Agencies

The performance or trend of NGOs in micro finance activities for last three financial years compare with other agencies is showed as under:

Grant support to partner agencies (in lakh) (2013-2014)

Table No.1

Agency	Cumulative sanction up to 31-03-14 (amount)	Cumulative sanction up to 31-03-14(SHG Nos)	Cumulative achievement up to 31-03-14(amount)	Cumulative achievement up to 31-03-14(SHG Nos)
NGOs	23175.34	574866	7220.16	378890
RRBs	764.24	49800	195.81	46164
CO-OPT BANK	1416.98	83069	369.97	52501
IRVs	460.12	26883	82.27	11228
FARMERS CLUBS	40.63	2544	20.40	9832
PACS	397.45	8533	4.28	85
SHG Federation	28.61	250	1.85	46
Total	26283.37	745945	7903.74	498746

Source: NABARD Report for the year 2013-14

Grant support to partner agencies (in lakh) (2014-2015)

Table No.2

Agency	Cumulative sanction up to 31-03-15 (amount)	Cumulative sanction up to 31-03-15(SHG Nos)	Cumulative achievement up to 31-03-15(amount)	Cumulative achievement up to 31-03-15(SHG Nos)
NGOs	26583.53	598387	9362.86	434884
RRBs	1341.44	56148	261.00	43849
CO-OPT BANK	1030.15	67712	437.61	54012
IRVs	503.26	28910	85.09	12758
FARMERS CLUBS	45.00	5078	20.27	4464
PACS	593.21	13430	37.13	1522
SHG Federation	32.40	300	15.07	195
Total	30128.99	769965	10219.03	551684

Source: NABARD Report for the year 2014-15

Grant assistance extended to SHPIs as on 31-03-16
Cumulative position as on 31-03-2016(in lakh) (2015-2016)

Table No.3

Agency	No. of SHG sanctioned up to 31-03-16	Amount sanctioned	No. of SHGs promoted up to 31-03-16	Amount released up to 31-03-16
NGOs	650132	30475	458033	10308
NGO-MFI	0	0	0	0
RRBs	56048	1341	44344	324
CO-OPT BANK	68762	1072	55126	482
IRVs	29810	514	14084	88
FARMERS CLUBS	5098	41	1995	21
PACS	13430	593	1601	57
SHG Federation	300	32	195	15
Total	823580	34068	575378	11295

Source: NABARD Report for the year 2015-16

Regional distribution of MFI loans outstanding (%)

Table No.4

Region	2008	2009	2010	2011	2012	2013	2014
South	61	58	55	48	49	46	39
East	20	20	21	20	23	22	25
North	1	3	3	3	4	4	4
West	7	6	8	12	8	10	12
Central	9	11	9	13	10	11	15
North east	1	1	3	3	6	7	5

Source: Sa-dhan, MFIN

Challenges of NGOs

One of the major problems that face NGOs is lack of resources, both financial and human. Since most of the activities under taken by them are in the nature of extension work, they cannot become self-supporting. They are dependent for funds on the government, whose procedures are often slow and time-consuming, on foreign donor agencies and industries whose grants may not be available on regular basis. NGOs have also weaknesses that include (a) limited financial and management expertise, (b) limited institutional capacity, (c) low levels of self-sustainability, (d) lack of inter-organizational coordination, (e) small scale interventions (f) lack of understanding of the broader socio-economic context. The NGOs faced the challenges and issues of concern about micro finance are skewed growth of the programme in different regions, lack of approach of the banks, failure of subsidies of government, political patronage and the resultant pitfalls, lack of handholding support for livelihood activities, rising Non-Performing Assets (NPAs), sustainability issues and the need for seamless Management Information System. There have also been issues of poor quality of SHGs, multiple memberships, over financing and lack of oversight on the part of banks.

CONCLUSION

It is observed the above discussion that NGOs have emerged as a key player in the field of micro credit. They have played the role of intermediary in various dimensions including creating awareness within a community, developing resources and tools for communities, micro credit organisations and opportunities to learn about the principle and practice of micro finance. but at present time new opportunities and new challenges are felt in the field of micro finance. In recent years micro finance is in news for bad reasons. There are a number of suicide cases of micro credit clients all over India for excess interest charges and high pressure charge of recovery agents

in recovery of loans. It is hope that the government of India has brought out a legislation to check the high rate interest on micro credit and protect the marginal people from clutches of greedy MFIs.

Government of India introduced Micro finance institutions (Development and Regulation) Bill 2012 on may 22 ,2012 to establish a regulator under Reserve Bank of India to regulate and supervise the activities of NGOs and MFIs. The main features of the Bills are as follows: The bill allows the central Government to create a micro finance development council with officers from different ministries and departments. The bill requires all MFIs to obtain a certificate of registration from RBI. It is also responsible for redressal of grievances for beneficiaries of micro finance services. These initiatives may go long way in strengthening the micro finance status in India. Government cannot ignore its responsibility of social and economic development of poor and down trodden. In absence of any special skills with the clients of micro credit, the fund is being used in consumption and procurement of non-productive assets.

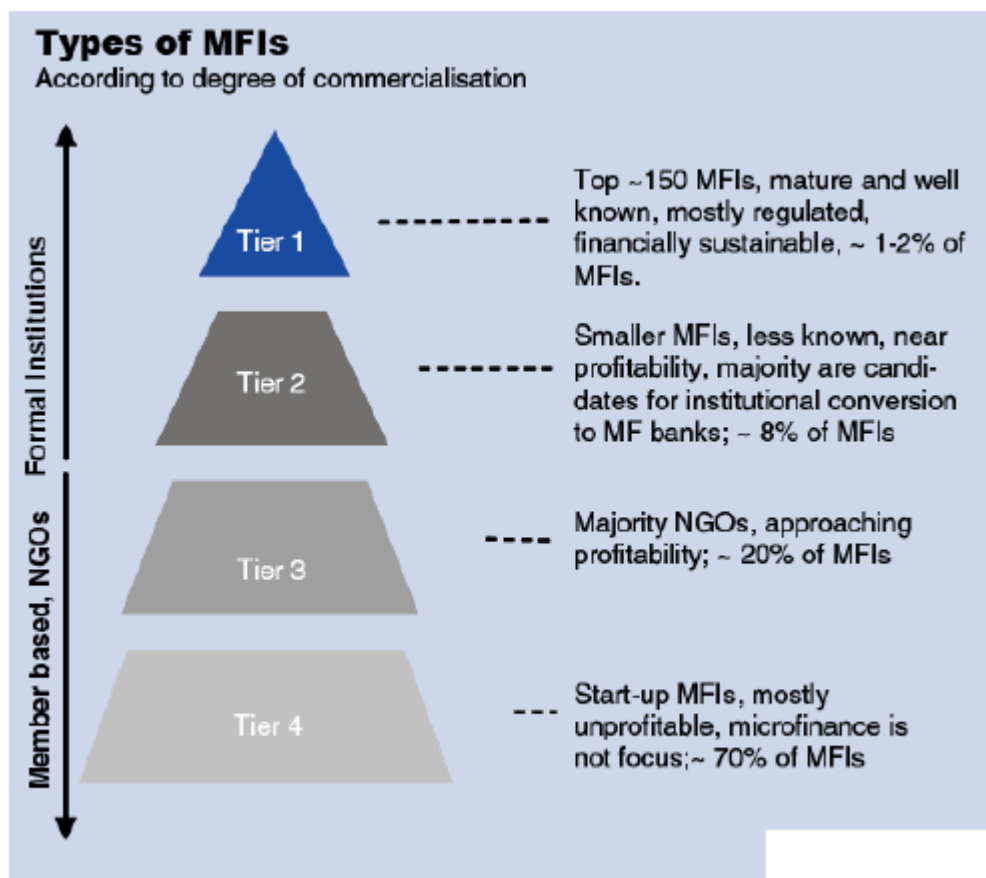
It is very important to provide skills development training program like handicraft, weaving, carpentry, poultry, goat rearing, masonry, bees farming, vegetable farming and many other agriculture and non-agriculture training. Government has to play active role in this context. People with some special skills have to be given priority in lending micro credit. If government, MFIs and all other agencies specially act together than micro credit can play a great role in economic growth in India.

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SUSTAINABLE ENTREPRENEURSHIP AND ITS VIABILITY - A CONCEPTUAL OVERVIEW FROM ODISHA ³

ABSTRACT

Purpose – The purpose of this paper is to analyse the drivers as well as Govt. Scheme operating towards sustainable entrepreneurial practices in MSMEs, operating in Odisha. The secondary objectives are to explore the relationship between these drivers and to draw out the implications for policy and practice besides finding the awareness regarding entrepreneurial education for entrepreneurship development and the linkage between entrepreneurship development and technical education.

Design/methodology/approach – There is a growing interest in the role that entrepreneurship can play as a catalyst to accomplish economic and social development objectives, together with growth, innovation, employment, and equity. The paper is informed by the literature on sustainable entrepreneurship, and on the drivers of pro-environmental practices in SMEs. It reports on the results of an exhaustive multi-level empirical study, which investigates the environmental practices of SMEs in Odisha. This case study/review was carried out to determine ways for invigorating technical, vocational education and training through entrepreneurship education.

This paper emphasizes the prevailing Governmental scheme for entrepreneurship development and strategies suggested to build up the culture and the plausible reasons for gap for entrepreneurship towards breaking new ground by deploying solutions for rapid, sustainable and resource-efficient growth are also discussed.

Findings – The study identifies that coercive, normative and mimetic isomorphic pressures concurrently drive sustainable entrepreneurial activity in the majority of MSMEs. These pressures are exerted by specific micro and macro-level factors, ranging from international customers' requirements to individual-level values of owners and managers. It also reveals the catalytic effect of Technical education not only to boosts the capacity of innovation but also nurtures the innovation and entrepreneurship among the students of engineering college in Odisha.

Practical implications – The evidence suggests that, in countries where formal institutional mechanisms have less of an impact, intermediary organisations can perform a proto-institutional role that helps to overcome pre-existing barriers for sustainable entrepreneurial activity..

Originality/value – This paper provides new insights into sustainable entrepreneurship and motivations for environmental practices in an under-researched developing economy with special reference to Odisha state in India. .

Keywords: Entrepreneurship, Sustainability, Competitive, Innovation, Strategies, MSME

JEL Classification: F35, G21, G21, L25, O16

INTRODUCTION

Sustainable entrepreneurship is a concept that combines elements from both sustainability and entrepreneurship, and its emergence has adopted a new aspect to the prediction of entrepreneurship. Enterprises with sustainability-driven approach contribute towards improving the environmental quality and social well-being in ways that are equally accommodating.

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An entrepreneurial activity can only be labelled sustainable, if there is an equal blending of the 3Ps (People, Planet, Profit) -which called 'triple bottom line'. Sustainable entrepreneurship is about a combination of economic, social and environmental value creation.

The need for engineering entrepreneurship education has been well reported in the past two decades. However, most research and educational efforts focus on the design and implementation of engineering entrepreneurship programs. There is a gap in assessment practices and there are several reasons for this. (Pittaway, L. & Hannon, P. 2009).

Enterprise education is highly important for engineering both diploma and degree level course. Technical and Vocational Education Training (TVET) refers to the educational processes that involve the study of technologies and related sciences and the possession of practical skills and knowledge aimed at discovering and developing the individual for employment in various sectors of economic and social life (Moss & Liang,1990)

Defining sustainable entrepreneurship

Shepherd and Patzelt (2011) offered the following definition 'sustainable entrepreneurship is focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society'

According to Spencen et al (2011) sustainable entrepreneurship is 'An innovative, market oriented and personality driven form of value creation by environmentally or socially beneficial innovations and products exceeding the start-up phase of a company'.

Entrepreneurial Skills in Technical Vocational Education and Training

The only way to empower the youth is to provide them with adequate and qualitative education in order to make them job creators and eradicate poverty (Sekena, 2004). Many countries of the world including Nigeria have considered Technical Vocational Education and Training (TVET) as relevant in equipping young people with technical skills that would enable them engage in productive lively hoods. However, the United Nations Education Scientific and Cultural Organisation (UNESCO) section for Technical and Vocational Education and Training (TVET) in 2006 observed that TVET programmes have not lead to increased employment, despite the obvious need for technical and vocational services. This might be due to dearth of wage employment opportunities for technically trained man power (Saba et.al ,2013).

Summarily, An entrepreneur with the mind-frame to solve an exact, particular sustainability problem (widely known as Sustainability Entrepreneurship, note the difference from Sustainable Entrepreneurship, which this paper focuses on) can be beneficial once an opportunity arises that the entrepreneur can put to use, but until then, the situation may remain the same – resources may still be used up in uneconomical ways, and it is a flawed way to conduct sustainable operations, however well-meant it may be. Sustainable Entrepreneurship, on the other hand, strives to set a universal mindset to practice sustainable methods throughout the organization, from internal personnel to purchased goods from partners, from top to bottom.

Sustainability Entrepreneurship versus Sustainable Entrepreneurship

Sustainable entrepreneurship sees the focus on the internal processes and everything surrounding the outputs of a business, while sustainability entrepreneurship focuses on opportunity fulfillment in the market.

Schaltegger et al (2011) described sustainable entrepreneurship as "*an innovative, market-oriented and personality driven forms of creating economic and societal value by means of break-through environmentally or socially beneficial market or institutional innovations*".

In general terms, there are two key perspectives on sustainable entrepreneurship. On the one hand, there are those academics that believe that any entrepreneurial activity must be subordinated to the relationship between sustainable entrepreneurship and the triple bottom line. Their researches are mainly published in sustainable management journals (Parrish and Foxon, 2009). They concluded, "innovators and entrepreneurs will consider sustainable development as one of the greatest business opportunities in the history of trade" (Hart and Milstein, 1999).

Viability

As per the conglomerate view of various English dictionaries, the word of viability is defined as “*capable of living, developing, or germinating under favorable conditions*”. It describes its prefix as if it was a living, prosperous, growing entity which is why it was a perfect global definition to a company that is at minimum covering all costs, continuing to grow in size and output and makes a positive return in turnover. Effectively, in economic terms, this would be seen as being profitable over years in time, or profitable to remain out of financial danger for years. Moreover it can be defined as making a positive return before taxes.

According to Leonaris Rey (2011), sustainability practices are related to the viability of sustainable entrepreneurship. However, her research results shows, there is no strong association between the three pillars of sustainability and viability. This in turn also shows that there is no negative association in actively pursuing sustainable measures and viability in SMEs. Thereby it can be concluded that there are no grounds for belief that pursuing a sustainable means of operation will result in company failure, and should not be a reason for SMEs to reject sustainable entrepreneurship.

What could Entrepreneurship do for Sustainable Development?

Entrepreneurship is seen as an alternative to unemployment and poverty which could be the panacea for development (Bogan & Darity, 2008).

Initially entrepreneurship was detected as establishing a business with people using their own capital. Nowadays, entrepreneurship and small businesses are the basics of economy, responsible for breakthrough innovations that influence the growth of free market economy and its general performance. (Sahin & Asunakutlu, 2014; Sharma et al., 2013).

SMEs' involvement in sustainable development can be considered as an entrepreneurial act. The sustainability market is in its development phase in industrialized nations and still quasi-non-existent in developing countries. This market presents not only uncertainties but also opportunities to those who can recognize them. Moreover, several studies demonstrate that adopting sustainable strategies and integrating them at the core of the strategic activities creates value for stakeholders and preserves wealth for future generations (Spence et al., 2011).

Shepherd & Patzelt (2011) opined that Sustainable Entrepreneurship embodies the objective to enhance social wealth, with the goal to create profit, and to ensure *financial viability* to pursue other opportunities that may arise to be exploited outside the realm of the social objective.

Mair and Marti (2006) advocate that ‘while economic value creation is seen as a necessary condition, it is more important to ensure financial viability and business longevity’.

Parrish (2010) suggests that the values and motives that give rise to sustainability entrepreneurship, based on equanimity between self, other people, and nature, result in specific organizing tensions that have the potential to challenge the viability of enterprises that embody these values. However, he indicates that the distinct competencies and cognitive patterns of sustainability entrepreneurs, derived from the same values and motives, enable these organizing tensions to be effectively overcome. Following this argument, he concludes that the use of perpetual reasoning is a key feature that ultimately distinguishes sustainability entrepreneurs.

Types of Entrepreneurship

Five types of entrepreneurs;

1. *Administrative entrepreneurship*: It is the joint efforts of both the general management and scientific technical personnel to identify areas for R & D and the development of new products, techniques or the improvement of existing ones.
2. *Opportunistic Entrepreneurship*: Ability to catch at the right time the fruits of the internal as well as external technological developments.
3. *Incubative Entrepreneurship*: This is nothing but the ability to initiate and nurture new venture developments within the original company with special care.

4. *Imitative technical Entrepreneurship*: This stresses the replication or creative imitation of innovative technical achievements made by another firm - done with appropriate modifications and refinements in case protected property right are involved.
5. *Acquisitive Entrepreneurship*: This is the ability of the internal management/entrepreneurs to acquire competitors technical capabilities.

Characteristics of Entrepreneurship:

An assessment instrument was designed to measure the entrepreneurial mindset of engineering students. Such an instrument is needed to measure the growth in engineering entrepreneurship mindset of engineering students who pursue programs focused on developing such a mindset (Harichandran et.al., 2016).

Entrepreneurial behaviors as the learning outcomes grouped into the following four categories

- *Engineering Thought and Action*:
Apply creative thinking to ambiguous problems, Apply systems thinking to complex problems Evaluate technical feasibility and economic drivers, Examine societal and individual needs
- *Collaboration*: Form and work in teams, Understand the motivations and perspectives of others
- *Communication*: Convey engineering solutions in economic terms, Substantiate claims with data and facts
- *Character*: Identify personal passions and a plan for professional development, Fulfil commitments in a timely manner, Discern and pursue ethical practices, Contribute to society as an active citizen

GOVT. OF INDIA INITIATIVES FOR ENTREPRENEURSHIP DEVELOPMENT:

Name of Schemes

1. *Prime Minister's Employment Generation Programme and Other Credit Support Schemes*
 - i. Prime Minister's Employment Generation Programme (PMEGP)
 - ii. Performance and Credit Rating Scheme
 - iii. Credit Guarantee Trust Fund for Micro & Small Enterprises (CGTMSE)
 - iv. Interest Subsidy Eligibility Certificate (ISEC)
2. *Development of Khadi, Village and Coir Industries*
 - i. Science and Technology Scheme
 - ii. Market Promotion & Development Scheme (MPDA)
 - iii. Revamped Scheme of Fund for Regeneration of Traditional Industries (SFURTI)
 - iv. Coir Udyami Yojana (CUY)
 - v. Coir Vikas Yojana (CVY)
 - Skill Upgradation & Mahila Coir Yojana (MCY)
 - Development of Production Infrastructure (DPI)
 - Domestic Market Promotion Scheme
 - Export Market Promotion
 - Trade and Industry Related Functional Support Services (TIRFSS)
3. *Technology Up gradation and Quality Certification*
A Scheme for Promoting Innovation, Rural Industry & Entrepreneurship (ASPIRE) through QMS&QTT
 - i. Building Awareness on Intellectual Property Rights (IPR)
 - ii. Lean Manufacturing Competitiveness for MSMEs National Manufacturing Competitiveness Programme (NMCP)
 - iii. Credit Linked Capital Subsidy for Technology Upgradation
 - iv. Marketing Support / Assistance to MSMEs (Bar Code)
 - v. Entrepreneurial and Managerial Development of SMEs through

Incubators

- vi. Enabling Manufacturing Sector to be Competitive
- vii. Design Clinic for Design Expertise to MSMEs
- viii. Technology and Quality Upgradation Support to MSMEs

2. *Marketing Promotion Schemes*

- i. International Cooperation
- ii. Marketing Assistance Scheme
- iii. Marketing Assistance & Technology Upgradation (MATU)
- iv. MSME Market Development Assistance (MDA)

3. *Entrepreneurship and Skill Development Programme*

- i. Assistance to Training Institutions (ATT)

4. *Infrastructure Development Programme*

- i) Micro & Small Enterprises Cluster Development (MSE-CDP)
- ii) Tool Room
- iii) TCSP

5. *Schemes of NSIC*

- i. Single Point Registration Scheme
- ii. Credit Facilitation through Bank Tie-up
- iii. Raw Material Assistance & Credit

Govt. of Odisha Initiatives for Entrepreneurship Development

Entrepreneurship is characterized by the ability to organize, manage and assume the risks of a business enterprise with aim to generate wealth, employment and social good. Entrepreneurship serves as the genesis for developing a vibrant micro, small and medium enterprise (MSME) sector which is an indispensable component of competitive economies. Entrepreneurship also has the potential to promote inclusive growth through empowerment of women, disadvantaged sections as well as educated unemployed youth.

Odisha MSME Department formulated a Development Policy in 2016 through a consultative process involving stake holders including Industry, Associations, Financial Institutions, Experts and Government Departments concerned with an objectives to Encourage new manufacturing capacity, Provide a conducive ecosystem for promotion and growth of MSMEs in potential sectors, to provide opportunities to local entrepreneurial talent

Entrepreneurship Development Models of Odisha

Decades of 1980-2000 experienced a considerable growth and development of small and medium enterprises (SMEs) in Orissa. De-licensing, direct foreign investment, trade liberalization, policy reforms etc. were the innovations made. Protectionist attitude and subsidy culture were almost eroded. Investments were made cheaper. But, competition was intensified and gradually made complex. This posed challenges for SMEs to adjust to the changes, affiliating them to large industries. Policy changes attempted to raise preparedness of SMEs to share the market, develop inter-industry competition, render production of quality products and services. Govt. adopted several models of developing entrepreneurship. Mostly used 9 models are; (Source : The final draft of the Odisha Entrepreneurship Development Policy 2014 <http://www.msmeodisha.gov.in>]

1. Strategic Alliance Model for Small & Medium Enterprises (SMEs)
2. Radio Programme Model for Entrepreneurship (RPE)
3. Resource Potential Model for No-Industries District (NID)
4. Enterprise Education Model for SMEs
5. Marketing Model for SMEs
6. Entrepreneurship: A Professional Business Model

7. EDP Models for Orissa: from Management to subject inputs
8. Corporate Instinct Model for SMEs
9. Entrepreneurship Model for Women

WHERE WE ARE ? – Entrepreneurship Scope at ODISHA

Strong economy

The state's economy witnessed high growth rates between 2011-12 and 2017-18, with GSDP of the state growing at a CAGR of 10.30 per cent. Cumulative FDI inflows in the state, during April 2000 to December 2017, amounted to US\$ 425 million

Strong mineral production

Odisha has emerged as a key state with regards to the mineral and metal based industries. At 32.8 per cent in February 2018, Odisha contributed the largest share of mineral production in India in terms of value*. Value [*Excluding fuel minerals, atomic minerals and minor minerals*] of minerals produced in the state reached US\$ 2.71 billion in April-February 2018.

Strong growth in MSME units

The state is home to a large number of MSME units. The state is amongst the top ten states accounting for the highest number of MSME enterprises

Strong power sector

Odisha is the first state in India to have undertaken reform and restructuring initiatives in the power sector. As of August 2018, the state had a total installed power generation capacity of 7,369.10 MW. (Source: Economic Survey of Odisha 2018)

High economic growth

The state's GSDP grew at a Compound Annual Growth Rate (CAGR) of 10.30 per cent between 2011-12 and 2017-18. The tertiary sector was the major contributor to the state's GSDP with contribution of 45.25 per cent during 2017-18.

Policy, fiscal incentives and initiatives

The state offers a wide range of fiscal and policy incentives for businesses under the Industrial Policy Resolution, 2007.

OBJECTIVES OF THE STUDY

Two fold objective was set,

1. To find the awareness regarding entrepreneurial education for entrepreneurship development
2. To check linkage between entrepreneurship development and technical education

Hypotheses: Created, based upon the above two objectives.

H0 : Entrepreneurship education is considered as a strong background for entrepreneurship development.

H1: There is a significance relationship between technical education and entrepreneurship development.

Methodology

A structured Questionnaire was used to identify both the quantitative and qualitative points of view . Analysis of variables responsible towards the awareness of entrepreneurship development through technical education is statistically measured. SPSS ver. 19 is used for descriptive analysis of collected data.

Sampling

The sample consists of 158 respondents of different categories. The respondents were selected on the basis of Stratified Random Sampling Technique. A total 180 questionnaire were administered among Poly technics & Engineering colleges in and around Rourkela and Bhubaneswar . After continuous follow up requests, only 158 responses were received back which were found to be complete and correct. Care has been taken to ensure that the sample covers almost different categories of people.

Findings (Awareness on Entrepreneurship Development)

Descriptives- **Table1.3** shows that the standard deviation is highest ($\sigma = 4.412$) in the age group of 51years and above people and lowest in 31-40 years of age group ($\sigma = 2.709$). It represents that the variation in perception of respondents is more in 51 years and above of age and less in 31 to 40 years of age on awareness of entrepreneurial education for entrepreneurship development

The ANOVA **Table-1.4** represents the variations of respondents among the age group awareness of entrepreneurship development dimension. The value points out that there is no significance in perception of respondents between the age group and group awareness of entrepreneurship development dimension as the level of significance shows **greater than 0.05, i.e 0.914**. The mean square value is 1.842 between the groups and 10.590 in within the groups.

Descriptives- **Table1.5** shows that the standard deviation is highest ($\sigma = 3.752$) in the people having qualification of BE/BTech people and lowest in the people having qualification of ITI and Intermediate ($\sigma = 1.728$). It represents that the variation in perception of respondents is more in having qualification of BE/ BTech and less having qualification of ITI and Intermediate on awareness of entrepreneurial education for entrepreneurship development.

Findings : (on linkage between entrepreneurship development and technical education)

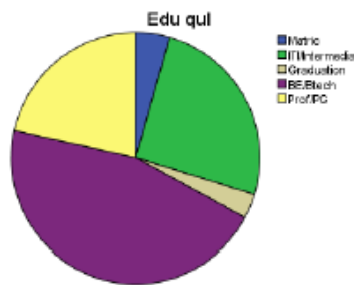
The ANOVA **Table-1.6** represents the variations of respondents among the age group awareness of entrepreneurship development dimension. The significance value is 0.003 (less than 1%) is statistically significant. It denotes that there is good relationship between entrepreneurship development dimension with educational qualification variation.

Data Analysis

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30yrs	8	5.1	5.1	5.1
	31-40yrs	45	28.5	28.5	33.5
	41-50yrs	99	62.7	62.7	96.2
	51yrs & above	6	3.8	3.8	100.0
	Total	158	100.0	100.0	

Edu qual					
		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Matric	7	4.4	4.4	4.4
	ITI/Intermediate	40	25.3	25.3	29.7
	Graduation	5	3.2	3.2	32.9
	BE/Btech	72	45.6	45.6	78.5
	Prof/PG	34	21.5	21.5	100.0
	Total	158	100.0	100.0	



Age		Awareness on Entrepreneurship Development
20-30yrs	Mean	19.50
	N	8
	Std. Deviation	2.828
31-40yrs	Mean	18.73
	N	45
	Std. Deviation	2.709
41-50yrs	Mean	18.85
	N	99
	Std. Deviation	3.433
51yrs & above	Mean	18.33
	N	6
	Std. Deviation	4.412
Total	Mean	18.83
	N	158
	Std. Deviation	3.228

REPORT

Edu qul		Awareness on Entrepreneurship Development
Matric	Mean	19.71
	N	7
	Std. Deviation	1.890
ITI/Intermediate	Mean	20.3
	N	40
	Std. Deviation	1.728
Graduation	Mean	19.4
	N	5
	Std. Deviation	0.5
BE/Btech	Mean	2.608
	N	72
	Std. Deviation	17.85
Prof/PG	Mean	72
	N	34
	Std. Deviation	3.752

BE/Btech	Mean	18.91
	N	34
	Std. Deviation	3.059
	Mean	18.83
Prof/PG	N	3.228
	Std. Deviation	
	Mean	
	N	
Total	Std. Deviation	

DESCRIPTIVES

Awareness of Entrepreneurship Development

					Lower Bound	Upper Bound		
20-30yrs	8	19.50	2.828	1.000	17.14	21.86	14	23
31-40yrs	45	18.73	2.709	.404	17.92	19.55	12	25
41-50yrs	99	18.85	3.433	.345	18.16	19.53	6	24
51yrs & above	6	18.33	4.412	1.801	13.70	22.96	10	22
Total	158	18.83	3.228	.257	18.32	19.34	6	25

ANOVA

Awareness on Entrepreneurship Development

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.525	3	1.842	.174	.914
Within Groups	1630.861	154	10.590		
Total	1636.386	157			

DECSRIPTIVES

Awareness on Entrepreneurship Development

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Matric	7	19.71	1.890	.714	17.97	21.46	17	21
ITI/Intermediate	40	20.30	1.728	.273	19.75	20.85	17	25
Graduation	5	19.40	2.608	1.166	16.16	22.64	15	21
BE/Btech	72	17.85	3.752	.442	16.97	18.73	6	24
Prof/PG	34	18.91	3.059	.525	17.84	19.98	9	23
Total	158	18.83	3.228	.257	18.32	19.34	6	25

ANOVA

Awareness on Entrepreneurship Development

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	163.303	4	40.826	4.240	.003
Within Groups	1473.083	153	9.628		
Total	1636.386	157			

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IMPACT OF TECHNOLOGY FOR DEVELOPMENT OF MICROFINANCE IN RURAL AREAS

ABSTRACT

The concept and role of micro financing is well known for social up lift-ment as well as for the development of rural and backward areas. Considerable efforts are being made at the public and private sectors to bring in enough number of technologies in the rural areas for their implementation and use through micro financing for the overall development.

The paper highlights the meaning and definition of the microfinance. It presents and history of microfinance in India and presents the different options and schemes.

In the conclusion the author pointed out that the microfinance plays an important role in integrating rural development and poverty alleviation. The impact of microfinance on rural development and poverty reduction has been measured in terms of several dimensions such as improved income, employment and household expenditure and reduced vulnerability to economic and social crisis.

Keywords: Entrepreneurship, Microfinance, competitive, Innovation, Strategies, MSME

JEL Classification: F35, G21, L25, O16

INTRODUCTION

Support of micro financing agencies including banks is not reaching at the grass route levels and therefore, most of the developmental programmes get diluted or ineffective and many a times they don't even take off. In the rural areas people are not much aware about the micro financial schemes and their benefits. Hence, in order to provide sustainable rural development and progressive poverty alleviation the role of micro financing agencies becomes an important in the context of current scenario. In the present communication the whole mechanism of micro finance, its role to achieve sustainable rural development and for social economic benefits are discussed in detail.

All over the world the role of micro financing for rural development and alleviating poverty is well known and in many a cases it has been proved that well organized micro financing policies have helped in achieving sustainable development of the rural sector. During 11th fiveyear plan Government of India also emphasized development of the rural sector through poverty alleviation and achieves more than 8% economic growth. For this purpose appropriate financial budget allocation has also been announced. For achieving this goal, both public and private sectors have to play important role in macro and micro financing. Numbers of renowned economist have published an account on micro financing for development of rural infrastructure so that in due course of time the outcome of such efforts may lead to sustainable development accruing socio-economic benefits.

Role of micro financing in promoting renewable energy technologies in rural areas for sustainable development and poverty alleviation. While dealing the topic he mentioned that the success of micro

financing in rural development and promotion of renewable energy technologies (RET) is dependent on presence of several factors which includes infrastructure, availability of information, education of rural population, and availability of maintenance services and creation of opportunities for incoming generating activities. In other words, integrated rural development and RET based rural energy programmes are dependent on the use of micro financing. Further, he mentioned that only such an approach can bring about poverty alleviation and improve the quality life of the rural poor. In India more than 70% of the population lives in villages and most of these villages are underdeveloped. Research and development sector in our country brings number of green and eco-friendly technologies every year. Implementation of these technologies in the rural sector can bring radical change in the rural economy which may also lead to poverty alleviation, create employment opportunities and generate or stimulate good growth. However, for implementing these technologies micro financing through public and private sector agencies is the need of the hour. In the present paper efforts have been made to critically analyze all the issues focusing how micro financing can bring mutational changes in the rural economy for overall benefits to all the communities and weaker sections of the society.

MEANING OF MICROFINANCE

Microfinance is defined here as the provision of a broad range of financial services such as deposits, loans, payments services, money transfers, and insurance to the poor and low-income households and their farm or nonfarm microenterprises. An MFI is defined as a single organization (for example, an NGO providing microfinance) or a unit whose primary business is microfinance within a diversified institution (for example, a microfinance unit within a commercial bank). In microfinance for the poor over the last two decades was led by practitioners who developed methodologies that achieve very high rates of repayment and cost recovery and also reach predominantly poor clients, especially women (Robinson, 2001). Greater sustainability means that donor subsidies can be leveraged to reach greater numbers of poor clients. In the past, the failure to charge interest rates sufficient to cover costs and enforce repayment meant that subsidies were largely absorbed in covering operating costs and loan losses, while only a select few benefited from the limited number of subsidized loans that could be delivered. Today, the emphasis is on building commercial approaches to microfinance that can increase both scale and outreach to the urban and/or rural poor through a range of reliable financial services (including savings, money transfers, and insurance, as well as credit) with decreasing dependence on external donor funding.

Primary Features of the Old and New Paradigms in Rural Finance
 Features Old: Directed, Subsidized Ag. Credit
 New: Financial Systems

- Chief aims Boost agricultural production
 - Reduce poverty
 - Reduce market imperfections and transaction costs for income expansion and poverty reduction
- Role of financial markets
 - Help the poor.
 - Stimulate production.
 - Intermediate efficiently.
- View of users Beneficiaries: borrowers Clients: borrowers and depositors
- Subsidies Heavily subsidy dependent increasingly independent of subsidies

- Sources of funds Vertical: governments and donors Horizontal: primarily voluntary deposits
- Associated information systems Dense, fragmented and vertical – assessing whether targets were met. Less dense and mainly horizontal – management information.
- Sustainability Largely ignored Major concern
- Outreach Short-term focus Long-term concern
- Evaluations Credit impact on beneficiaries – mainly primary data Performance of financial institutions – mostly secondary information.

Definition of Commercial Microfinance

International microfinance professionals are increasingly considering the commercialization of microfinance to be “the application of market-based principles to microfinance” or “the expansion of profit-driven microfinance operations.” There is a growing realization in the international arena that commercialization allows MFIs greater opportunity to fulfill their social objectives of expanding access of the poor to an array of demand-driven microfinance products and services on a sustainable basis. It takes into account commercialization at two levels, proposing that it involves both institutional factors (MFI commercialization) and attributes of the environment Within which MFIs operate (commercialization of the microfinance industry). At the micro level, MFI commercialization can be considered as progress along a continuum,

- Adoption of a professional, business-like approach to MFI administration and operation, such as developing diversified, demand-driven microfinance products and services and applying cost-recovery interest rates.
- Progression toward operational and financial self-sufficiency by increasing cost recovery and efficiency, as well as expanding outreach.
- Use of commercial sources of funds; for example, non-subsidized loans from apex organizations (wholesale lending institutions) or commercial banks, voluntary savings, investor equity or other market-based funding sources.
- Operation as a for-profit, formal financial institution that is subject to prudential regulation and supervision and able to attract equity investment.

At the macro level, the extent of commercialization of the microfinance industry depends on several factors, including the degree to which the policy environment and the legal and regulatory framework are conducive to the development and growth of commercial MFIs, the availability and access of commercial MFIs to market-based sources of funds, and the existence of key industry support institutions, such as credit information bureaus, microfinance trade associations, microfinance technical training centers and providers of business development services.

Micro finance-features and principles

Microfinance services are provided by three types of sources:

- formal institutions, such as rural banks and cooperatives;
- semiformal institutions, such as nongovernment organizations; and
- Informal sources such as money lenders and shopkeepers.

Institutional microfinance is defined to include microfinance services provided by both formal and

semiformal institutions. Microfinance institutions are defined as institutions whose major business is the provision of microfinance services.

Microfinance can provide an effective way to assist and empower poor women, who make up a significant proportion of the poor and suffer disproportionately from poverty. Microfinance can contribute to the development of the overall financial system through integration of financial markets.

Microfinance is considered to be an adequate tool for financing small scale activities/technological applications in the rural areas because of the following features

- Provide credit for investment in small scale activities chosen by the poor people.
- Empower the poor to build self confidence that I can do something.
- Can pay for itself with the interest earned.
- Allow to develop opportunities for self employment to the underserved people.
- Have the broadest utility and the least cost per beneficiary.

The principles of sustainable micro-financing are as follows:

- offers flexible customer friendly services preferred by low-income group
- has opportunities for streamlining operations and reducing costs (standardized simple lending process, decentralized loan approval, inexpensive offices, and use staff from local communities)
- Operate in market basis charging market interest rates and fees, and (4) strive to recover the costs of the loan.

Impact Indicators of Microfinance

Several impact indicators are there by which we can analyze the utilities of microfinance. These are:

- Overall household income
- Empowerment
- Improvement in health and education.

Effects:

- Microcredit helps to increase the household income.
- Through microfinance, people can diversify their income sources and enhance the enterprise growth.
- It provides access to financial services to the poor people who enable them to establish and change their assets.
- Micro financial services enable the poor people to minimize the risks and take greater advantage of upcoming opportunities.
- In India, through micro finance the government has created many job opportunities in the rural areas.
- For the women, microfinance offers greater control over the available resources to them.
- The clients of microfinance can increase their savings' level than the non-clients.
- In some country, the introduction of microfinance leads to an increase in the enterprise revenue.

ORIGIN AND GROWTH OF MICROFINANCE SECTOR IN INDIA

On 12th July 2002, Prime Minister Atal Behari Vajpayee outlined an eight points agenda to push the economy on a growth path of eight percent during the 10th plan. Mr. Vajpayee assured that it would be government's

endeavor to ensure that “the poor and the unorganized sector have access to savings, credit and insurance services”. This statement itself is a great boost to the microfinance sector, as one can see the changing perception of the people influencing the policies, toward it. However, it is still a beginning and to make the sector vibrant, the efforts have to be still on.

Microfinance is being practiced as a tool to attack poverty the world over. The term “Microfinance” could be defined as “provision of thrift, credit and other financial services and products of very small amounts to the poor in rural, semi urban or urban areas, for enabling them to raise their income levels and improve living standards” (NABARD 99). Microfinance Institutions (MFIs) are those, which provide thrift, credit and other financial services and products of very small amounts mainly to the poor in rural, semi-urban or urban areas for enabling them to raise their income level and improve living standards. Lately, the potential of MFIs as promising institutions to meet the consumption and micro-enterprise demand.

Growth of microfinance

The growth of microfinance is visible in many aspects. There are more than 2000 NGOs involved in the NABARD SHG-Bank linkage program. Out of these, approximately 800 NGOs are involved in some form of financial intermediation. Further, there are 350 new generation co-operatives providing thrift and credit services. According to our estimate, the present total outstanding, including Sa-Dhan members and bank linkages is approximately Rs.700 crores (Rs. 150 crores of Sa-Dhan members and another Rs. 550 crores from the Banking system). The total client base is estimated at 6-8 million as opposed to the Government of India (GOI) intention to reach 25 million clients. The growth of community institutions has taken place with the role to take social and financial intermediation. A numbers of community banks have come into existence at village and block levels call ' Federation of Self Help Groups'.

The inadequacies of the formal financial system to cater to the needs of the poor and the realization of the fact that the key to success lies in the evolution and participation of community based organizations at the grassroots level led to the emergence of new generation of MFIs.

Another kind is NGO-MFI directly lending to the poor borrowers, who are either organized into SHGs or into Grameen Bank type of groups after borrowing bulk funds from SIDBI, RMK and FWWB. Examples in this category are Rashtriya Gramin Vikas Nidhi (RGVN) which runs credit and savings programme in Assam and Orissa on the lines of Grameen Bank, Bangladesh. Also we have SHARE in AP, ASA in Tamil Nadu under this category.

There are MFIs which are specifically organized as cooperatives, such as over 500 Mutually Aided Cooperative Thrift and Credit Societies (MACTS) in AP, promoted among others by Cooperative Development Foundation (CDF) and the SEWA Bank in Gujarat which also runs federations of SHGs in nine districts.

Then we have MFIs, which are organize as Non-Banking Finance Companies (NBFC) such as BASIX, CFTS Mirzapur, SHARE Microfin. Ltd and Sarvodaya Nanofinance Ltd.

Commercial Microfinance Expands Outreach

MFI commercialization is usually hastened by a strategic decision of an MFI's owners/managers to adopt a for-profit orientation accompanied by a business plan to operationalize the strategy to reach full financial self-sufficiency and to increasingly leverage its funds to achieve greater levels of outreach. The recognition that the key to achieving substantial levels of outreach is building a sound financial institution essentially means that the MFI needs to charge cost covering interest rates and continually strive for increasing operational efficiency. As an MFI's interest and fee revenue covers first its operating costs and then the cost of its loanable funds, it may be considered to be increasingly operating on a commercial basis. To balance outreach considerations with achieving financial self-sufficiency, pricing decisions are key as are streamlining operating systems to improve productivity and increase client volume to reach economies of scale. MFI profitability enables expansion of operations out of retained earnings or access to market-based sources of funds. As profitability improves, so does the ability of the institution to leverage commercial sources of funds to achieve

increasing levels of outreach. Fully Subsidized Fully Commercial Achievement of Operational Self-Sufficiency Pricing and Efficiency Gains Lead to Increasing Cost Recovery Profitability Achievement of Financial Self-Sufficiency Heavy Losses

Informal providers, not subject to commercial or banking laws Level of Formality / Integration with the Formal Financial Sector Semi-formal institutions, subject to commercial laws but not to banking laws Formal institutions, subject to prudential banking regulation and supervision High Profits Operating as a for-profit, formal financial institution may be the most complete hallmark of MFI commercialization because this implies subjectivity to prudential regulation and supervision and that the MFI has become fully integrated into the formal financial system. The process of commercialization has led to increased competition as existing MFIs have expanded their outreach over time. In addition, the profitability that commercial MFIs have demonstrated has attracted some new entrants to the market and, to a more limited extent, downscaling by a few commercial banks. In some countries where this process has been occurring for some time, such as Bolivia, the microfinance market is approaching saturation with heated competition in virtually all urban and peri-urban areas. However, many other countries have localized competition that is intensifying as MFIs vie for similar target clientele in densely populated areas. D. How Commercial MFIs Enhance Access to Demand-Driven RMF In most developing countries, the poor and poorest are largely located in less densely populated, rural areas. The extent to which commercial MFIs target rural areas for market expansion depends on two main issues: i) the degree of focus on the poor (or more specifically, the rural poor) in a commercial MFI's mission statement; and ii) the extent of competitive pressures in the environment. For commercial MFIs that start out with a rural focus or maintain a more general but strong social orientation toward serving the poor, expanding their outreach over time to less densely populated, rural areas can be expected to proceed in accordance with the MFI's capacity in terms of expertise and funding to expand its rural operations. For MFIs whose commercial missions outweigh their social objectives, exploitation of the lowest cost, most highly profitable market niches will naturally occur first. Some people have expressed concern that increased commercialization will cause MFIs to drift from their missions, in other words, reduce their focus on the poor. While mission drift can happen, this has not been the case for most NGOs transforming to formal, commercial MFIs.

In fact, increasing competition in traditional microfinance markets of more highly populated areas can push the market frontiers in several directions (upmarket to wealthier clients; down market to underserved, poorer clients; or into new geographic locations), including serving harder to reach clients in more sparsely populated rural areas. So, while competitive market pressures can initially deter the second type of MFIs from focusing on rural markets, over time competition can push these MFIs into expanding their rural operations out of a need to identify new markets for expansion. For both types of commercial MFIs, competition is bringing significant benefits to clients as MFIs become more customer-oriented and interest rates become more attractive. Also, competition brings innovation in products and delivery mechanisms, deeper market penetration, increased efficiency, lower prices and better service.

Capacity Building Needs for MFIs

It has been observed that, MFIs are able to reach the poor effectively mainly because they have designed products and channels, which are friendly and suitable to the need of the poor. However, MFIs outreach is limited in comparison with the mainstream financial institutions because of the shortage of financial and human resources. MFIs need grants to build their own capacity as well as that of the borrowers or SHGs. A vast majority of MFIs are NGOs registered under the Societies Act or Trust Act, and they cannot mobilize large amount of lending funds due to the inappropriate legal and financial structure. A few MFIs which have registered as Non-Banking Finance Companies (NBFCs) are able to mobilize equity from development financial institutions and leverage these with borrowing from commercial banks. However, the regulatory framework is not conducive for these MFIs.

Unfortunately, in India the dominant reform agenda of the mainstream sector clouds the reform and attention that is required at the bottom end. The past few years though has seen an appreciable increase and support to this problem. The present economic advisory team under the leadership of the Prime minister though (PMO)

has brought increasing focus to this problem and a group has been constituted to deal with these problems.

Sa-Dhan, The Association of Community Development Finance Institutions (biggest Apex body of Microfinance Institutions in India) had been asking the Government of India to make more funds available for the capacity building of the microfinance sector. Though locked into bureaucratic procedures, some of these funds have been made available. Hence, the need for capacity building of NGOs on one hand and the capacity building of local communities on the other hand is needed to ensure effective management. In this context, if the Microfinance Development Fund (MFDF) of 430 crores is not released in the immediate future, it will culminate into disaster for the microfinance sector.

Microfinance as an instrument

Microfinance is yet to prove its worth as an instrument that would reduce poverty and bring a change in the rural socio economic structure. In some countries it is already generating positive results. The study of the Impact of Microfinance means how the micro financial services effects on the lives of the rural and as well as urban poor people. That is, whether or not micro finance enhances the process of income growth, poverty reduction, asset building etc. microfinance is the best possible method to improve the socio-economic structure in the rural areas. The admittance of commercial banks and other formal financial institutions into microfinance may enhance the competition for the ongoing microfinance institutions. Although it may better the rural financial sustainability but minimize lending to the poor. Providing efficient microfinance services for this segment of the population is important for a variety of reasons.

Micro finance as an industry

Many view rural microcredit as an input, along with business development services, into rural micro-enterprise development. Traditional microfinance products and methodologies generally reflect this model, with products aimed primarily at micro entrepreneurs, especially market vendors, with short loan terms, regular repayment schedules, and ever-increasing loan amounts. Increasingly, a new consensus is emerging among microfinance practitioners, donors and experts. This new view considers microfinance as an industry worth promoting in and of it. Microfinance institutions (MFIs) can be small and medium enterprises at the heart of rural sustainable development. Their development positively correlates with rural business development. A new approach considers a wide range of flexible financial services for a variety of poor clients, not just rural micro-entrepreneurs.

This means that micro credit becomes transformed from input into rural enterprise development into a financial service that available to poor people. What this mean to MFIs and donors is the following:

MFIs: Under the current micro-enterprise development model, an MFI offers very limited number of range of supply driven credit products, which tend to focus fairly narrowly on micro enterprises needs and activities. Loaning for green technological systems is not a usual practice for MFIs. Under the new approach MFIs need to evolve to provide more demand driven flexible and efficient financial services for the rural poor. These flexible demand-driven services would recognize the varying requirements of poor.

Donors: Currently, donors design projects to reach the rural micro-enterprise sector or other specific target groups. Many of these projects combine credit with business development services, reflecting the traditional micro-enterprise development model. Donors often insist that the MFIs charge "market" or "sustainable" interest rates in order to become developmental activities sustainable. Under the new approach, donors need to push for the transformation of these MFIs into demand-driven financial service providers with a wider variety of financial products.

The dynamic growth of the microfinance industry has been promoted not only by market forces but also by conscious actions of national governments, Non-Governmental Organizations (NGOs), and the donors who view microfinance as an effective tool for eradicating poverty. The powerful push behind this huge and increasing support for microfinance indicated that national economic and social impacts are significant and it needs to be examined more closely.

Models of micro finance institution and rural development

It is worth to mention few micro-finance institutions that may successfully expand their business to provide small loans for rural development programmes that have a focus on rural sustainable development and poverty alleviation. There are three accepted models in micro financing in India namely, (1) Self Help Group/ SHG Bank Linkage Model (2) Grameen Model (3) Individual Banking Model operated through micro financing institutions. Among the three models the first model is most popular in India. 90% of the micro-credit is being disbursed through SHG bank linkage mode. Infact, with emphasis on capacity building of micro finance institutions and intermediaries, micro credit has transformed into micro finance.

The phenomenal growth of micro financing is evident from the fact that the number of SHGs which was 4757 in 1995-96, had increased to 1.83 million by the end of December, 2005 and the volume of credit had increased from Rs. 6 Crore to Rs.8319 crore during the same period. However, in spite of this phenomenal growth, micro financing has not attained the shape of a movement. There exist a vast gap in demand and supply of credit. As per one study, micro credit requirement was assessed at Rs. 50000 crore for the year 1999-2000. By adding other requirements such as housing loan, education loan and micro-enterprise loan, the upper ceiling of loan requirement was assessed at Rs. 2 lakh crore of micro credit. At present date of cost escalation and taking the base at Rs. 50000 crore, it is estimated that the present minimum requirement of micro credit may be Rs. 70000 crore. As against this, the supply is not more than Rs. 10000 crore. Recently, during the 11th five year plan the Government of India has announced an allocation of Rs.145000 crores for the rural infrastructure development.

Microfinance for poverty reduction

Microfinance can be a critical element of an effective poverty reduction strategy. Improved access and efficient provision of savings, credit, and insurance facilities in particular can enable the poor to smoothen their consumption, manage their risks better, build their assets gradually, develop their microenterprises, enhance their income earning capacity and enjoy an improved quality of life. Microfinance services can also contribute to the improvement of resource allocation, promotion of markets, and adoption of better technology; thus, microfinance helps to promote economic growth and development. Without permanent access to institutional microfinance, most poor households continue to rely on meager self-finance or informal sources of microfinance, which limits their ability to actively participate in and benefit from the development opportunities.

Rural Education

The rural education framework is very important for absorbing technological innovations specially meant for rural areas. With the help of education, people develop a sound reasoning of what is good and what is bad and this also makes them self-reliant. Technology plays a crucial role in achieving this goal. There is a need to develop good infrastructure for education in villages. Proper schools need to be built instead of running classes in kachha houses. Low cost computers need to be invented which are affordable by poor people. In this regard, it is noteworthy that 100 \$ (approx. Rs. 5000/-) laptops are under construction phase which when launched will cause a revolution in computer education across the world.

Apart from this more number of Rural Technology courses need to be floated in Polytechnics where youth can learn about these technologies and then start production on their own. For instance, knitting and sewing attracts large number of girls. They also get health and child care education through this in the polytechnics. Software Technology Parks of India (STPI) are also helping to promote start-ups in villages. Gandhiji had proposed the idea of Nai Talim or 'New Education' for educating whole India which was largely followed at the time of its emergence in 1937. It is working as a model for imparting education by many Rural Institutes across the nation today.

Need for Rural Technology

The analysis of the need for promotion of rural technology would result in focusing on the basic necessities

of people. We can separate five elements of social and economic infrastructure, which should be taken care of effectively by the local bodies and central government. They are – health, education, drinking water, housing and electricity. Followed by these the need for roads, efficient agricultural output, employment at grassroots level and telecommunication cannot be neglected as well. All these goals of rural development converge towards development of effective rural technologies and a sound rural education to absorb the technological innovations. Promotion of small scale industries through Rural Entrepreneurship and traditional job creation is one of the effective ways of adhering to the problem. Rural technology is also important for strengthening our rural economy and to make it self-dependent. The approach of Five Year Plans in this regard aiming at growth, equity, social justice, self-reliance, improved efficiency and productivity, calls for a sharper focus on employment generation and poverty alleviation through development programs. The provision of these programs will help people to stand on their own feet and work with self- confidence and self-respect, which in turn will help in people's participation in development tasks.

TECHNOLOGICAL DEVELOPMENTS SO FAR

Information and Communication Technology (ICT)

The strengthening of rural communication services through ICT is an important ingredient for the welfare and development of rural India as it has many advantages. Mobile Phone revolution has almost redefined the meaning of connectivity. In today's world when man is trying to automate every single process of manufacturing through powerful computers and machines, computer literacy has also become an important issue. Computer Literacy Missions have been launched in various states to incorporate this objective. ICT also helps in accessing health care in times of urgency and in cases where a village is located far from a city. It also gives timely information on business, price, market, demands etc. so that the people in rural regions can respond to changes in the market. It also provides information about employment and generates opportunities to women and underprivileged people regarding self-employment and income resources.

Information, awareness and technology selection

Though number of green technologies is available, all these cannot be implemented each and every where. Depending upon resources available and geographical and climatic condition, location specific technologies we need to bring in and implemented. In such efforts we may have to critically examine location specific technologies and their feasibility for implementation.

To familiarize about the technologies and develop skill there is again need for training and awareness. For this purpose regular training programmes have to be organized through various agencies and create a kind of awareness and develop expertise. This kind of exercise is very much needed for successful implementation of technological applications. Micro financing including lending and repayment rules and its awareness should be the part of such training programmes.

Micro finance for technology applications

Microfinance is defined as provisions of thrift, credit and other financial services and products of very small amount to the poor in rural, semi-urban and urban areas for enabling them to raise their income levels and improve living standard. Microfinance is provided in varying context either to individuals or groups ranging from personal micro credit to small enterprise support and rural finance.

The institution that provide microfinance and credit services are diverse including non-government organizations(NGOs), credit union, non-bank financial intermediaries and commercial banks. Generally, microfinance clients are poor and low income people that do not have access to other formal financial institutions. Microfinance clients are usually self employed or house hold based entrepreneurs. Their diverse "Micro enterprises include small retail shop, street vending, artisan manufacture and service provision". In rural areas micro entrepreneurs often have small income generating activities such as food processing and trade. However in order to bring rural development on the faster track micro financing is essential to all

these clients for technological applications. As referred earlier there are number of technologies available in the country. As the outcome of the efforts made by the R&D institutions in the country and in order to implement such location specific technologies, support of micro financing from the microfinance institutions is required. It is very much essential that while giving such support of microfinance to the different clients, the lending policies should be clear to take care of the client interest, so that, the technological application becomes a successful programme. While implementing such programmes both micro financing agencies as well as clientele should utilize the expertise for technological applications through outsourcing agencies.

Micro finance and Technology applications

Besides the support of micro finance and technology applications, development of organized markets is an essential component in bringing growth of the rural economy. Proper micro financing with the technical expertise for technological application may lead to varieties of product development. These products may be in the form of consumables/non-consumables. However to generate income the products should find a proper market so that money in the form of profit will be realized out of the sale of the products. In order to bring this kind of effective mechanism, organized and well structured market are essential at least at taluka level. This kind of system helps both micro finance agencies and a clientele to keep the lending and borrowing policies in a healthy way. For example the World Bank states that "one of the most powerful ways to improve energy supply is to ensure that the energy market is determined by consumer choices that means both that the prices of energy should reflect its cost and that regulation of energy industry should encourage competition and choice" .

Technology Dissemination in Future

There is a requirement of a speedy growth in rural telecom sector. This can be ensured by evolving appropriate mechanism for regular monitoring of progress of rural telecommunications both at state and national level. High technology devices are needed for rural areas as efficient devices allow maximum energy and materials to be extracted for useful purposes. For example, use of high technology for lighting and cooking, since around 75% of total household energy is used for this purpose (Boateng, 1997). There is also a requirement of liquid fuel for lighting, simple hurricane lanterns are used presently which have very poor light output. Noorie lanterns are a major improvement in this direction. Research and Development (R&D) is also required for biodiesel and pyrolysis oil in stoves to improve their efficiency. Improvement is required in high-tech biogas reactors and storage of biogas in hydrates, porous carbon, etc. Developing nano-materials for such structures is a challenging task ahead.

Technology dissemination process also differs from generation to generation. It requires understanding of economics, financing, institutions, management, stakeholders etc. So the learned planners of government bodies should be efficient enough to take into account all the factors.

Role of Technological Institutes of National Importance

The varsities and other institutes of national importance such as IITs, NITs etc. can play a very important role in dissemination of technology in rural regions. With special R&D programs and curriculums in these institutions, various innovations can be done for developing low cost machines, cheaper and effective means of transport and other developments for rural education etc. The government should promote such courses and activities in these institutions of national importance and should accordingly fund these institutions to carry out research activities for rural uplifting. With the liberalization of the economy in the recent years, there are more such cases involving private industrial establishments and university – industry cooperation e.g. setting up of the Oysters Lab (OLAB) in BITS, Pilani. It is a semiconductor R&D lab and is the first campus based VLSI Design facility in India. Texas Instruments has set up second development facility in India in IIT-Madras.

Green technology for rural development

The green technologies are those technologies which are eco-friendly. In other words, the technologies developed by using natural resources and when adopted will not create any nuisance to the environment. In India there are number of R & D scientific organizations like Council of Scientific and Industrial Research (CSIR), Indian Council of Agricultural Research (ICAR), Indian Council of Medical Research (ICMR), Indian Institute of Technology (IIT), Conventional Universities, Agricultural Universities, Baba Atomic Research Centre (BARC) and number of private industrial research agencies are contributing in evolving one or other technology which is rather eco-friendly and can be defined as green technology. Depending on the necessity and challenges that are required for the overall development of the rural sector we need to bring in and implement at least some of the green technologies in such locations. For this purpose micro financing is very much needed for applications of green technologies. Integration of micro financing and technological application will definitely stimulate growth and overall development of the rural sector. Today we have number of green technologies namely renewable energy from wind, water, tidal energy, solar energy, development of bio-fuels from natural resources, bio-gas plants, bio-fertilizers, bio-manures, bio-pesticides, bio-waste recycling, bio-conservation, cattle farming and aquaculture, dairy and dairy products, pollution control and water purification, water conservation, rejuvenation for plantation and development of forest etc.

After witnessing a dip in 2009 on account of global financial crisis, the green sector in India is once again attracting the attention of investors and banks. Three reasons have been thought of which are favorable for investors in rural sector **i.e.** high REO's (returns on equity), increasing investor comfort with renewable generation risk, and strong commitment from the central government to ensure renewable feasibility. The growth of the green sector is substantiated by pace of lending support financially through banks for implementing green technology projects. Recently Yes bank and State Bank of India have set aside certain percentage allocation of funds to implement projects related to clean technologies. For example Yes Bank has offered Rs 700 crores for a project involving management of municipal solid waste and its disposal in an environmentally friendly manner. State Bank of India has tied up with Managing Emission, a Mumbai-based company involved in business of setting up projects for renewable energy and energy efficiency with carbon embedded assets, to provide 20, 000 energy efficient plants to rural India through micro finance loans. The project involves building bio-gas plants at farmers houses. The project aims at reducing greenhouse emission by saving conventional fuel such as fire wood, LPG and kerosene. Under the project, farmers contribute 50% of the cost and the balance 50% is financed through low interest micro finance loans from the bank. The repayment of the micro finance loan is then structured in a manner by which the income received from carbon credits is used for repayment.

Creating market environment for self sustained eco friendly green technology

Besides the support of micro finance and technology applications, development of organized markets is an essential component in bringing growth of the rural economy. Proper micro financing with the technical expertise for technological application may lead to varieties of product development. These products may be in the form of consumables/non-consumables. However to generate income the products should find a proper market so that money in the form of profit will be realized out of the sale of the products. In order to bring this kind of effective mechanism, organized and well structured market are essential at least at taluka level. This kind of system helps both micro finance agencies and a clientele to keep the lending and borrowing policies in a healthy way. For example the World Bank states that "one of the most powerful ways to improve energy supply is to ensure that the energy market is determined by consumer choices that means both that the prices of energy should reflect its cost and that regulation of energy industry should encourage competition and choice".

Credit Demand of the Poor

It is estimated that in India there exist approximately 7.5 crores poor households, out of which 6 crores are rural and 1.5 crores urban households. One estimate assumes that the total annual requirement of credit for the rural poor families would be at least Rs.15, 000 crores on the basis of a maximum need of Rs.2000/- per family. Another estimate for requirement of credit (excluding housing) is Rs.50, 000 crores assuming that annual average credit usage are Rs.6000/- per rural household, and Rs.9000/- for poor urban household. An

additional Rs.1000 crore is estimated to be required for housing per year. Apart from micro-credit, they require savings and insurance also. Meanwhile, bank advances to weaker section aggregated Rs.9700 crore during 1997-98. MFIs and SHGs are estimated to have provided about 137 crore (cumulative up to September 1998). Moreover, 36% of the rural households are found to be outside the fold of institutional credit.

Challenges of Microfinance

The main challenge currently facing the microfinance field is to increase microfinance outreach for a significant number of un-served or underserved micro entrepreneurs and poor households, many of whom live in rural areas. It analyzes constraints and opportunities to expand the provision of microfinance in less densely populated, rural areas and suggests that commercial Microfinance may hold the most promise for sustainably expanding the microfinance frontier. It reviews past lessons in rural lending and offers an analytical framework for considering issues surrounding commercial microfinance and its implications for expanding rural outreach. It elaborates the challenges of sustainably increasing rural microfinance (RMF), including credit and savings.

Donor support market intervention

In India development of market are not well organized not only at district, town and village level but also in metropolitan cities. In order to build well structured market the role of donor agencies and their intervention become an important factor. Well structured market helps in keeping and maintaining the quality of products made out of technology applications and these products in turn helps both at consumer level as well as manufactured level benefiting collaterally. This kind of market linked technology application may help micro finance industries to be sustainable benefiting each and every unit and leading to overall development of the rural sector.

CONCLUSION AND SUGGESTIONS

Microfinance plays an important role in integrating rural development and poverty alleviation. The impact of microfinance on rural development and poverty reduction has been measured in terms of several dimensions such as improved income, employment and household expenditure and reduced vulnerability to economic and social crisis.

Any developing country cannot become developed without the development of its rural base. For a country like India, where almost sixty percent of the country's population lives in primitive conditions, it becomes even more important. This development is possible through technological advancements in the nation. These advancements can be channelized to improve literacy as well, which is a major obstacle in the path of development.

Rural regions in our nation are still deprived of electricity and basic necessities. Modern technology has not touched the lives of people even after sixtytwo years of independence. Thus the Gandhian Paradigm of social progress needs to be followed effectively in our villages. We have to ensure that rural beneficiaries are not just introduced to new technologies but also entrusted with their use. A number of schemes and programs have been made for providing employment opportunities to the rural youth over the years but due to poor implementation of the programs and the absence of proper monitoring almost all the schemes have not shown expected results.

India must also tap Information Technology to the maximum extent for its development so that many of its problems can be checked through new public policies, which are supported by the scientific data. Poverty in rural areas has resulted in suicides of a large number of farmers. Therefore, the rural problems are manifold in nature but the solution is only one – 'Technological advancements coupled with increase in literacy in rural areas.'

However, integrated rural development and technology based programmes leading to incoming generating opportunities for rural population can easily be put on fast track by the use of micro financing. For implementing these technologies we have to make efforts to examine location specific technologies and its

implementation. People belonging to villages are still unaware of the banking policies and credit systems. They are lacking the knowledge of the technologies available and how microfinance is used. We must make villagers to familiarize about the technologies by conducting training and awareness programmes and the aim of these programmes should be not only on lending and repayment of microfinance but proper use of micro finance for technology implementation. NGOs should also communicate to them and share their views with villagers. Banks should convert and build up professional system into social banking system for poor. While giving micro finance to the villagers the micro finance institutions should also arrange the experts who are aware of how, when, where and which technology is being used and how best they are useful for villagers so that it will build and sustain the rural developmental activities. In these efforts, the Government of India and the State Government should also provide the support for capacity building initiative and ensure transparency and enhance credibility through disclosures.

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Spendauer of the Autom in Balatonalmádi

Photo © by Dr. Antal Szabó

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**HIGHER EDUCATION AND WILLINGNESS TO COOPERATE – IS THERE ANY
RELATION?
THE CASE OF HUNGARIAN FARMERS**

ABSTRACT

Agriculture has undergone tremendous development in recent decades, for this reason it is no longer enough to take over the experience of our predecessors, but technical-IT knowledge is also needed for successful management of an agribusiness. There are many cases in the international literature where, in addition to knowledge of technologies, the acquisition of operational knowledge is also encouraged. Acquisition of both modern technologies and economic knowledge related to operation can take place within the bounds of a formal education/ training, with the help of professional consultants, or by sharing information between farmers. With present study our aim was to examine what is expected of a well-functioning agricultural economic cooperation, and whether the expectations of agricultural entrepreneurs regarding cooperation are influenced by their formal qualifications. With the help of a rather lengthy questionnaire, we reached 435 Hungarian farmers that enabled (both in terms of gender, territorial distribution and generations) a representative survey. Based on the results, we concluded that for many aspects explored in the research there was a significant difference between farmers with and without agricultural education.

Keywords: agriculture, cooperation, education

JEL Classification: I23, I25, O13

INTRODUCTION

The agriculture has undergone tremendous development in recent decades. For the efficient and economic operation of agricultural enterprises, it is necessary not only to define a system of external and internal conditions related to production, but also the factors that affect the management of the company [Nagy - Vathy (2016)]. In order to produce efficiently, the entrepreneur must have up-to-date and comprehensive information and is only able to carry out profitable production with the necessary professional, economic, market, legal, financial and social knowledge [Kozári-Tóth (2016)].

In almost all cases, innovation is necessary for effective organizational operation and it is created through common thinking and cooperation between the members of the organization, so it's created together during production. A knowledge network is a system of connections between network members whose primary goal is to share the knowledge possessed by the members and thereby create new knowledge [Baksa-Báder (2020)]. Properly functioning interpersonal knowledge sharing ensures that the wide range of knowledge present in organizations is available in the right place and at the right time [Ergün - Avcı (2018) Park - Kim (2018)] - mainly for those elements of knowledge which, by their nature, have little codification.

The results and profitability of agricultural production are greatly influenced by the way and efficiency of cooperation between producers [Takács-György – Takács (2003), Takács (2017)]. In today's changing economic environment, the competitiveness and performance of companies, especially small and medium-

sized enterprises, can only be maintained if they work in cooperation with their partners and competitors [Takács-György-Benedek (2016)].

According to the research of Szabó and Baranyai (2017), half of the Hungarian farmers involved in their research are not willing to join or participate in any cooperation. The reasons for the absence of farmers are the retention of independence, lack of information about the forms of cooperation, they believe they don't need it, there is no collaboration they can join, or they have been held back by a previous bad experience. Hungarian producer initiatives are predominantly weak and frail, only a few stronger organizations serve the interests of producers. This is due to a tendency to cooperate and a lack of trust. It would be a very important step, with the help of early school education, to change the mental attitudes of producers and break down PSYCHOLOGICAL BARRIERS.

LITERATURE REVIEW

Sharing experience is also an essential condition for the efficient operation of agricultural companies, because today it is no longer enough to take over the agricultural experience of the predecessors [Varga et al. (2017)]. There is a need for technical-IT knowledge - we call it intelligent farming [Wolfert et al. (2017), Blok - Gremmen (2018), Popp et al. (2018)], precision [Eastwood et al. (2017), T. György K. (2017)], or digital agriculture [Shepherd et al., (2018), Bógel (2018)], or even agriculture 4.0 [Rose - Chilvers (2018), Egri (2019)]. However, in addition to technological and IT knowledge, it is important that managers also have economic and entrepreneurial knowledge [Hágen-Marselek (2017), Kassai (2020)]. One of the most obvious ways to acquire this knowledge is through education, which can take place within a formal Bologna system [Magda et al. (2017), Hamza et al (2018), Kapronczai (2018)], and may also be self-organizing [Czakó et al (2019)].

Many international literatures deal with the importance of practical education, and it is considered important for farmers to be equipped with entrepreneurial skills [Sherrard - Alvarado (2017), Tauschitz (2017)]. They reported that agricultural education focuses too much on theoretical, technical and scientific aspects. The acquisition of knowledge is also considered particularly important because it is absolutely necessary for efficient production [Jordaan et al. (2014), Mabaya et al. (2014), Sherrard, (2014)].

According to the 2016 agricultural census, in Hungary, 3.4% of farmers had higher education and 10% had secondary education. The vast majority of farmers still rely solely on their practical experience. However, it should also be mentioned that the proportion of those with no more than basic education fell from 91% to 86% between 2010 and 2016 [KSH (2016)].

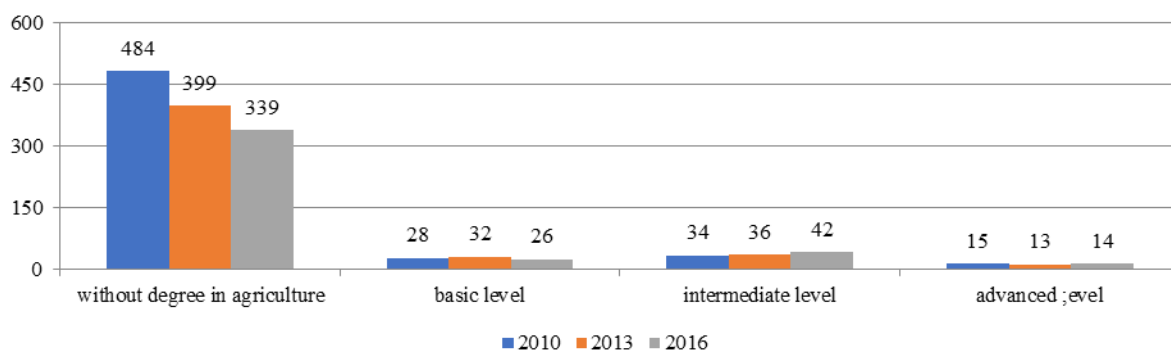


Figure 1.: Number of farmers by agricultural education in individual farms (thousand persons (source: KSH GSZŐ 2016, own editing)

In addition to educating farmers, it is also possible to outsource tasks and employ external experts. As the complexity of agricultural activity has increased, the role of expert counselling has become more important and transformed [Norton - Alwang (2020)]. The purpose of the consultants is to help the clients to the point

where as long as they can make the right decisions to increase their efficiency and profitability with sufficient knowledge and practice. Consultants need to use personalized communication tools that meet the client's needs, to enable the most appropriate knowledge transfer within an optimal time frame [Anderson - Feder (2007), Kozári (2018)].

In our neighbouring country, Austria, for example, there is an Agricultural Advisory Service, which organizes further trainings emphasizing the role of corporate governance and business management in order to achieve efficient production. They developed comprehensive operational concepts which are later analyzed in working group consultations [LKNÖ (2016)].

Ginkel (2018) in his research on the formation of networks describes that there is a wide range of cooperation between network members in a network, from intermediation activities (networking, coordination of interests, management of financial resources, management of human resources, etc.) to integrated activities. These roles require a high level of managerial, expert and entrepreneurial competence, at the same time, there is a great need for individuals in different roles to share their experiences with each other.

The Netherlands is at the forefront of agricultural networks, in the early stages of which universities or governments play a leading role, which over time, as more market opportunities emerge and operations become less risky, the leadership role may shift to another player [Dedehayir et al. (2016)].

RESEARCH QUESTION AND METHOD

The aim of our research was to explore what lies behind the lack of willingness to cooperate among agricultural entrepreneurs. The initial point of our research is that entrepreneurs do not uniformly reject the idea of cooperation, but they formulate different expectations for cooperation and, if they are met, join a particular association. The formulated expectations and the related intention to join are closely related to the qualifications of agricultural entrepreneurs. Our further assumption is that both the orientation (agricultural) and the level of education are decisive.

Accordingly, the following hypotheses have been formulated:

H1: The expectations of agricultural entrepreneurs regarding cooperation are influenced by their formal qualifications

H1a: Existence of specialized qualifications results in a significant difference in expectations for collaborations

H1b: Based on the level of specialized education, a significant difference can be detected in the expectations of agricultural entrepreneurs

The research took place in the context of a comprehensive study [Lazányi-Szűcs (2020)], which examined the operation of Hungarian agricultural companies, the characteristics of entrepreneurs and the willingness to cooperate. The present study addresses a single research issue, which aimed to explore what they think they expect from a well-functioning agricultural cooperation. A five-point Likert scale was used for the statements in the question group, “not at all important”, “not very important”, “neutral”, “relevant” and “very important” response options were available.

The first phase of the research was targeted sampling, where all parts of the country, full-time farmers working in agriculture were contacted. Subsequently, in the second phase of the research the snowball method was applied: with the help of respondents in the first phase, the online version of the questionnaire reached more than 400 farmers across the country. After data cleansing, 435 questionnaires were considered acceptable. The questionnaire can be divided into three parts. The first part sought to explore the demographic data and some basic characteristics of the agricultural enterprise, the second part examined the operation of the company, and the third part discussed the respondents' attitude towards possible cooperation, its advantages and disadvantages, and the competencies expected from potential leaders.

According to the Central Statistical Office, 72% of those employed in agriculture are men, the sample can be considered representative in terms of the gender of the respondents. Our attempt to reach all regions of the country has also proved successful, which is illustrated by the following graph. The Northern Great Plain region is slightly over-represented, the involvement of the other six regions can also be considered representative (based on KSH).

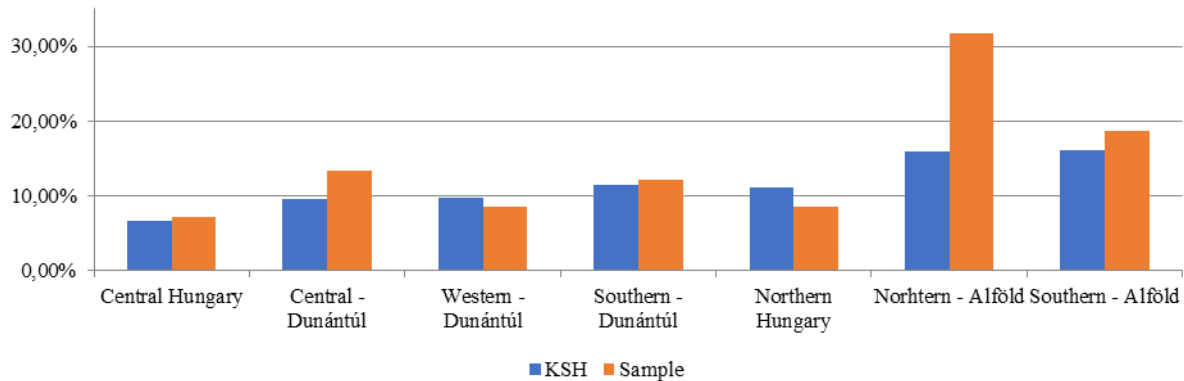


Figure 2.: Distribution of respondents by regions (KSH and own resources, own editing)

The largest share of the respondents came from the baby boom generation, which can also be considered representative in terms of the KSH census. Generations X and Y were almost equally represented in the questionnaire, while Generation Z is slightly overrepresented based on the 2016 agricultural census.

The primary objective of the present study was to examine the qualifications of the respondents, which we wanted to examine in different aspects. The data reported in the study were processed using the SPSS 20 software. Of the 435 sample, 182 stated that they had some type of agricultural education, 249 did not have any agricultural education and 4 did not wish to declare it. The sample consisted of 328 male and 96 female farmers (11 respondents did not wish to declare their gender). Almost 57% of the respondents did not have a degree in agriculture, just over 15% had primary, nearly 12% had a secondary education and more than 16% had a higher degree in agriculture.

RESEARCH RESULTS

Question no. 37 in this questionnaire focused on what farmers expect from a well-functioning cooperation. The number of cases, mean and standard deviation of the variables are summarized in the table below:

Ideally, what would you expect from a well-functioning organization?	Average	Std. Dev.
Information needed to increase production efficiency (higher income)	3,22	0,833
Information needed to increase production efficiency (increase in average yield and reproduction)	3,05	0,876
Free or discounted expert advice required for efficient operation	2,84	1,028
Discounted participation in conferences organized on the topic of agriculture	2,20	1,101
Purchase discounts	3,06	0,960
Intermediary assistance in sales	2,80	1,071
Knowledge about tender opportunities	3,04	1,059
Economic consulting and representation	2,68	1,006

Labour hire	2,10	1,130
Mediation of contractors within the group	2,08	1,070
Equipment rental within the group	2,35	1,053
Legal advice and representation	2,54	1,098
Relationship building opportunities	2,86	1,036
Informal exchanges of experience specifically for members	2,59	1,025
Activities in free time	1,60	1,269

Table 1.: the no. 37 questionnaire's average and standard deviation of variables in SPSS (own source, own editing)

However, the expectations cannot be considered homogeneous. With the help of the t-test performed via SPSS, we tried to reveal of which variables a significant difference can be detected in terms of specialized education. The tables below only show the values of the variables that give significant differences.

Ideally, what would you expect from a well-functioning organization?					
Do you have an agricultural qualification?		N	Mean	Std. Dev.	Std. Error Mean
Information needed to increase production efficiency (increase in mean yield and reproduction)	no	223	2,95	0,919	0,062
	yes	170	3,19	0,784	0,060
Free or discounted expert advice required for efficient operation	no	224	2,71	1,092	0,073
	yes	171	3,01	0,914	0,070
Purchase discounts	no	224	2,97	1,017	0,068
	yes	171	3,16	0,870	0,067
Intermediary assistance in sales	no	223	2,65	1,087	0,073
	yes	170	2,97	1,029	0,079
Knowledge about tender opportunities	no	224	2,90	1,108	0,074
	yes	169	3,22	0,966	0,074
Economic consulting and representation	no	223	2,53	1,039	0,070
	yes	168	2,85	0,929	0,072
Labour hire	no	222	1,98	1,111	0,075
	yes	170	2,25	1,140	0,087
Relationship building opportunities	no	223	2,73	1,083	0,073
	yes	168	3,00	0,948	0,073
Informal exchanges of experience specifically for members	no	224	2,43	1,031	0,069
	yes	171	2,78	0,975	0,075

Table 2.: Evaluation of various aspects of a good agribusiness network based on relevant education

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
37. Ideally, what would you expect from a well-functioning organization?		F	Sig.	t	df	Sig.(2tailed)	Mean Diff.	Std Error Diff.	Lower	Upper
Information needed to increase production efficiency (increase in mean yield and reproduction)	**			-2,813	385,961	0,005	0,242	0,086	0,411	0,073
Free or discounted expert advice required for efficient operation	*	15,952	0,000	-2,875	393	0,004	0,297	0,103	0,501	0,094
Purchase discounts	**			-1,988	387,893	0,047	0,189	0,095	0,376	0,002
Intermediary assistance in sales	**			-2,942	373,294	0,003	0,316	0,107	0,527	0,105
Knowledge about tender opportunities	*	5,933	0,015	-2,966	391	0,003	0,317	0,107	0,527	0,107
Economic consulting and representation	*	8,351	0,004	-3,072	389	0,002	0,312	0,101	0,511	0,112
Labour hire	**			-2,346	359,044	0,020	0,270	0,115	0,496	0,044
Relationship building opportunities	*	5,735	0,017	-2,607	389	0,009	0,274	0,105	0,480	0,067
Informal exchanges of experience specifically for members	**			-3,441	375,475	0,001	0,349	0,101	0,549	0,150

* Equal variances assumed, ** Equal variances not assumed

Table 3.: Expectations regarding a well functioning agribusiness network – significant differences based on relevant education (own source, own editing)

There was a significant difference between farmers with and without agricultural qualifications in terms of free or discounted expert advice required for efficient operation. More than two thirds of those with an agricultural qualification considered preferential expert advice to be essential or very important, the proportion of the unskilled at these levels is just over 64%. Among the answers that were not important at all or not very important, a higher proportion were without agricultural education (almost 16%), the proportion of skilled workers barely exceeded 5%.

As presented in the below tables, there were many structural differences between the values provided by respondents with and without relevant education.

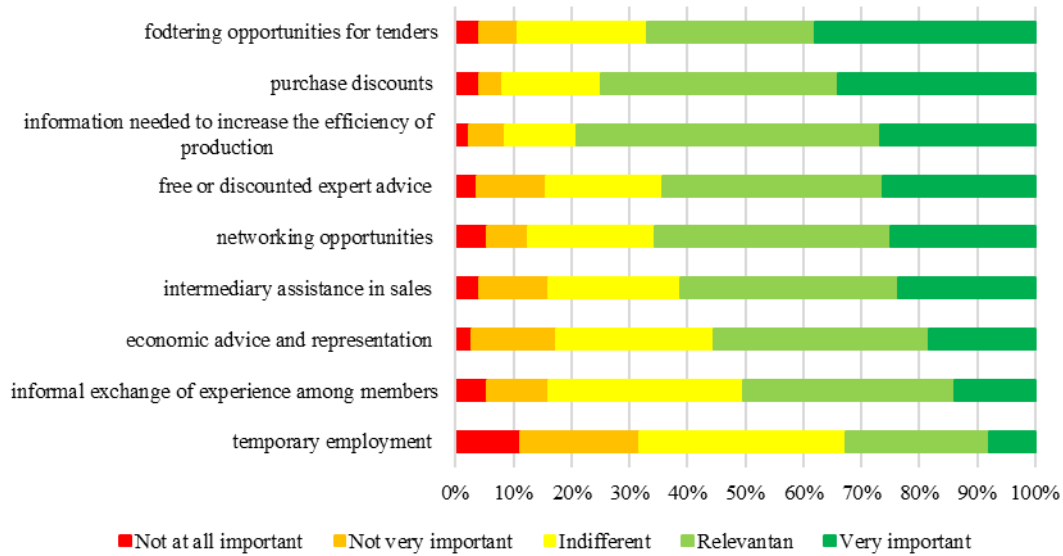


Figure 3.: Respondents’ opinion regarding the value of a network – respondents with relevant education

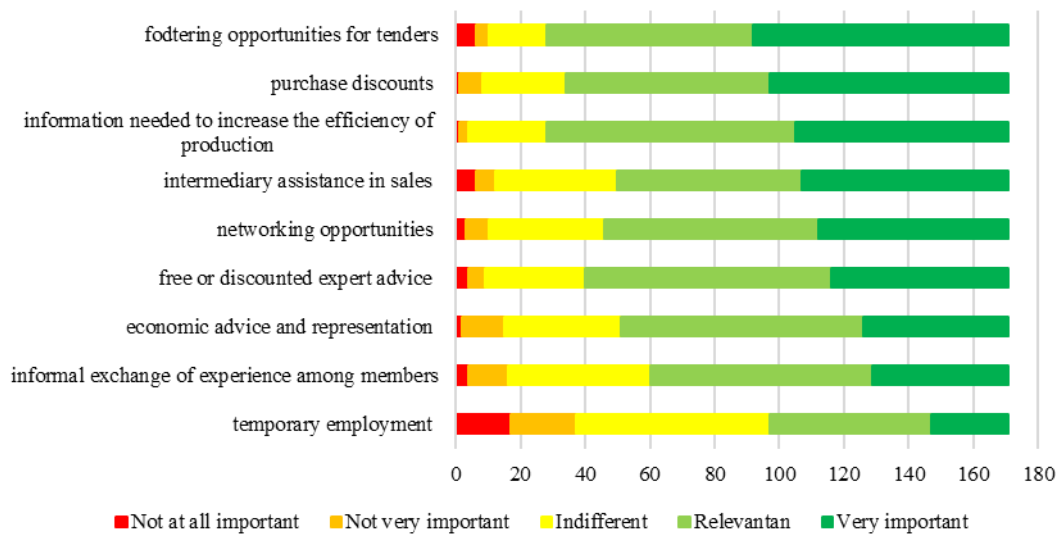


Figure 4.: Respondents’ opinion regarding the value of a network – respondents without relevant education

The information needed to increase production efficiency was considered essential by more than half of unskilled farmers, which was more than 7% higher than for the skilled, however, almost two-fifths of skilled workers considered the issue to be very important, which was nearly 12% higher than for the unskilled.

A similar trend can be observed in case of purchase discounts: more than 9% more people with an agricultural degree rated the issue as very important, and those without a professional qualification rated the issue as relevant with almost 5% more.

In the case of intermediary assistance in sales one-fifth of those without a professional qualification rated the issue as neutral, nearly two-fifths as important and roughly a quarter as very important, which is also one-fifth neutral among the skilled, one-third say it is important and according to almost two-fifths it is very important.

This trend also can be observed during describing the tender opportunities. Almost 84% of those with an agricultural qualification considered preferential expert advice to be essential or very important, the proportion of the unskilled at these levels is just over 67%. Among the answers of not important at all or not very important, a higher proportion were without agricultural education (almost 11%), the proportion of those with qualifications is just over 6%.

With regard to the possibility of economic advice and representation, as has already been observed in previous cases, a higher proportion (almost 70%) of those with a vocational qualification found it relevant in this case as well, the proportion of the unskilled at these levels is just over 55%. Among the answers of not important at all or not very important, a higher proportion were without agricultural education (almost 14%), the proportion of skilled workers barely exceeded 9%.

With regard to temporary agency work, the rate of neutral responses was the highest (above 35%) for both groups, however, it can be said that the proportion of those without vocational training represented that opinion that this is a less important aspect for them, also here a higher proportion of professionals considered it to be an essential or very important factor.

More than 73% of those with an agricultural qualification considered preferential expert advice to be important or very important in their networking opportunities, the proportion of the unskilled at these levels is a bit almost 66%. Among the answers of not important at all or not very important, a higher proportion of people were without agricultural education (almost 12.5%), the proportion of skilled workers barely exceeded 6%.

Finally, with regard to non-compulsory exchanges of experience, three-fifths of those with an agricultural qualification gave a substantial or very important rating, a little over a quarter of them considered its significance neutral, while more than a third of farmers without vocational training are neutral and more than half rated the aspect as essential or very important.

In the light of the results, we accept hypothesis H1a, as in the case of several characteristics there was a significant difference between the expectations of entrepreneurs with and without specialized qualifications.

To examine the second sub-hypothesis H1b, we compared the responses of entrepreneurs based on the level of education.

As to what, ideally, farmers expect from a well-functioning organization, compared to the level of education of the farmers, after performing the t-test in the SPSS, no significant difference could be detected in any of the previously examined questions.

SUMMARY

The international and domestic literature draws attention to the fact that the agricultural sector expects more and more complex knowledge and skills from those who work in it. One way to acquire knowledge is through formal education, another possibility is the acquisition of knowledge through informal channels, which is most often realized in the form of collaborations and network organizations. In our research, we analyzed the expectations of farmers against a well-functioning producer cooperation. There was a significant difference in the results of nine questions depending on the agricultural educational level of the farmers. In the light of the research results, it can be said that the professional qualification significantly influences what entrepreneurs expect from an agricultural economic cooperation. However, based on the level of training, we did not find significant, biased differences. Those with specialized training generally expect benefits / services from cooperation that supplementing their own knowledge, skills, such as tenders, legal knowledge or enabling them to exchange experiences through informal channels, such as a networking and informal exchange of experience. In connection with the research, it can be said that most farmers see the benefits associated with

cooperation. However, the perceived level of a given benefit varies, and only those who consider the perceived benefits to be important will be those who would like to join associations, networks, which are able to make these available to them.

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ABSTRACT

This publication presents the studies about various important aspects of the economic, social and political development on the regional, sub-regional and global level in this uncertain time for humanity due to the COVID pandemic. We must adopt the necessary changes in our everyday lifestyle, to get the new skills, through education and learning lessons of the lockdown, isolation, epidemic crisis and managing the risks for sustainable development, innovations and results-oriented solutions and the new key role of the ERENET network members for cooperation and collaboration. The results dedicated extensive processes are necessary to be launched by ERENET may involve a wide range of knowledge institutions and SME's, Non-Governmental Organizations, experts and practitioners that allow direct interaction between different knowledge holders and political decision-makers, as well as a scientific to minimize the impact of the education lockdown, food crisis and economic turbulences in our society.

Keywords: COVID-19, ERENET, NGRO

JEL Classification: F35, G21

New Corona Virus - COVID-19 pandemic has aggregated existing challenges confronting emerging countries resulting in a new array of issues, which could potentially inhibit the implementation of the Public Health guidelines, providing Urban and Rural Communities better healthcare programs and social-economic support. The pandemic calls for unprecedented actions by National Governments, Healthcare systems and Small and medium-sized enterprises, SMEs. It requires more than ever-innovative and collaborative measures by all countries and the global community to contain the spread and mitigate its far-reaching repercussions.

Global and local disasters, climate change and environmental degradation have impacts on human mobility, requiring an international response based on human rights. Some slow onset events and processes, such as droughts, floods, rising sea levels, land degradation and storms, cause millions of people to leave their homes every year, moving either within their own country or abroad. Even if the consequences of environmental degradation on human mobility are difficult to isolate, as other drivers of migration such as economic, social and political conditions and processes are interlinked, there is consistent evidence showing that environmental changes exacerbate existing vulnerabilities, affect human livelihoods and living conditions, and act as a push factor.

The world is facing a multitude of asymmetric crises. We are facing an urban and rural crisis, with an increasing number of unemployment, inflation, migration from rural areas to cities, income inequalities, gender inequalities, corruption, social fragmentation and polarization, youth unemployment and chronic poverty. Air pollution and nearly a quarter of the urban population living in slums; a health emergency, exacerbated by the coronavirus epidemic and the rise of chronic diseases; unsustainable food and land-use systems that drive environmental degradation and poor nutrition; deforestation, commercialization of agriculture, and other unsustainable land-use practices drive the climate crisis. As COVID-19 has spread, it has underscored how interconnected our world is and the importance of science in ensuring a sustainable future. The COVID-19 pandemic has had worldwide economic and social consequences, with entire countries under lockdown and various industries shut down.

This is a significant challenge for all citizens to deal with the current global outbreak of Coronavirus - COVID-19, which has disrupted human health globally and creates demand and supply shocks in all economic sectors, to varying degrees and at different rates. Although the agricultural sector tends to be more resilient than other sectors, to the extent that the pandemic disrupts regional and international trade, the food system in developing countries can still take a significant hit. Moreover, for countries that rely on food imports, a food system crisis may hit earlier than the effects of the pandemic itself. In the short run, demand can decrease significantly due to loss of income and overall economic slowdown. This is particularly critical for small and medium-sized enterprises (SMEs) in the midstream and downstream parts of the Food sector (i.e. processing, transportation and distribution), as well as for SMEs outside the Food Systems.

Pandemic certainly has affected some segments of Agriculture, Agribusiness, Agricultural Cooperatives, target groups more severely than others have. One possible approach would combine agricultural and social protection support to address short-term needs as well as speed up to medium- to long-term recovery. Central to this approach would be food systems. With their ability to connect rural and urban areas and to create employment all along the value chain, they are invaluable to any recovery effort.

It is clear that Covid-19 exposed critical vulnerabilities and fragility of the local food systems, straining supply, disrupting food chains and increasing the food insecurity of millions of people globally. The pandemic has made clear that food systems must change if they are going to be resilient, achievable, and ready for future crises, most notably climate change. The question is how the food systems convert in developing countries rapidly and effectively. How do we reduce vulnerabilities, high commercialization of the prices on food and risks in food systems as complex and multi-layered as the local food system in emerging countries?

We have identified specific measures to adapt and build rural people's resilience to COVID-19 and we are trying to continue to develop concrete plans to support the COVID-19 response and to avoid setbacks to developmental progress already achieved. A broader strategy along the lines described above is also under development, which will address immediate needs as well as ensure the long-term resilience of our Farmers and Family Farmers.

- The climate crisis alongside with current pandemic thrusting the worlds farming communities into deeper poverty while destroying Biodiversity, Forests and other ecosystems. To learn the lessons given by COVID-19 we must be oriented on the solution-focused discussions and we should have answers to these questions:
- What are the most crucial actions National Governments and Food Companies must be taken now to bring about learning the lessons of the first and second waves of the Covid-19, climate change and resilience for the world's rural Farmers and Family Farmers.
- How can all of us better support new economic and social programs to gain success and empowerment for rural and urban communities?
- How exactly does climate-smart agriculture support those who feed us to adapt to the crisis, and how can we scale the best Business Models up rapidly and sustainably?

We all agree that we need to explore new policies, social and economic strategies for rural and urban communities, strengthening SMEs, which should base on the local context of the respective region. It must be beneficial for natural and human-made environment amalgamate in a way that it fulfills future growth and trends without disturbing the basics of life.

To continue to strategize on how to build back better resilient communities after COVID19, it is imperative that disaster risk reduction and resilience building are at the forefront indeed the core of national recovery and rehabilitation efforts.

It has also become necessary to urgently strengthen rural and urban community resilience to climate Change-related risks, better assist affected communities to build back better in the aftermath of these disasters, and support developing countries to make policy and investment decisions that reduce existing disaster risk and prevent the creation of new risk factors.

I think resilient recovery from the impacts of COVID19 will not be possible without conscious efforts to boost global and regional resilience on all fronts, social, economic and environmental. It is important to take strategically, calculated and measurable collective actions to support the efforts of countries and communities in special situations. re National Governments ready to respond to most urgent questions- How can emerging countries develop and implement policies and programs to strengthen preparedness, build resilience, reduce forced migration and reduce disaster risk because of the COVID pandemic? What international support do emerging countries needs in terms of capacity, knowledge, access to the latest science and technology, and financing instruments, to develop and implement modern human health protection, multi-hazard and multi-sectoral disaster risk reduction strategies that include climate and pandemic risks among others? How can we capitalize on our efforts to build back better from the COVID19 disaster to reduce Food System risks, strengthen resilience to climate change risks, and support the implementation of national priorities for sustainable development?

One of the drivers of this increased risk is the declines in our food systems, agroecosystems, often driven by agriculture, which at the same time, depends on healthy ecosystems to produce the food we need. Because the world around us is changing faster than ever before, it is changing politically, socially, technologically, economically as well as environmentally, and the question is how to be prepared and be ready for coming changes. Why Our Fast-Changing World requires us to change our lifestyle, mindset and how we can cooperate and collaborate on a regional and global level. Climate change, a growing global population, and volatile food and energy prices have the potential to push millions more vulnerable people into extreme poverty and hunger by 2030. How are we adapting to a fast-changing world?

Urgently needed to continue cooperation among Countries and Regions through whole-of-government and whole-of-society approaches as well as national to local coordination to fight against COVID-19, with a focus on digital transformation. Developing countries like Georgia, which been affected by the COVID-19 pandemic, due to the high economic dependence on tourism, which has collapsed because of border closures and restrictions. As well as the COVID-19 pandemic has created the perfect storm of overlapping health, Food Crisis, inflation, unemployment and social crises and must be underlined the importance of the social distancing, e-learning and digital government in the post-COVID-19 era and how technology partnerships can be mobilized in the regional and global dimension in the fight against the pandemic.

We now have another challenge as the world is changing, and these changes are rapid and fastest, are we adapting to a fast-changing world and how to improve the quality of life in emerging countries? Urgent and bold policy measures are needed, to not only contain the pandemic and save lives but to protect the most vulnerable societies, businesses from bankrupts, small and medium-sized Enterprises and Family Farmers as most sensitive social and economic entities from economic ruin and to sustain economic growth and financial stability. Countries, regions, states, municipalities, and companies worldwide are confronting the COVID-19 emergency in various ways. Food systems are at a critical juncture—they are evolving quickly to meet growing and changing demands but are not serving everyone's needs. The worsening coronavirus pandemic is likely to increase hunger and malnutrition, as economic disruption and loss of livelihoods put the poor and other

vulnerable groups at great risk. Achieving food security requires integrated approaches that respond to the multiple, interconnected causes of malnutrition and raised prices of food.

Building more inclusive food systems can create greater resilience in the face of such shocks and bring a wide range of economic and development benefits to all businesses, especially for small food producer companies and must be initiated more efficient policies, strategies and action plans. More direct and targeted investments are necessary for a growing range of innovative, digital tools and remote technologies that can promote inclusion and minimize the human factor (to avoid virus transmission) in the whole food chain to highlight the imperative of inclusion to make food systems work for everyone. Be focused on green recovery and digital technologies are vital for many countries and societies as well as SMEs. This can only happen with the leadership from the education sector across the world and by learning the lesson by Covid-19. Together, we need to emerge stronger by fostering resilience to future shocks like new outbreaks, mutations of the viruses, etc.

Non-Governmental and Research Organizations have an extra important key role in setting many social and economic programs, about learning the lessons of the COVID-19 as the longer-term initiatives within ERENET Network. We must combine complementary strengths and expertise with the common goal of ERENET as the most active and pro-business network in Europe.

More funding and Business Angels are necessary for measures that significantly mitigate the negative effects of the coronavirus pandemic in developing and emerging countries. Many mob apps and new platforms can identify, in just a few minutes, the most relevant partnership for e-commerce, e-marketing, creative and digital issues for Farmers and large-scale Agribusiness Companies.

With over 75% of citizens now living in urban settings, cities and regions are more than ever on the frontline when a disaster strikes. National Governments at all levels, and in particular local and regional authorities, have been called upon to provide emergency services, coordinate efforts and mitigate as far as possible the impact on economies. In an effort to contain, the impacts of the virus, local authorities have taken various measures in addition to national measures, to reduce the existing risk and prevent future risks associated with biological hazards. The role of local initiatives and processes, such as volunteering networks, has been critical in responding to the immediate needs and recovery efforts. At the same time, cities and regions continue to face risks in their local contexts, which make the landscape of risk particularly complex and increase the vulnerability of citizens, vital systems and economies.

As rural and urban communities work to recover from COVID-19, now is the best moment to rethink how we live, how we work, and go green and innovate. Using technologies, knowledge to become more sustainable, more fiscally responsible, and less time wasteful is an imperative now more than ever. Small and Medium Businesses are able to survive during the crisis effectively having prepared the new strategy on Post-Pandemic Recovery and Transformation, how to adopt and to mitigate a new reality. SMEs' edibleness to revitalize the businesses through innovations, blockchain technologies and smart farming in rural areas. SMEs empowered with a new market analysis, better coordination, integration, going on green technologies, circular economy and zero waste management, monitoring, and evaluation functions indeed can survive. To reduce all climate change risks in Agriculture, through the help of all the member Farmers and Ag Cooperatives, by establishing early warning and emergency alert smart systems to provide accurate and timely advice to national or local emergency response on risk mitigation. Further, assessment tools on the existing and potential hazards and risks brought about by climate change to vulnerable areas and ecosystems could be developed.

ERENET network has a great mission to carry out new market and business and downstream parts of the Food sector (i.e. processing, transportation and distribution), as well as for SMEs outside the Food Systems.

Pandemic certainly has affected some segments of Agriculture, Agribusiness, Agricultural Cooperatives, target groups more severely than others have. One possible approach would combine agricultural and social protection support to address short-term needs as well as speed up to medium- to long-term recovery. Central to this approach would be food systems. With their ability to connect rural and urban areas and to create employment all along the value chain, they are invaluable to any recovery effort.

It is clear that Covid-19 exposed critical vulnerabilities and fragility of the local food systems, straining supply, disrupting food chains and increasing the food insecurity of millions of people globally. The pandemic has made clear that food systems must change if they are going to be resilient, achievable, and ready for future crises, most notably climate change. The question is how the food systems convert in developing countries rapidly and effectively. How do we reduce vulnerabilities, high commercialization of the prices on food and risks in food systems as complex and multi-layered as the local food system in emerging countries?

We have identified specific measures to adapt and build rural people's resilience to COVID-19 and we are trying to continue to develop concrete plans to support the COVID-19 response and to avoid setbacks to developmental progress already achieved. A broader strategy along the lines described above is also under development, which will address immediate needs as well as ensure the long-term resilience of our Farmers and Family Farmers.

- The climate crisis alongside with current pandemic thrusting the worlds farming communities into deeper poverty while destroying Biodiversity, Forests and other ecosystems. To learn the lessons given by COVID-19 we must be oriented on the solution-focused discussions and we should have answers to these questions:
- What are the most crucial actions National Governments and Food Companies must be taken now to bring about learning the lessons of the first and second waves of the Covid-19, climate change and resilience for the world's rural Farmers and Family Farmers.
- How can all of us better support new economic and social programs to gain success and empowerment for rural and urban communities?
- How exactly does climate-smart agriculture support those who feed us to adapt to the crisis, and how can we scale the best Business Models up rapidly and sustainably?

We all agree that we need to explore new policies, social and economic strategies for rural and urban communities, strengthening SMEs, which should base on the local context of the respective region. It must be beneficial for natural and human-made environment amalgamate in a way that it fulfills future growth and trends without disturbing the basics of life.

To continue to strategize on how to build back better resilient communities after COVID19, it is imperative that disaster risk reduction and resilience building are at the forefront indeed the core of national recovery and rehabilitation efforts.

It has also become necessary to urgently strengthen rural and urban community resilience to climate Change-related risks, better assist affected communities to build back better in the aftermath of these disasters, and support developing countries to make policy and investment decisions that reduce existing disaster risk and prevent the creation of new risk factors.

I think resilient recovery from the impacts of COVID19 will not be possible without conscious efforts to boost global and regional resilience on all fronts, social, economic and environmental. It is important to take strategically, calculated and measurable collective actions to support the efforts of countries and communities in special situations.re National Governments ready to respond to most urgent questions- How can emerging countries develop and implement policies and programs to strengthen preparedness, build resilience, reduce forced migration and reduce disaster risk because of the COVID pandemic? What international support do emerging countries needs in terms of capacity, knowledge, access to the latest science and technology, and financing instruments, to develop and implement modern human health protection, multi-hazard and multi-sectoral disaster risk reduction strategies that include climate and pandemic risks among others?. How can we capitalize on our efforts to build back better from the COVID19 disaster to reduce Food System risks, strengthen resilience to climate change risks, and support the implementation of national priorities for sustainable development?

One of the drivers of this increased risk is the declines in our food systems, agroecosystems, often driven by agriculture, which at the same time, depends on healthy ecosystems to produce the food we need. Because the world around us is changing faster than ever before, it is changing politically, socially, technologically, economically as well as environmentally, and the question is how to be prepared and be ready for coming changes. Why Our Fast-Changing World requires us to change our lifestyle, mindset and how we can cooperate and collaborate on a regional and global level. Climate change, a growing global population, and volatile food and energy prices have the potential to push millions more vulnerable people into extreme poverty and hunger by 2030. How are we adapting to a fast-changing world?

Urgently needed to continue cooperation among Countries and Regions through whole-of-government and whole-of-society approaches as well as national to local coordination to fight against COVID-19, with a focus on digital transformation. Developing countries like Georgia, which been affected by the COVID-19 pandemic, due to the high economic dependence on tourism, which has collapsed because of border closures and restrictions. As well as the COVID-19 pandemic has created the perfect storm of overlapping health, Food Crisis, inflation, unemployment and social crises and must be underlined the importance of the social distancing, e-learning and digital government in the post-COVID-19 era and how technology partnerships can be mobilized in the regional and global dimension in the fight against the pandemic.

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ERENET network has a great mission to carry out new market and business



Blackbird eats red berries

Photo © by Dr. Antal Szabó

CALL FOR PAPERS



FIKUSZ is an annual conference organised by the Óbuda University – Keleti Faculty of Business and Management for young researchers: advanced Masters Students, PhD Students and young PhDs.

The conference program will consist of a number of invited lectures and contributed papers. Contributions from all over the world are invited and solicited. The meeting is set out to attract scholars with different backgrounds. The language of the meeting is English.

The following topics are invited:

- Business and marketing
- Finance and economics
- Human relations, Social sciences
- IT and mobile security

FIKUSZ '20

20 November, 2020

The conference will be organized online this year. To support research collaboration, thematic online workshops are planned on topics of most interest.

Call for Papers of FIKUSZ 2020

see at <http://kgk.uni-obuda.hu/sites/default/files/FIKUSZ-cfp-2020-v3.pdf>

Registration form is available at https://kgk.uni-obuda.hu/fikusz/registration_form

The deadline for registration is 20th October 2020.

Contact us for additional information about the event, together with details:

- **Dr. Popovics Anett**
phone: +36-1-666-5195
e-mail: popovics.anett@kgk.uni-obuda.hu
- **Dr. Kelemen-Erdős Anikó**
phone: +36-1-666-5195
e-mail: kelemen.aniko@kgk.uni-obuda.hu

NEWS

SOCIETY 5.0

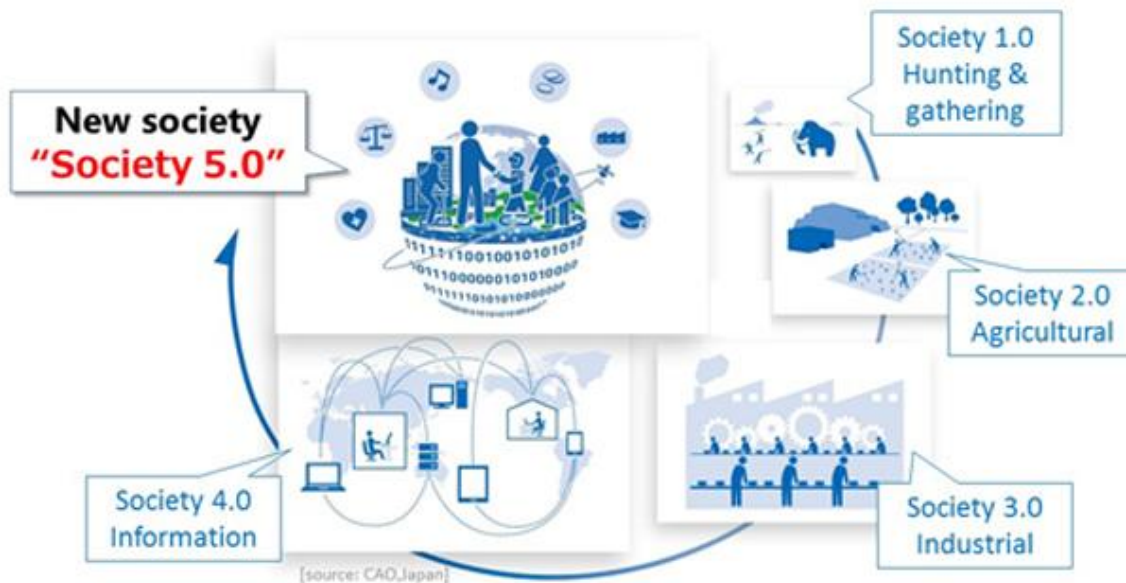
exempted from the https://www8.cao.go.jp/cstp/english/society5_0/index.html

What is Society 5.0?

One definition: "A human-centered society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space."

Society 5.0 was proposed in the **5th Science and Technology Basic Plan** as a future society that Japan should aspire to. It follows

- the hunting society (Society 1.0),
- agricultural society (Society 2.0),
- industrial society (Society 3.0), and
- information society (Society 4.0).



Achieving Society 5.0

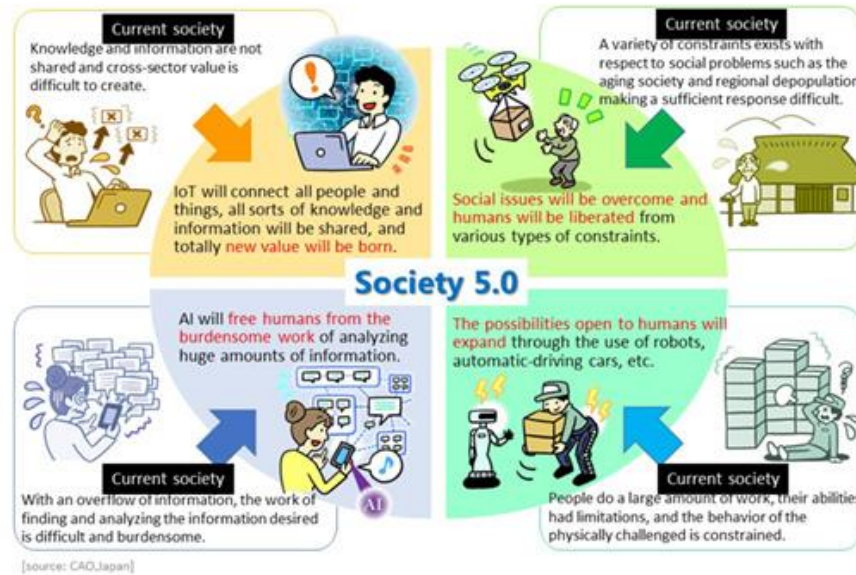
In the information society (Society 4.0), cross-sectional sharing of knowledge and information was not enough, and cooperation was difficult.

Because there is a limit to what people can do, the task of finding the necessary information from overflowing information and analyzing it was a burden, and the labor and scope of action were restricted due to age and varying degrees of ability. Also, due to various restrictions on issues such as a decreasing birthrate and aging population and local depopulation, it was difficult to respond adequately.

Social reform (innovation) in Society 5.0 will achieve a forward-looking society that breaks down the existing sense of stagnation, a society whose members have mutual respect for each other, transcending the generations, and a society in which each and every person can lead an active and enjoyable life.

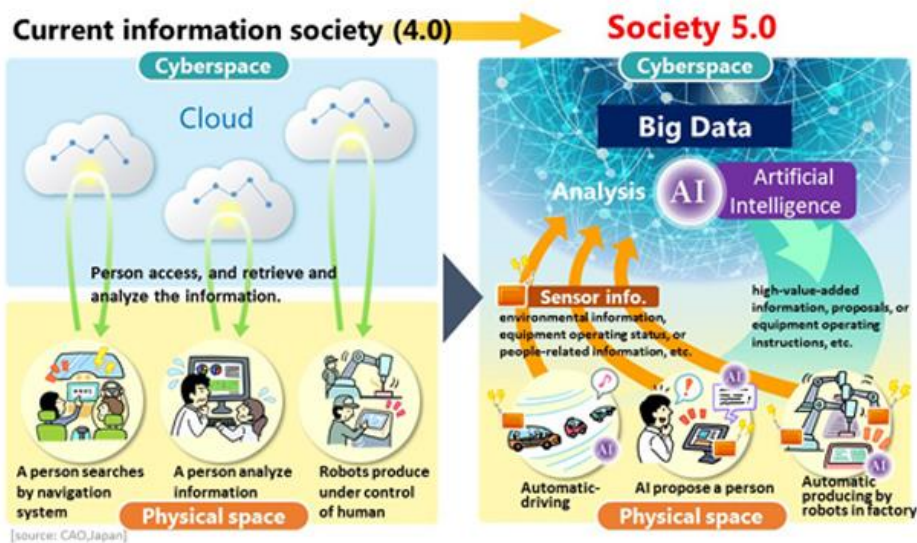
How Society 5.0 works?

Society 5.0 achieves a high degree of convergence between cyberspace (virtual space) and physical space (real space). In the past information society (Society 4.0), people would access a cloud service (databases) in cyberspace via the Internet and search for, retrieve, and analyze information or data.



In Society 5.0, a huge amount of information from sensors in physical space is accumulated in cyberspace. In cyberspace, this big data is analyzed by **artificial intelligence (AI)**, and the analysis results are fed back to humans in physical space in various forms.

In the past information society, the common practice was to collect information via the network and have it analyzed by humans. In Society 5.0, however, people, things, and systems are all connected in cyberspace and optimal results obtained by AI exceeding the capabilities of humans are fed back to physical space. This process brings new value to industry and society in ways not previously possible.

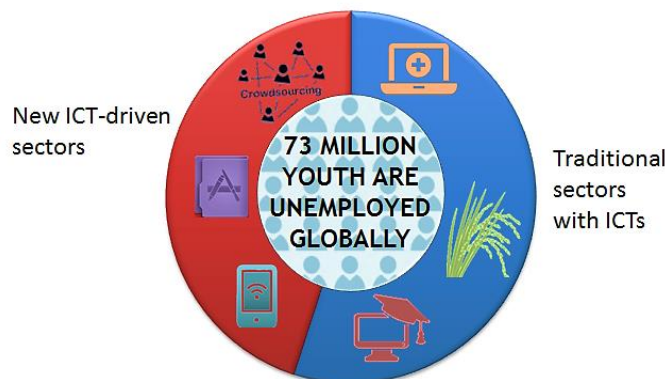




YOUTH EMPLOYMENT AND ENTREPRENEURSHIP

Today, 73 million young people are unemployed worldwide, and three times as many are underemployed — often those working in the informal sector, facing low wages, no benefits, and a higher probability of being laid off. A further 621 million youth are said to be "idle" — not in education or training, and not looking for employment. Youth make up 17 per cent of the world's population and 40 per cent of the world's unemployed.

Digital Opportunities for Youth



"When youth struggle at the beginning of their careers the repercussions can last a lifetime. This is not a future we want for the next generation, making it imperative that we take concrete steps to ensure youth have meaningful work opportunities and can lead productive and fulfilling lives," says Brahim Sanou, Director of the ITU Telecommunication Development Bureau (BDT), in his foreword to *Digital opportunities: Innovative ICT solutions for youth employment*. The ongoing information technology revolution is transforming established sectors from agriculture to health and creating new ones from microwork to apps development. ICT represent not only a cross-cutting tool but can help in reducing unemployment. The sector is marked by a pressing need for a wide range of ICT jobs. This means that highly qualified youth in technical fields have significant opportunities available to them.

In response to youth challenges and emerging ICT opportunities ITU developed a Report on ***Digital opportunities: Innovative ICT solution for youth employment*** aiming to cast a spotlight on promising solutions in the digital landscape for youth. In support to this Report, ITU provides open access to a [Youth Employment and Entrepreneurship Resources Database](#) for finding digital jobs, information on entrepreneurship, learning technical and soft skills, finding a mentor, and many other valuable services. You might download this report from the <https://www.itu.int/net4/ITU-D/cds/sis/Youth/Resources/index.asp>

Source: <https://www.itu.int/en/ITU-D/Digital-Inclusion/Youth-and-Children/Pages/Youth-Employment-and-Entrepreneurship.aspx>



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The address of the ERENET Secretary sees below:

Dr. Antal Szabó, Scientific Director

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