AERC Foundation Day Lecture 2015

Agricultural Economics: Don't be in Hurry to Write an Obituary!

by

Prof. R. S. Deshpande
National Fellow,
Indian Council of Social Science Research &
Former Director, Institute for Social and Economic Change,
VKRV Rao Road, Nagarbhavi, Bangalore, Karnataka

Agro-Economic Research Centre
For the states of Gujarat and Rajasthan
(Ministry of Agriculture & Farmers Welfare, Govt. of India)
H. M. Patel Institute of Rural Development,
Sardar Patel University
Vallabh Vidyanagar, Anand, Gujarat, India

July 2015

Felicitation of Dr. R. S. Deshpande by
Dr. Harish Padh, Hon. Vice Chancellor of our University

Dr. R. S. Deshpande delivering the lecture

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About the Centre:

The Agro-Economic Research Centre (AERC) for the states of Gujarat and Rajasthan was established in July 1961 at the Sardar Patel University, Vallabh Vidyanagar by the Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, New Delhi. AERC has been working as an associate institution of S. P. University and enjoying autonomy status in its working. The Centre has completed 55 glorious years (1961-2015) of its journey marked by both achievements and challenges. During these years, the Centre has emerged as a strong policy feedback centre of the Ministry of Agriculture, Government of India due to hard work and strong commitment of the staff in the Centre. The focus of research effort in the initial stage was on comprehensive village surveys and resurveys in order to understand the process and direction of change at the village level. Subsequently, the emphasis of research has shifted to problem oriented studies. The Centre has by now completed 163 problem-oriented studies, 21 village surveys and 4 village resurveys. During its long journey, the Centre has brought remarkable improvement in every aspect of research including methodological base of the studies. The studies have come out with useful findings and policy implications for agricultural and rural development of the states of Gujarat and Rajasthan.

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Dr. S.S. Kalamkar
Director and Professor
Agro-Economic Research Centre
(Ministry of Agriculture & Farmers Welfare, Govt. of India)
H. M. Patel Institute of Rural Development
Sardar Patel University, Vallabh Vidyanagar, Anand, Gujarat.
Ph. No. +91-2692-230106, 230799; Fax- +91-2692-233106
Email: director.aerc@gmail.com; directoraercgujarat@gmail.com
Website: www.aercspu.ac.in; www.spuvvn.edu

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Agricultural Economics: Don't be in Hurry to Write an Obituary!

R S Deshpande[1]
National Fellow
Indian Council for Social Science Research
Email- rs.kalbandi@gmail.com

Honourable Vice-Chancellor of this illustrious University Professor Harish Padh; one of the ablest administrators of Karnataka and my friend Dr. Ashok Dalwai; the octogenarian and *Poojniya* to all of us Professor Mahesh Pathak; the person who is bubbling with energy Dr. Kalamkar, Ladies and Gentlemen. It is a pleasure to be with you all on this occasion. I feel honoured while taking this coveted

[1]This is a revised version of the Foundation Day Lecture delivered at AERC, Sardar Patel University, Vallabh Vidyanagar on 1st July 2015. Consequently, I revised the spoken script to an academic paper by adding references and making certain points emphatic and clear. It took more than expected time due to my other engagements and owe the responsibility for that. I am grateful to Prof Mahesh Pathak, Prof Kalamkar and all friends at AERC Vallabh Vidyanagar. Thanks are due to Professor M G Chandrakanth, University of Agricultural Sciences, Bangalore provoked me many a times on some themes. Dr Khalil Shah at ISEC, helped me with information that I used here. My grateful thanks are due to him. Leaving a few errors unattended is my usual habit. I feel that keeps the reader on tows and for that I beg your tolerance.

podium for various reasons. First, I consider myself lucky to have got this privilege to share the dais with Dr. Ashok Dalwai, who is not only an excellent Agricultural Economist but also bestowed with a great responsibility of policy making for agriculture at the Centre. It was really enjoyable what Dr Ashok Dalwai spoke extempore and gave extremely useful insights. Second, I had this chance to interact with the faculty here and especially with Professor Mahesh Pathak, a true Professor of my senior generation. Third, I cherish this honour of having given the chance to deliver this very prestigious Foundation Day lecture under the series studded with great luminaries. I am humbled to be a part of that elite group. As you know, I am going to speak on a subject which may create flutter / controversies but that is very close to my heart and bothered me since quite some time. Dr Ashok Dalwai depicted his in-depth understanding impromptu through the power of his points, as I do not have that power in my points, I sought help from the Power Point.

Introduction

I chose this particular topic with a definite purpose. It has been agitating in my mind for a long time without a proper vent and I am going to put in all my experience in research and teaching to emphasise the theme. For years, I am continuously bothered about the future of our discipline and that we, as agricultural economists, are fast losing

the direction and its usefulness to the country. We are drifting away from the society, farm and farmers. Our research is becoming esoteric and satisfies merely the paper achievements (with greatest negative contribution by the UGC sponsored Academic Performance Index (API)). Recently, Professor Mruthyunjaya expressed his anguish and disdain in the Presidential address to the Agricultural Economics Research Association, about the way Agricultural Economics Research is taking shape in the recent past. He spoke my heart out. Therefore, I thought, I must pick a few threads from his lecture, to build on my theme. I am purposefully provocative while giving the title to this lecture as "Agricultural Economics: Don't be in Hurry to write an Obituary"! Yes, because, I am concerned about some one of us out there is in a hurry to write an obituary note of the subject? As you all know, obituary is a death note, a note after the death of a person or subject. Are we in hurry or nearing to demolish core agricultural economics; or am I hurrying in saying that? Do I sound cynical ?, while saying, thank you 'agricultural economics', you have done your job and now good bye and rest in peace, allow us get into the maze of mundane equations and models that are far drawn from the reality of farm and farmers. Unfortunately, yes, we are in hurry in misusing the discipline to the core. Let me elaborate.

There are two pictures of India that we see now; one is the fast developing urban economy

of India and another one is the peripheral rural economy from which urban sector draws most of the resources (strength). Any keen observer would say that the two pictures are slowly moving towards merging. From one side urban agglomerations are steadily swallowing the rural hinterlands and on the other the rural areas are fast adopting urban consumerism. The two opposite journeys have strong economic significance. This merging of economic differences is not without externalities to both the regions, it is detrimental to the rural economy as also stressful for the urban environment. There is a lot of economics and political economy involved in this silent transformation. On one side the issues in the rural economy are getting distended whereas, the urban consumerism based problems are dominating the discussions and cause economic weakening in the rural sector besides causing strong rur-urban migration. Even in simple statements in agricultural economics teaching, we are not careful in describing this phenomenon. Almost proverbially, many of us have been repeating that, '*60 per cent of India's population depends on agriculture*' repeating the vintage textbook phrases. But when we say this, are we patently wrong? Because, none of us can depend on anything else but food & agriculture. Therefore, 100 per cent of the population of this country depends on food and food is produced not in factories, but only on agricultural lands. Thus we cannot undermine the economics of agriculture and push that into the baskets of traditionally fixed syllabi.

Agricultural economics has historically emerged as an important branch of knowledge. Francois Quesnay (1758) a French Physiocrat gave an explanation in his famous work *Tableau économique* (Economic Table), for conversion of land into agricultural output to derive profits. That was possibly the first and purely technocratic explanation of agricultural economics. The legislation in the American Senate by Vermont Justin Morrill signed by President Abraham Lincoln in 1862 and known as Morrill Act helped to establish the Land Grant Colleges heralding teaching of agriculture as a science in USA. Excellent teaching and training are pre-requisites of good agriculture. Followed by this, the Hatch Act created the Agricultural Experiment stations in a controlled environment in US. The experiments were monitored to understand the value added. That should be called as the beginning of the entry of economics in the field of agriculture.

It is well known that agricultural economics developed under the shadow of Neo-classical economics and borrowed substantially from the theory of the firm. To begin with Adam Smith's "Wealth of Nations" that dwells on agriculture in some portion. Actually, it was with the American Economic Association devoting one full session in their 1907, Annual Meeting to the question "What is Agricultural Economics?", the subject was taken seriously. At the same time the beginning was made with the text book of Henry C Taylor, 1905, that Agricultural Economics knocked the doors of

the classrooms. Further this was strengthened with the data from developing countries. Dears after that, agricultural economics has gone through transmutation that shaped the discipline for more than a century. It is not strange that the tenets of the disciplines were stated by the economists of developed nations and the applications were set in developing countries following these theories. This was accomplished tactlessly, without calibrating it to suit the local conditions. I am attempting here to trace this evolution (or transfiguration) and the steady decline in dissemination of essential knowledge as also the drift away from the core issues of concern to the farm society.

Roots of Agricultural Economics

When we walk back in the history of India, we visualise that over the past century & half, the development of agricultural economics was phenomenal but entered into a drag in the recent decades. Following my preferred methodology of *phaseology*, I would put this entire period into four phases for the purpose of easy understanding. The first phase coinciding with the first half century during the British Raj. I start with 1857, and classify the first phase as 1857 to 1901. It is the year 1857 that marked the first war of independence. (It took us up to 1977, to call it as war of independence and till 1977, in every history text book, we taught it as *Sepoy Mutiny* against the British Raj, for almost

three decades in Independent India.) One must bear in mind that British did not come here as philanthropists but as market agents to generate & transfer surplus originating in this economy to Britain. Here, I refer to the writings of Justice Mahadev Govind Ranade's lectures (delivered during 1872-73), who demonstrated that the quantum of transfer of wealth, taking place from India to Britain, and estimated the outgo of gold and silver at Rs 436 crores at current prices (Sovani (Eds), 1963, p 39). Dr Ambedkar estimated the home bond debts payable to Britain as £ 4,38,94,400 by 1858 (Ambedkar 1915, p31). In his thesis at Columbia University on the Finances of East India Company he also underscored the point that huge resources were transferred to England during those years. (See Ambedkar, 1923) The kind of wealth that was been transferred included besides cotton, gold and other materials. The terms of trade were worsening significantly. We were exporting goods of larger values than we were importing, the drain was truly significant (Sovani (Eds), 1963, p.16). India was initially a surplus trading economy (especially in agricultural goods), trade surplus of British India was better than many other comparable economies then. Of course, British had their interest confined to developing this nation for the purpose of their own surplus extraction. Agricultural sector was their main supplier of the surplus and that finds no mention (except Ranade & Ambedkar) in analytical writing in agricultural economics then.

Around 1850s the changes were also taking place across the world and Americans had taken a lead in writing the initial pages of history of agriculture teaching & research. Agricultural economics as a discipline should have begun with initial writings on the surplus extraction under the shadow of colonial rulers. Tracing the changes in the crop economy of the country during the colonial rule is an important lesson to learn the trade response of agricultural sector. But except Ranade & Ambedkar, no one actually gave any attention to the agricultural trade as an engine of exploitation during Colonial India and based the analytical writing on Indian Agriculture forgetting the conditions of this fragile platform. These issues hardly attracted any attention of the fraternity of economists elsewhere too; let alone entering into teaching of agricultural economics class rooms. The droughts of 1887-88 and the next decade of turmoil brought in some writings on agricultural sector focusing on drought in the form of reports from the British Government. Therefore, there were no significant writings on agricultural economics till 1898.

I chose the first phase as starting at 1857, as only after the first fiercely fought battle of independence, the British government realised the necessity to focus on welfare oriented policies pacifying the *Ryots* in the country, so that the second revolution could be avoided. It is well known that the first battle of independence was fuelled largely

by the Ryots in the hinterland and they helped the Indian revolutionaries to survive (Saul, David, 2002). Deepak Lal commented that "The Mutiny also roughly marks the transition of the British in India from '*Nababs*' to '*Sahibs*'." (Lal, 1988, p103). According to the analysts of Indian history & economy during British rule, 1857, provided a correct dividing line for two distinct phases of British Empire and their economic activities (Deane (1964); Dutt (1901); MacPherson (1972); Spear (1965)). It was Lord Cornwallis who changed the nature of East India Company from commercial venture to a political and administrative outfit that captured the control of Indian administration. British government realised the pre-1857 folly of relaxed control and keeping Ryots out of the State reach. In order to correct this British Government started many administrative departments that included the Department of Revenue, Agriculture and Commerce established in 1871; by the fourth Viceroy Lord Mayo. This was to gain full control over the Ryots.

Lord Mayo developed an institutional organisation with dual purpose one to pacify the *Ryots* and promising them that the Government is doing its best to help the Ryots and second to extract the surplus of cotton produced in this country. Cotton was exported from India in huge quantity and thus cotton became one of the prime commodities in some of the regions like north Karnataka, Vidarbha and other places. There is however, no significant

study of Cotton trade during British India. During 1860 to 1868-69, Indian cotton almost captured 82% of the cotton exports to England leaving USA far behind. (Sovani (Eds), 1963, p29). Indian writing in agricultural economics was largely in the vernacular languages and focused on the trade related issues basically arguing about extraction of trade surplus but the mainstream agricultural economists did not take a note of any of those issues that shaped (!) Indian agriculture beyond colonial rule. The introduction of a new crop like Cotton or Indigo and extracting the surplus out of the trade of these is a methodology followed even today. This stayed as a time tested methodology that got perfected.

There was hardly any indigenous thinking or writing about agricultural economics in academic circles then, with only a few exceptions. It must be remembered that the events that occurred during this first phase left a long shadow on shaping the development of agriculture in India. The very theme of "*Ma Baap Sarkar*", emerged during this phase and continues to haunt the psyche of our farmers and rural areas even today in Indian Republic. It was here that Indian agricultural economics along with the economists, could have started their analytical journeys. But we find little trace of the historical emergence of our fragile agriculture in the teaching or research in Indian agricultural economics. Today, the students of agricultural economics are neither taught nor are exposed to any of these significant

events that shaped the foundation of the Indian agrarian society. Predominant view is, it is history, and therefore trash as opposed to the models that are essential in current teaching.

Grounding of Agricultural Economics in India

The second phase began with the famines of 1880, 1890, 1898, and 1900 led the British Government to think about the famine and famine policy. Do we teach that when we speak of droughts or climatic variability? No, even our teachers and students are unaware of the famine commission's recommendations. British Rulers took the famines as a warning bell for arsons, looting and lawlessness. The Famine Commission report was among the good literature available and in these reports (1898) the approach of the British Government is quite visible. For example the report has para 284 that states: " *I am not satisfied that the wage scale here described which was in force in the Central Provinces in the spring and hot weather of 1897 was insufficient, or had any injurious effect on the health of the workers. And so far as the remarks in this paragraph imply a condemnation on the local Administration, I do not concur*" (GoI, 1898). The entire emphasis was on defending the Government on the count of the many deaths and arguing that the famine wages paid were more than sufficient. Therefore, more than managing the

famine and hunger the emphasis was on masking of the probable mismanaged administration. None of the native academics wrote about the agrarian structure nor about the mismanagement of the famines during those years. None of the courses in agricultural economics discuss either about the agricultural retrogression in British India or the researchers analysed it (Except at times Thorner and Thorner, 1958 is referred to).

One of the things which we must remember that 20,000 British came from across the seas to this country to rule billions of Indians. It was possible only because the native Indians were either mute spectators or collided with the British Government like we follow the methods and materials in teaching and researching in agricultural economics. Precious little was done for the agricultural sector till 1871 and then under the new Regulation Act of 1773, Lord Cornwallis was appointed as Governor General of India. The nature of governance of agriculture changed. Lord Cornwallis combined the political and administrative roles specifically. He wrote "*Henceforth, you were either a merchant or an administrator, but not both*". This was the beginning of the British directing their focus on administration for commercial extraction. (Spear 1965, p.88). (Once again no notable agricultural economists at that time (nor later) took note of the changes and their future repercussions on Indian farm sector. Though it was also sporadically written in the history of Agriculture of India (Ambedkar,

1915, Habib, 2001; Lal, 1988, Randhawa, 1980), these are never referred to in the classrooms of agricultural economics nor in frontline researches. Actually, teaching of agricultural economics or even agriculture as a vocation was in nascent form till British Government took a firm hold of Indian Administration and thereby agriculture. It is only through the Department of Agriculture that the British State dictated the development of the sector following a British model of learning and teaching of agriculture. Agricultural Economics was not even on the scene till the end of 19th century.

The change came in during early twentieth century in the form of institutionalisation in India under the British Raj. This second phase in the agricultural economics India began on the background of the Famine Commission reports and the First Irrigation Commission report. This started with an emphasis on agricultural Administration and institutionalisation. Research and teaching of principles of agricultural economics picked up in India only after the devastating Famines of late 19th century that shook the country. The reports following these famines and the fear of revolt in the countryside kept the British Government on toes and the impact of the famines was documented systematically and some steps were taken to ameliorate the conditions. It was on this background that the First Irrigation Commission Report of 1901-03 came as an important step in order to develop agriculture and work on infrastructure. Interestingly,

the reports of the First Irrigation Commission stands as an excellent treatise on water resources of India and future of its use. But almost till nineties none in agricultural economics fraternity visited the most revealing report on water use in India (I had mentioned this in my book on Where Water Seeps, 2002, Academic Foundation). Recommendations of the First Irrigation Commission, marked the first step towards enhancing infrastructure in agricultural sector. Not many authors touched the economics of infrastructure in the context of pre-independence India. Till then no substantial indigenous writing on agricultural economics is visible in India.

The British Government followed the top-down administrative control on the agriculture sector. And for this process the institutionalisation was an instrument they utilised. This process of institutionalisation continued unabated thereafter. First agricultural school was started at Saidapet in Madras Presidency to train agriculturists so that they supply the manpower to the agricultural institutions. In 1901, an Inspector General of Agriculture was appointed in India and that was the first establishment towards agricultural administration. In 1905, the colleges of agriculture were started at Pune, Kanpur, Sabot, Nagpur, and Lailapur (Presently in Pakistan).These colleges started in order to train Indian agriculturists so that they will contribute towards the growth of agricultural sector. It was during the early years of the 20th century that academics dealing with economics

realised the importance of agricultural economics. Agricultural economics as a discipline till then was in an embryonic stage and largely taken care of by the British administrators. In 1907, American Economic Association first time devoted a session in their annual meeting to understand agricultural economics under the question "What is Agricultural Economics?" By that time Henry Charles Taylor's book on Agricultural Economics (1905) was out and being used in the Land Grant Universities in US. Taylor's approach to the study of economics of agriculture was too mechanical starting with factors of production with the economic principles applied and moving towards the organisation of the farm - firm. Production and factors of production was his major concern and not the farmers and land relations. This left a strong trail to be followed by the authors from the next generation who emerged on the scene later. This was the approach followed by most of the authors during that period and blindly followed by the next generation. The support to the second phase came from the indigenous writings on rural India.

Indigenous Writings in Agricultural Economics: British India

Randhava (1980) and Dandekar (1994) are the two important contributions tracing the history of agriculture in India besides pure historians like Irfan Habib. Both elaborated on research and

infrastructural systems that were established during the British Raj and brought forth the fact that most of the training then was focused on technical aspects. These research systems did not have specific focus on agricultural economics. The subject featured sporadically and incidentally in the writings of native social analysts of rural India (see the literature on Village studies). Writings on rural India were more in the form of travelogues of the rural visitors and often descriptive. Slater's work has been heralded as pioneering work on understanding village India. This collection of essays hardly has any reference about the economy of village India. Rather the entire focus of the authors (most of whom were urban elites) was on only describing village organisations. Often construing about the nuances of the rural practices. All British policies were governed by the experience gathered about agriculture by the British researchers in England and nothing home-grown was allowed to breed. The indigenous thinking was always considered as unwanted, pedestrian and backward. As I mentioned, Mahadev Govind Ranade along with a few more writers and intellectuals who believed in Indian thinking or Indian intellectualism argued in favour of indigenously originated thought processes. In 1892, Justice Ranade delivered a few lectures on Indian Political Economy at Deccan College Pune and later published under the title "Essays on Indian Economics" in 1906. In these lectures Justice Ranade emphasised getting away from the influence of western economics as that

was applicable only under the circumstances prevailing in UK. His essays on Indian Political Economy published in 1898, elaborate part of this indigenous thinking. But he and others formed hopeless minority and every learned persons during those days, believed that knowledge can only originate in the West and most Indian intellectuals religiously followed those trends thereafter. The western supremacy was taken as sacrosanct burying deep the sporadic writings done by native intellectuals. The writings of Dadabhai Nauroji, Ranade, G K Gokhale, Mahatma Phule, and even the LSE Trained Dr Ambedkar's were ignored in favour of western books and knowledge streams. These were neither taught nor referred to in the class rooms even today.

Dr Ambedkar obtained his initial training at Columbia University under Prof Seligman and at London School of Economics under Professor Edwin Cannan. However, his writings were based on the core Indian thinking as he was passionately connected with Indian masses. In 1918, Dr Ambedkar wrote an essay on "*Small holdings in India and their Remedies*" in the Journal of Indian Economic Society, but that stayed un-noticed even when the debates on the proliferation of small farm was at the peak before independence and even in the recent years in the context of Contract Farming. It was Dr Ambedkar, who argued about the Industry-Agriculture symbiotic relationship to get over the problem of redundant surplus

labour from agriculture, far before Sir Arthur Lewis got his Nobel Prize for the dual economy model (1979). Our agricultural economists never thought this during Sixties, Seventies or Eighties, that this issue of small farms is of greater importance than estimating technical production functions. I hasten to add that only M L Dantwala and Dandekar were exceptions.

It is during this phase that the cultural trait was getting concretised among Indian intellectuals. Most of the Indian writers in agricultural economics carried a strong belief that intellectual idea must be imported and super-imposed on the local indigenous ground data ignoring the mismatches. This became an acceptable model in Indian Agricultural Economics teaching and research and proliferated very fast. Probably, it was considered as the only path to compete with the world intellectuals by following them close on their heels, than thinking anything original and ahead of them in the context of India. Regrettably, in pursuit of this, we lost what we had as our own indigenous scholarly capital. The local intellectualism was crushed under the pretext of backwardness. Over decades, Indian writings in agriculture meekly followed the above design and path of the researches carried out in the west and there was little that was done to alter or change this course over decades.

The report of the First Irrigation Commission is a document that went through the irrigation

problems of India in minute details. The report underscored the need for canal water distribution at the village level / distributary mouth. It was clearly stated that the construction of the dams and canals is the responsibility of the engineers, whereas, the water distribution must be wholly managed by the users (Narayanamoorthy and Deshpande, 2005, p.33). The same line of argument was taken by Sir Visvesvaraya in 1928 & 1938 (See Narayanamoorthy and Deshpande, 2005, Pp 30-35). But till the World Bank in its report and Vaidyanathan in the Planning Commission appointed Committee, restated the same argument (albeit without referring to the earlier writing), Indian academics did not take note of the line of thinking. We rather waited till 1976 for the World Bank to tell us Waters' Users Association as the solution for improving water use efficiency. During the first phase –the Royal Commission on Agriculture had given a large number of recommendations. The Imperial Commission on Agriculture also gave a good number of recommendations. But the subsequent writings in agricultural economics were only growing under the shadow of the British intellectualism, with least attention to the confronted issues. Problems in the agricultural sector continued to harass the farmers as this group was never a centre of discussion from agricultural economist.

Some years back, when I was working on the watershed development at the Gokhale Institute of Politics and Economics, in a meeting, the then

Commissioner of Agriculture told me that, he resurrected a very interesting statement of Mahatma Phule, which they decided to put on the cover page of the booklet on Watershed Development issued by the Government of Maharashtra. Subsequently, that was issued by the State Department and the statement meant that "in the fields of the farmers the army / police that was not utilised (after the World War) could be used in order to dig trenches so that water can percolate in the soil"; also this manpower can be used to plant grasses and small trees so that water can percolate and this moisture will be available at the time when there is a drought or famine in this part of the country (Maharashtra) (Phule, 1883; Published in Phadake, 1969). The statement was that of 1883 from the book written by Mahatma Phule titled "(*Shetkryacha Asood* or Cultivator's Whip-cord"); we forgot that Mahatma Phule told us to conserve moisture through water flow management, as one of the important interventions in order to protect agriculture. The knowledge however, drowned on the policy makers only in 1970s and that too after the World Bank had emphasised it. Once again it was proved that our source of intellectualism originates from the western powers. Rather Mahatma Phule's writings are neither known nor taught in the political economy or agricultural economy classes.

Another excellent example of the dominant western intellectual leads is the IFPRI report by

Evenson, Pray and Rosengrant (1999) that states Total Factor Productivity (TFP) growth in 1956-65, before the Green Revolution was respectable. The estimates in the paper mention that extension and credit explain almost 70 percent of the TFP growth and the public research system contributed about 22 per cent, with private research contributing 7 percent. That would add up to 99 percent of the TFP growth contributed by these three factors leaving only 1 percent for the rest inputs. Here we have an interesting finding. If one goes by the decomposition results by Robert Evenson et al (1999), we are forced to swallow the result that the farmers' efforts and care of the farm contributes miniscule to the growth of Total Factor Productivity (Evenson et al, (1999) and Evenson (2000)). Murkier is the fact that this is taught in the class of agricultural economics with a great pride.

The Beginning of Agricultural Economics

After debating the major question on "What is Agricultural Economics?" by the stalwarts in the American Economic Association, it was agreed that this branch of economics has a unique existence as many of the economic theorems do not apply directly in agriculture. The subject was introduced in the Land Grant Colleges more as an allied discipline albeit subservient to the core agricultural sciences. In 1887, the Hatch Act brought in Agri Experiment stations, which functioned together with the Land

Grant Colleges to form a system of research experiments, data collection, dissemination, instructions and outreach to the farmers. Economics was never taken as a quintessential component to connect the crop-land- farmer and markets nexus. It was also taken for granted in our nonmarket institutional framework prevailing then. But that neglect and the tradition of taking agricultural economics as non-consequential continued in the teaching fraternity. One of the initial text books (Henry Taylor's book on "An Introduction to Agricultural Economics", 1905) focused more on the technical relations between factors of production and the organisation of agriculture, taking farmer and the farming society only with incidental presence. This was used as the text book by the first generation of agricultural economists.

The establishment of the National Association of Agricultural Economics (1915) marked a new beginning that continued as American Farm Management Association till 1968. The subject was expanding and was seeking new shores. A good historical review of the development in the subject was undertaken by Schertz (1975) and Runge (2006) that provides an excellent overview. The Journal of Farm Economics (JFE) largely contributed by the US scientists, significantly helped in the development of the discipline. But the researches in JFE focused on the problems confronting mainly US agriculture and often dealt with issues confronted by the western world. Rarely the pages of Journal

of Farm Economics and afterwards in American Journal of Agricultural Economics carried any core agricultural issues pertaining to developing nations and Indian farm sector was no exception. It is during late twenties that Black's book (Black, 1926) on 'Production Economics' entered the class room of agricultural economics and then onwards unleashed the total domination of production economics that proliferated the research in Indian Agricultural Economics too. Teaching and research in Indian agricultural economics grew under three shadows. First, there was the indelible influence of the Land Grant Colleges and their course structure in teaching of Indian Agricultural Economics. Second, the British agricultural administrative system had a diagonally different outlook of the knowledge field in Agricultural economics than that of the American ideas. That influence through persons like Professor Ashby was prominent. Third, mathematics and statistics used in production economics, was more enthralling to the researchers and teachers in agricultural economics. As a result, the Indian agricultural economics research and teaching took a shape that weaned the subject away from the issues of the farmers. Indian agricultural economics therefore, got shape under these influences besides a few strong leads. First, it was the neo-classical lure of fixing everything in the framework of the neo-classical economics with scant attention to its applicability in Indian conditions. Second, the force of production economics in the text books

on agricultural economics available then, clear in their computational focus. Third, the attraction of new statistical tools and their use in AJAE or many western journals created a strong cobweb in which the academic research on Indian agricultural economics got fully entangled.

The next phase of agriculture economics in India both in research and teaching began with a land mark that altered the course of development of the subject. This came in the form of establishment of the Indian Society of Agricultural Economics (ISAE) in 1939. Important indigenous issues started getting into discussion and debates. This was a decisive step to move researches and teaching of agricultural economics towards the core Indian contents. First president of ISAE was Sir Malcolm Lyall Darling, a person who was basically a Civil Services Officer and had deep interest in Village studies and peasants. He was responsible for the initial shaping of ISAE. He wrote the famous book on "*The Punjab Peasants in Prosperity and Debt*" (1928). {Did the title sound as if it is written during yesteryears?}. His intentions were to track the problems of the peasants and villages to get to the solutions for the Indian farmers. This was amply addressed in his maiden address to the ISAE on "*Peasant and Politics*". This was his first presidential address and a subject that seems to be of the current interest during those days. The subsequent themes taken by the presidents of ISAE included: Rural Indebtedness, Agricultural Reconstruction, Land

Issues–Tenancy-Reforms and agrarian structure. One of the important contributions came from J P Bhattacharjee who analysed the "Agricultural Economics and the Agriculturists". He wrote "*To get the theme, my main problem is that the available economic theories do not explain sufficiently usefully the practice of agriculture in the so-called traditional societies and do not offer meaningful guidelines for its development*" (ISAE, 2016, p 447). We did not touch any similar theme all through the seventy-five years of the existence of ISAE, which was not just coincidence but possibly the research interests were pulled away from the core Indian themes.

ISAE recently brought out three volumes including the presidential addresses during the Platinum Jubilee Celebration. The First volume has a powerful introduction by Professor V S Vyas and he summarises "*The major preoccupation of the Presidential speeches during that period (1940-65) concerned around the issues of the role of agriculture in India's economic development; strategies for augmenting agricultural output; required reforms in agrarian structure; cooperatives and rural reconstruction; role of the government in agricultural development and organisation of research in agricultural economics.*" (ISAE, 2016, Vol. 1 P, 2). The initial focus was establishing the discipline of agricultural economics to address the problems of farms and farmers and Professor C N Vakil spoke on the role of agricultural economics in Indian economy. Rather he was worried that the subject has

remained neglected and quotes from Prof Ashby as "*Having regard to (a) the area of agricultural land, (b) the size of the agricultural population, (c) the importance of agriculture in the national economy – it's actual and potential contributions to national wealth – I am appalled at the small provision made for investigation and research in Agricultural Economics…. Recognising that India is a relatively poor country, it is still true that in comparison with other applied sciences of agriculture, Agricultural Economics has been starved*" (ISAE, Vol I, P 208). Over years, the ISAE became one of the prominent professional societies with its own office and staff located at Mumbai. Initial five decades, it was led by stalwarts who knew what is needed by the clients of the profession and for its intellectual development. Economists of the calibre of Sir Malcolm Darling, C N Vakil, T. Vijayraghavacharya, Rajendra Prasad, Sir Manilal Nanavati, M L Dantwala, D G Karve, S R Sen, D R Gadgil, V M Dandekar, Nilakantha Rath were the internationally recognised economists and had made a mark in the subject by being in India. ISAE was never handled by any remote control from the foreign land. ISAE was continuously consulted on policy front by the State Governments and the Central Government. But in the recent past, unlike the other social science professionals, ISAE did not make a desirable mark in shaping of the agricultural policy of the country. Initial 25 years of the journey of agricultural economics under the guidance of the stalwarts were really the years that directly touched

the core issues in the subject discipline, the process failed in the recent past as also kept away from the policy.

Research and teaching have a very strong symbiotic relationship. In the following years, research was becoming more mechanical and moulded on set patterns and that also had its impact on teaching. In the recent past, the teaching of agricultural economics also suffered the same virus due to lack of the good teaching material and teachers. Many universities have relegated agricultural economics to the background and the prominence is appropriated by some relatively new disciplines. Initially, the book by Nanavaty and Anjaria (1945) was used for teaching Indian rural problems (after 1945), till then we had largely relied on the texts provided by non-Indian authors (Foster and Leager; Taylor HC and A D Taylor; Heady and Dhillon; Heady). Maxton (1946) took a review of adequacies and inadequacies of agricultural economics teaching in 1946 in the Journal of Agricultural Economics. Staying in tune with the teaching methods prevailing then Maxton emphasised production economics only. Similarly, Lee Martin's (1977) survey of agricultural economics literature, brings out the development process of the subject in USA and their universities. That clearly shows the move of the subject towards technicality and increasing the distance from the farm or farmer based issues. The book by Nanavaty and Anjaria was different and swanked total

Indian-ness running through its veins. This was initiated by the ISAE almost during the same year when Maxton (1946) took a review of Teaching of Agricultural Economics in US. This decisive step by ISAE was taken to bring the discipline closure to the core of the Indian agricultural problems, issues and seek solutions to the problems confronted by the farmers. These issues unfortunately did not continue in agricultural economics class rooms. Our teachers / researchers could not wean away their intellect from the over-shadowing colonial hangover and the lure of technicality. The situation between 1939 and 1960 was quite conducive to the development of Indian variety of agricultural economics but deteriorated after 1999. Earlier the academic leaders were well reputed in the world and that was supported by Radhakrishnan's Commission on Education that recommended establishment of agricultural education in India.

Emergence of Agricultural Economics Research and Teaching System

At the time of independence, the overall teaching / research system in India was under the shadow of the British education system with still a large number of them serving the Indian administration. In fact, we had some ICS officers trained under the British orthodoxy and who very effectively directing the education and research systems under their norms. There were a few who

really had their heart in the development of Indian agriculture and worried about the issues confronted by farmers. Not that every foreigner was bad but majority of them had limited interest in this country. There was some shade of Indian-ness among a few of them (Harold Mann, Ashby, Sir Malcolm Darling, Slater etc), but majority of Indian teachers and researchers then fell for the lure of following the non-Indian knowledge leads. The colonial hangover on the aggregate education system was quite visible. Professor Arthur Ashby influenced as a British economist, but he was closer to the Indian agricultural scenario. The Land Grant colleges started in Tenancy, Ohio State, Pennsylvania, Texas and University of Missouri were the models for our agricultural universities and agricultural colleges. We followed these models without any modification as the senior teachers were trained in these colleges & Universities in US. Agricultural teaching and research systems were getting shaped under that shadow.

This began with the intervention from the Indian government which appointed Dr K.R. Damle Committee to visit US and provide a blue print to establish agricultural education in India. After visiting the Land Grant Colleges in US, Damle Committee gave its report and we started the first Indian Agricultural University, in the name of G.B. Pant at Nainital. It is interesting to note that the model was that of Land Grant College and it was from United States, while we were a British colony.

British agricultural education system was totally different as against American agricultural education system. We super-imposed American system on an operational British System of education. The research and training systems were also largely guided under US influence and that became a predominant guiding force which prevails even today. The methodology of our teaching and research in agricultural economics was highly influenced by the prevailing systems in US and it continued thereafter even today.

One can see two phases after independence in the development of Agricultural Economics. During the first phase, we had significant food shortages. The per capita availability of food grains was far below the ICMR norms, Government of India. Immediately after independence we had to worry about food and food economy. GOI appointed study groups beginning with Foodgrains Policy Committee of 1943 (Gregory 1943). Maitra (1950), Mehta (1957), Venkatappaiah (1966). All these Committees made recommendations covering major sectors of agricultural economy directed more towards strengthening indigenous food economy. Research then should have been directed largely towards the food and food economy but these subjects stayed out of the teaching of agricultural economics in the prominent universities. No students of agricultural economics

in the Universities ever heard about Food grains Review Committees or Venkatappaiah Committee or their recommendations. Food shortages bothered them but out of the class rooms and at times in research field. At that time senior agricultural economics researchers were attracted more towards Rockfeller / Ford Foundation fellowships. Large number of researchers from our country went to US and mastered the then fashionable technical & mathematical agricultural economics. Their research was largely on the similar lines as that was prevailing in US then. The first kilogram of high yield Taichung rice was brought to India from IRRI by Dr G V Chalam, the then General Manager of National Seeds Corporation. Rockfeller foundation played a decisive role in the process.

With this intervention began the phase of new technology that changed the course of teaching and research significantly. The teaching and research of many academics during these years remained dominated by production economics, adoption of technology and as they led the profession the juniors dutifully stayed in tune with them. A generation of intellectuals was being misled into issues that did not address the concerns directly concerned with our farmers of farms. Victims of all this process were the prevailing problems of Indian Agriculture that got scanty attention from the researchers. Only a few noted agricultural economists kept working

on the issues that bothered the Indian agricultural development but they were in minority. The rest academics found it better to stick to the framework of esoteric mathematical models.

Prof. Mahesh Pathak said that, I am a hybridised academician. Yes, I am a graduate of Science and got hybridised in economics. Yes, I departed from unitary dictates of academic disciplines that included the disciplines of science or the disciplines of social science or the discipline of mathematics. I rather took the journey on my own instincts traversing through the labyrinth of these disciplinary lanes. When I was awarded National Fellow of Agricultural Economics, I told that, I never attended the class-room in Agricultural Economics throughout my life; I never followed the usual courses of agricultural economics, but I started researching in agricultural economics differently and so I still think differently because, I did not allow anything to hegemonies my thinking process. I take a view of the discipline from a vantage point of a distant participant. Today, I am speaking from that perspective here and with full internal information. Thanks to Professor Mahesh Pathak. Many may feel that I missed the routine path set forth by our predecessors or the requirements of the discipline. But I feel, the committed practitioners of the discipline have missed the path away from the ground realities, farm and the farmer.

The Missed Path

The next phase in agricultural economics research and teaching in India had really gone a different way. As we saw through the historical development, this phase was a continuation of the super-imposed American research-oriented agricultural economics research system on a the existing traditional British education system. Around that time, we hardly had any idea about functioning of our markets, land systems, our village systems and the most needed resource systems. Bhattacharjee wrote about the inapplicability of the western economics in Indian context he writes "*In such dual societies, the 'economics' of production in non-monetised or imperfectly monetised sector cannot neatly fit into the framework of conventional equilibrium analysis*" (ISAE, 2016, p 452). Our marketable surplus was absolutely minimal but still production economics, micro-macroeconomics, econometrics dominated our teaching and research. Till then in Agricultural Sciences, mathematics was not so popular. The students who were scared of mathematics, tried to go to economics, political science, sociology or agricultural sciences; unfortunately, mathematics and econometrics came in as intruders to all these disciplines and occupied the centre stage to

become dominant method. Similarly, the training of agricultural economics through the trained Professors under Rockfeller and Ford Foundation brought in a research and teaching culture that focused more on farm management, production economics, agricultural finance and marketing. The missing path of teaching of agricultural economics is not an Indian phenomenon alone it was debated elsewhere in the world. Worried about the teaching of agriculture economics at undergraduate level as early as in fifties, Kolhs (1950) indicated signs of wear and tear in teaching and research. He stressed the complexity and very rightly stated that the 'Pinpoint' or 'Shotgun' approaches do not help. He expressed deep concern that agricultural economists are getting detached from the field, farmer and field experiments. After this, two very interesting papers brought this forth: - one was by Barkley Andrews (2001) on "*The Future of Teaching Under-graduate Agricultural Economics: A Life-long Learning in Era of Rapid Technological Change*" this was published in Journal of Agricultural Resource Economics. Barkley (2001) analysed the returns to education and his concern comes out in contesting four commonly believed paradigms. He proves that we wrongly prioritised: (i) Students as consumers (ii) Large classes, (iii) Overuse of new technology

and (iv) Rigidly defined academic achievements (Barkley, 2001, p. 12). He further remarked "*Quantitative skills and practice in application of economic principles to real-world problems, provide students with abilities that will be useful throughout their career and lives. These skills become even more valuable when economic principles are combined with written communication, oral communication and problem solving abilities*" (Ibid p17) and warns overuse of that. In India we have drifted deep inside this reality over generations of teaching.

Not only in India but the international agricultural economists' fraternity also sounded a warning bell about the deterioration of teaching and research in the discipline. The academic fraternity questioned, are we moving towards the mainstream economics and technical economics?. And shifting away from the core issues of concern to the agriculture sector or farmers. Kolhs (1950) was among the first to fire the salvo questioning the teaching at undergraduate level. Following this in the year 1975 Schertz brought forth the drag set in agricultural economics in the form of addressing the problems of farmers and farm society. Explaining the farm production became central issue during 50s and 60s. He writes "*We largely neglected for instance potential effects of*

international trade on farm income and consumer prices and effects of racial discrimination and other forms of inequality existing among farmers and farm workers" (Schertz P 10). Issues pertaining to low-income farmers as well as the speed with which large number of them are sliding down under poverty did not receive any attention. Subsequently, Glen Johnson in his presidential address to Agricultural Economics Association in 1985 emphasised that agriculture economics is an applied social science discipline and therefore, it must pick the threads of analyses from the ground. He emphasised that the quality of agricultural economics /economists should be judged from the excellence in addressing the practical problems in the field and confronted by the farmers. Similar concerns were voiced by James Houck (1986) in the proceedings of American Agricultural Economists Association. He stated that "*Agricultural economists, as applied social scientists, emphasise research and teaching that directly enhances understanding of actual economic activity or improve public and private decision making*"(Houck P.376). Indian agricultural economists cannot and have not added anything substantial to enhance mainstream economic theory. Either this was not the purpose for which the subject discipline began with or the attempts were short lived but one cannot forget the necessity

of this. While discussing the issue of Agricultural Economics at Crossroads (1995), in the American Association of Agricultural Economics, the authors expressed grave concern about the profession under severe pressure and needing a fresh look. Thompson (1995) reviewed the papers presented at the symposium discussing the crossroads that agricultural economics is stranded at. His review suggests that even though agricultural economists are bourgeoning in number, neither the teaching, research nor the extension acquired grounding or connecting to the farm - farmer. At the end of the review he conjectures that if corrections are not made (and that was in 1995) "*the downward spiral is likely to continue*". This was a resounding warning and should be taken very seriously. In India we are not so much bothered about the trend and the deterioration continues.

Recently, Casswell (2013) in his presidential address to the American Association of Agricultural Economists, quoting Daniel Bromley (1992) writes that in another 20 years Departments of Agriculture Economics will be practically extinct. Surmising about the specialisation forces within broad agricultural economics discipline, he provided significant insights about the deteriorating quality attributes in the subject. Catering to the

job market is one major concern of the learning institutions and largely the manual of the courses feed only the job market. There is nothing wrong in this process because after all the students are prepared for the purpose of jobs, but over doing such process is detrimental to the augmentation of knowledge. Casswell noted that out of the 77 departments of agricultural economics the verified quality parameters are of quite concern as also questionable. He finally stated on the testing of the quality parameters that "*In the big picture for all of us, it is all about the real impact of our work in the terms of better understanding of economic processes, better policy making, and better quality of life for the people of the world*" (Casswell p 20).

Teaching and research in agricultural economics in India, as stated earlier began under the two powerful shadows of British education system, on one side British organised institutions and teaching and research processes were our guidelines. On the other side following the Damle Committee report our teaching and research was proliferated under American influence of what was followed in Land Grant Colleges. All our text books as also the research leads were generated in the United States and Indian academics simply followed the trail. Similar books at times rewritten by

the Indian authors, published by Indian publishers were followed as textbooks. Research and teaching in agricultural economics was conducted in interdependent but in two separate domains namely the general universities and agricultural universities. There were a few meeting points but largely these are two independent flows. The former was more concerned connecting agricultural economics with mainstream economic theories whereas, the latter schools were largely influenced by the use of econometrics. In the process the central actors namely farmer, land, natural resources, agricultural labour, market imperfections in land labour and capital markets, did not receive adequate attention. Esoteric approach and mathematics dominated research and teaching in the universities. A symposium conducted by the Indian Society of Agricultural Economics during 90s discussed the issue of teaching of agriculture economics in the Indian universities threadbare. Professor Nilkanth Rath and Prof S H Deshpande provided quite a few useful suggestions after commenting strongly on the ground realities (Rath, 1990 and Deshpande, 1990). Even during early 90s there was the strong feeling among agricultural economists to look back into the process of teaching and research and improve upon and connect with the ground realities.

Teaching and research in agriculture economics in India has gone through a few broad transformations. First change occurred immediately after the establishment of agricultural universities and colleges in the country. Most of them followed the Pantnagar model of agricultural University and teaching of agricultural economics. The establishment of Pantnagar Agricultural University was on the model of Land Grant Colleges and based on the committee report headed by Dr Damle. Sometime during 1966-67, second makeover took place, when revamping of the syllabus as well as ICAR guidelines came into existence. The University level teaching and research was largely guided by the ICAR experts. Books by authors like Taylor, Mann, Heady, Ashby, Heady and Dillon dominated the course structure. In the general universities agricultural economics was taught as one of the many courses and focused mainly on the Indian agricultural problems. Anjaria and Nanavati, Desai and Alakh Ghosh were the most preferred authors and their text books dominated the General Universities. While production economics and farm management economics dominated the teaching at the agricultural universities, the teaching in general universities focused more on the problems elaborated by the textbook authors.

The alteration brought in a methodological revolution in the process of teaching with mathematical economics and econometrics entering the picture. In all the universities this methodology of teaching dominated and the students who learnt these subjects were considered as a better lot. Most of these students were absorbed in their parent universities and colleges and thus in this phase the teaching of agricultural economics turned more towards technical teaching. The next phase was to prepare the students in applying the statistical methods and econometric tools. Achieving expertise in these two methodological tools was the central theme of the teachers and students. The core issues in agricultural economics were not taught in the class rooms but left for the research domain.

In the post-independence era, we had the residuals of pre-independence emphasis on meeting the challenges of production, droughts, famines, the food shortages, PDS and control of food, food aid and aid for development. Imploring before the super-powers of the world in order to get the food and other aid was an accepted practice. On the same line for improving our educational system we relied on the world powers and their methods. Actually teaching of the subjects (especially agricultural economics) should have been taught based on

indigenous thinking. As a result today if one enters into the porticos of an agricultural university and asks the best Ph.D. student some questions if the current land acquisition bill, agrarian distress, Price Policy have got anything to do with the farmer? We are most likely to get an answer that: Sir, what is land acquisition bill or the other things? We will get an answer that this is not taught Sir, it is not in our syllabus. We confront blank faces when it comes to the discussion on the current agrarian issues. But if we ask about Langrangian Multiplier we get an immediate answer. Then the question comes about the very purpose of teaching agricultural economics.

ICAR gave a strong emphasis on creating institutions. ICAR received significant funds from many world funding agencies to undertake specific researches and create institutions. The world funding agencies saw to it that the culture of agricultural economics as well as the philosophy of research and teaching catch roots in India. We were forced to understand our indigenous problems from them, learn from them. Actually we should have done what suits the best to our soils. We are teaching or researching something which is not essential for our farmers or farm and therefore we are slowly walking towards the terminal

end of agricultural economics. Dr Ashok Dalwai reminded me of Mahatma Gandhi from this land of Gujarat. We did not understand the Mahatma in true sense. Mahatma Gandhi had said one thing very important and that is written in our Institute's auditorium *"Let the winds of the world flow freely through my windows and let my windows and doors be open, but I refused to be blown off my feet"* and that is exactly where we went wrong. We allowed the winds to flow and blow us off towards the area which was not necessarily our cultural roots.

Change in Indian Scenario of Teaching and Research in Agricultural Economics

The phase of commercialisation in teaching and research brought in a sea change. In this phase, the commercialisation of teaching methods took a turn towards preparing students for the market. Teaching of courses were more tuned towards management of agriculture rather than understanding the nuances and issues confronting farmer or farm. Limited specialisations included crop sciences, horticulture, livestock, finance, fisheries, management, food processing. The preparation of a graduate in agricultural economics or a Ph.D. in agricultural economics was essential for the market than building knowledge bank or focusing on farm based problems that led us to confront the present

crisis in learning of agricultural economics or research in the subject. As teachers and researchers we were pulling the students away from the ground realities.

In this phase of commercialisation, the new tools and techniques came in. Tools applied in production economics like different types of production functions, linear programming, profit functions, regression analysis dominated research and also entered the class room. This ingress of tools was so dominant that the students and teachers forgot that these are application tools for some core economic issue. With the revolution in computers and availability of new software like SPSS, SCHAZM, SAS, Strata, MAT-lab, RATS, CATS, R and many others it became easier to understand and apply the complex mathematical methods to economic analyses. Overhead projectors followed by Power point presentations in the classroom came handy to make the teacher's job easier. The focus of teaching shifted from the issues in agricultural economics to application of software and most of the students and researchers speak only about the models and software so rather than the issue at the core.

Some months back, a thesis was sent to me for evaluation; one of my friends read it and said it is very good work on SAM (Social Accounting Matrix). SAM is a tool, and the student has actually worked on a village input-output analysis in order

to find out how the village dependence on market economy has increased after liberalisation. SAM was just a tool and the important point made in the thesis was the transfer of resources through worsening Terms of Trade. Even the student laid marginal emphasis on the core and devoted large part of the thesis describing the tool.

There is a certain lack of critical mass. Earlier generations of our teachers learnt agricultural economics in the country & society alien to us. Subsequently, without proper intonations it reached us with interventions by only a few notable exceptions. That is the reason why our research priorities are improperly focused even today. We can see from the succinct tables provided by Prof. Mruthyunjaya's in his Presidential address to AERA (2015). He picked up writings from reputed national journals and international journals and classified the research papers into broad categories. (See table 1). It was noted that large number of articles are published on crop sciences, horticulture and plantation, followed by that livestock, fisheries, forestry and others. Other non-specific issues actually dominated the publications. Indian agricultural economics researchers seem to be increasing their distance from the problems of the society and the farmers. Interestingly, Indian researchers' behaviour is not very different than the non-Indian researchers but possibly the void is higher as it demonstrated by the Indian agricultural research community. Dr. Dalwai asked me to talk

about the agrarian crisis, possibly because that did not form component of any teaching. The articles in Indian journals on the Indian agrarian problems are absolutely negligible except those appeared in the recent past after the spate of farmer suicides in some states of India.

Table 1: Research Publications in Agricultural Economics in Reputed National and International Journals 2004-13, Indicating trends in Research.

Sl No	Subject	National Journals (IJAE, AERA. EPW)	Internation-al Journals (AJAE, Aus JAE, Can JAE)
1	Crop Science	276 (16)	186 (12)
2	Horticulture & Plantation	95(6)	55(4)
3	Livestock	89(5)	177(11)
4	Fisheries	56(3)	56(4)
5	Forestry	36(2)	31(2)
6	Others Non-Specific	1157(68)	1062(68)
7	Total	1709 (100)	1567(100)

Note: These are number of research papers published in the reputed journals, figures in parenthesis are percentages to total. Indian Journal of Agricultural Economics (IJAE); Agricultural Economics Research Association (AERA); Economic and Political Weekly (EPW); American Journal of Agricultural Economics (AJAE); Australian Journal of Agricultural Economics (AusJAE) and Canadian Journal of Agricultural Economics (CanJAE)

Source:: Mruthyunjaya (2015). Status and Strategies for Strengthening Agricultural Economics Research and Education in National Agricultural Research Systems of India", AERA, Vol 28, No 1.

The next table from Prof Mruthyunjaya's paper also shows some interesting data. In the second table Dr Mruthyunjaya presented three prominent Indian journals and classified the research papers published in the journals. Production economics dominates in professional agricultural economics journals whereas, in Economic and Political Weekly it receives least attention. Agricultural development also attracts many researchers so also agricultural marketing. However, Agricultural Policy has received disproportionately lower attention by agricultural economists. (See table 2). A similar exercise was carried out taking American, Australian and Canadian journals in agricultural economics. Even though, production economics makes its presence felt in all the journals, it is not the one that emerges as the most preferred research area in international arena. Agricultural Marketing and Environmental Economics score higher than the other areas. Agricultural Policy also attracted about 10% of the researchers which is higher than the Indian researchers. No wonder we have very few policy documents in agricultural sector and the analytical approach to policy is almost absent. It is only after mid-nineties that agricultural economists were exposed to the policy documents. Till then Plan Documents only served as policy statements besides the fire fighting schemes. It was Government of Karnataka that brought out the First ever agricultural Policy document by that title in 1995, prior to the National Agricultural Policy in 1999.

Table 2: Rankings of the Research Areas Covered by Researchers In Indian Journals 2004-13

Rank	IJAE	AERA	EPW	All Three	IJAE + AERA
1	Production Economics (22%)	Production Economics (24%)	Agricultural Development (14%)	Agricultural Development (14%)	Production Economics (23%)
2	Agricultural Development (19%)	Agricultural Development (14%)	Natural Resource Economics (11%)	Production Economics (13%)	Agricultural Development (16%)
3	Agricultural Marketing (12%)	Agricultural Marketing (13%)	Food Security (11%)	Agricultural Policy (9%)	Agricultural Marketing (13%)
4	Agricultural Policy (9%)	Agri-Business (7%)	Agricultural Policy (10%)	Natural Resource Economics (9%)	Agricultural Policy (8%)

Note: Figures in brackets are share of research papers in total. Abbreviations as in earlier table.

Source: Mruthyunjaya (2015). Status and Strategies for Strengthening Agricultural Economics Research and Education in National Agricultural Research Systems of India", AERA, Vol 28, No 1.

Table 3: Rankings of the Research Areas Covered by Researchers in International Journals 2004-13

Rank	American	Australian	Canadian	All Three
1	Agricultural Marketing (21%)	Environmental Economics (24%)	Environmental Economics (21%)	Agricultural Marketing (16%)
2	Agricultural Policy (10%)	Natural Resource Economics (23%)	Consumer Choice (16%)	Environmental Economics (14%)
3	Production Economics (10%)	Production Economics (9%)	Agricultural Policy (14%)	Natural Resource Economics (10%)
4	Environmental Economics (9%)	International Trade (7%)	International Trade (11%)	Agricultural Policy (10%)

Source: Mruthyunjaya (2015). Status and Strategies for Strengthening Agricultural Economics Research and Education in National Agricultural Research Systems of India", AERA, Vol 28, No 1.

Agrarian crisis that is confronting India as well as many other countries in the world the fuel least attention. The problems like droughts, famines, land issues, farm sector poverty, non-farm work density, significant urban migration and disappearing farmers have not attracted attention of the researchers for long. It is only after the Situation Assessment Survey of 2003, that researchers got attracted towards farmers' agony. It was during this survey that farmers had indicated clearly their intention to leave agriculture in preference to any other vocation. Professor V M Rao who expired some years back, had written about 50 years of agricultural economics in India in Economic and Political Weekly. In his article and in many of his personal discussions with me he expressed his agony of the neglect of very important issues by agricultural economists of the country.

We have gone through many phases of agricultural economics research & teaching in India. In these phases several issues have been attempted. But as an agricultural economist, I feel we are trying to score a goal when the goalposts are shifting. In table 4, I have presented most prominent areas tackled in agricultural economics research in India. We have classified seven decadal phases in the research in agricultural economics in India.

Table 4: Decades of Changing Research Pursuits

Sl No	Decades	Broad Areas Tackled in Research
1	1950s	Population and Food Availability; Land Tenancy; Cost of Production; Farm Management; Agricultural Statistics; Cooperatives
2	1960s	Land Reforms; Food & Aid; Allocation of land & resources; Dairy & Livestock; Agri Taxation; Green Revolution; Agricultural Education; Impact of Planning; Marginal Farmers & Agricultural Labourers
3	1970s	Growth-Poverty Linkage; Land Use; Supply Response; Input Supply and Pricing; Farm Size-Productivity; Price Policy; Externalities of Green Revolution; Land Degradation; Horticulture; Irrigation
4	1980s	Inequality- Growth; PDS; Mechanisation; Input & Other Subsidies; Investment in Irrigation; Semi Arid Areas; Markets; Non-Farm Sector; Environment; Common Property; Hill Agriculture
5	1990s	Agro Climatic Planning; Environmental Issues; Irrigation Efficiency; Large Dam Controversies; Horticulture; Right to Food; Capital Formation; Agri Trade; WTO; Sericulture; TFP
6	2000s	Agri Policy; Farmer at Millennium; Inclusivity; Trade Balance; Trade Agreements; Finance; Future Markets; Land Acquisition; Tenancy & Land Markets; WTO & IPR;
7	2010s	New Economic Policy; Water and Climate Change; Natural Resource Management; Institutions; Trade Balances; Research and Development; Second Green Revolution;

Note: Based on various issues of IJAE, AERA and EPW.

During the fifties, initially, we were worried about Population & Food Availability, Land Tenancy, Cost of Production, Farm Management, Agricultural Statistics, Input Output Analysis, Theory and Policy, Research Procedures and Co-Operatives. These are dominant pursuits of the agricultural economists during 50s. Some of these continued during the next two decades but the problems of Marginal and Small Farmers and Agricultural Labourers came to the forefront during that time and lingered on further. After that these went in oblivion. Growth and poverty dominated quite a few decades, till we got into the problems associated with irrigation and groundwater. International trade agreements and WTO provided new feedstock and the researchers were quite busy with these issues. Total factor productivity and production functions continued to dominate the researchers in agricultural University portals especially during the last two decades. Agricultural policy and researchers relating to that also featured sporadically but not seriously. In short, our experience of research is a kind of fire fighting approach and too often researchers picked up the issues that were current and available in the newspapers. Only a few found space in our teaching of agricultural economics. Many of these turned out only descriptive and found little connectivity with theories in economics.

After viewing the agricultural economics research pursuits for seven decades as reflected through important journals in the Indian agricultural

economics domain, I found that, the research publications in agricultural economics and the teaching of agricultural economics is divorced. Rather, we publish in agricultural economics something, which we do not teach, nor these issues get in the cover of the good textbooks in agricultural economics. Of course we have a few textbooks to teach proper agricultural economics; volume four by Evenson and Pingali. It is a four volume handbook of agricultural economics in which Evenson and Pingali one Volume. That is nearer to the Indian agricultural economics. I went through these volumes and was surprised to see again the subjects that are divorced from the problems of the farmer and the society. Except Pingali's paper, who is basically an Indian but migrated out; no one has the ground feel of Indian agriculture. And therefore, this book on agricultural economics will not be a great source for teaching of Indian agricultural economics. The second book is *The Handbook of Agriculture* by Shovan Ray. This handbook of agriculture has some good material bridging the gap between the field and the books. The last chapter that teaches us about the vanishing village society. This is something which should be taught in the agricultural economics M.Sc. or B.Sc. We have little idea about the rapid changes that are taking place in Indian villages and fast disappearing the farming community. Today the average age of the farmer is quite high and therefore the efficiency

in the farming is likely to slide down significantly. Mechanisation is not the only answer since we have a large share of small and marginal holdings. Farmers are also getting disgusted due to the shrinking net income from farming. They mince no words about it and as agricultural economists we have done precious little on this issue.

Constraints

We must understand that there are constraints operating in the domain of teaching and research in agricultural economics. Teaching and research in agricultural economics operate in two separate segments namely in the State Agricultural Universities (SAUs) and the General Universities. First, these two segments are prominent in agricultural economics but operate mostly independently with a little academic interactions. We do not have one to one exchange of ideas nor any collective thinking. This used to be the case two decades ago, but it vanished gradually. We fail to understand each other and nor we want to do so. Once two Professors of Agricultural Economics (very close to me) wrote a letter to the editor of a Bangalore News Paper on inflation. They questioned that when it is claimed that inflation is coming down, how come the prices of vegetables are increasing? The newspaper printed that. I telephoned the two friends and told that please try to understand the concept of inflation first. It is not prices of individual

commodities that matter, but it is the weighted price level. I had to explain that inflation is measured with the help of commodity weights. Therefore, I requested them first to read what inflation is? Basically, the agricultural economics research and teaching systems are totally isolated between the SAUs & Agricultural Research System and General Universities. In the SAUs, agricultural economics as a subject discipline does not receive the kind of priority that other scientific disciplines receive. It is taken as one of the soft disciplines along with agricultural extension. The SAUs as well as the Departments of Agriculture have not appreciated the centrality of Agricultural Economics, which actually dictates the pattern and quality of growth. This is also true in the general universities where agriculture economics is not among the preferred subjects. In fact in many universities have no teachers of agricultural economics.

Teaching and research in SAUs and General Universities suffer due to political interferences. The process of politicization in the universities has taken its toll in many segments. Recruitment of teachers and incentivisation of research are to important casualties. The politicization of the Universities and knowledge system so also research is the biggest rot that inflicted irreparable injuries on the knowledge system. Most of the universities have faculty members who rarely publish in standard a research journals. Besides, the textbooks are not changed nor the syllabus. Large number of

faculty members are recruited through either in-breeding (66%) or trained under a totally different research systems (13%). Researchers are method centric than knowledge centric. This facilitates the teacher not to prepare or read any new material for every lecture and repeat the material taught in the earlier classes verbatim. Today we are confronted with a bigger dilemma of knowledge for the 'Sake of Degree' vs 'Knowledge for the sake of Emancipation' of application on ground towards welfare of the people. It is strange that the problem of farmers are never discussed in the classroom of agricultural economics nor the students are aware of the imperative issues in the agricultural economy of the country. Greater emphasis on application / empirical computations in place of conceptual / theoretical constructs, rob the students and teachers of original thinking.

Today, in most of the SAUs as well as in general universities the emphasis is on teaching courses that focus on market friendly vocations -incorporating software packages (RATS,E-VIEWS, STRATA, SAS, SPSS, R) which enable the students to get quickly employed (as one who can compute on computers) in applied sectors rather than as good agricultural economists. Interactions of agricultural economists with the academics from other disciplines as also readings, got restricted due to the deluge of these methodological lures. There are only a few or no interactions of SAU teachers with ICSSR institutes or vice versa such as cross evaluations of academic

work, are absolutely non-existent. It is desirable to draw such programs to enable agricultural economists working in SAUs and other universities to interact with ICSSR institutes and other research institutes in the country and in other countries. This unfortunately does not happen at all. That leads to overall declining academic capabilities and research capacities, poor publication records.

Added to this our examination system today is more oriented towards answering objective type of questions rather than descriptive type of questions even at Master's and doctoral levels. Having no negative marks for the wrong answers this method of examination is faulty. There is hardly any monitoring of teaching and teachers, besides absence of serious external examination component is detrimental. All these together bring in complacency among teachers and students, resulting in improper coverage of syllabus. Teachers also do not venture out to discuss with the students innovative problems and innovative ideas. The evaluation of teachers by the students (this is true all over) is totally absent and if at all present, it is a farce. This further perpetually degenerates the system. Lack of incentives for good / excellent teachers and researchers in the system especially in social sciences / agricultural economics do not create vibrant academic atmosphere. For instance there are virtually no awards for social scientists, as most awards are based on varietal release, or experiments with scientific contents, which no social

scientist can have claim due to their social focus. The success or failure of a scientific innovation is decided by its economic viability and then the acceptance by the stake-holder. Hence, it is the social scientists who are close to the farmer and to the society. They work as the most important conduit between scientific discovery and its application on the ground. This fact is forgotten and social scientists in most of these places are taken for granted.

I feel strongly that we have not done justice to our duties. I would like to apologize to every farmer who slithered down in their income flow, got pushed under poverty, left farming livelihood because of market failures and other forces. We agricultural economists have failed you. We failed you due to self-interests, ideology, politics, and ill-defined work ethics for ourselves. We have failed you because our teaching, our researches are absolutely of no use to you and cannot touch even the fringe of the solutions of your problems. There are issues for which we have provided you answers in the language of mathematics and fed you the formulae. That enhanced me but not fed you with what you needed. The food giver of the world I belong to the group that bellied your expectations from us as agricultural economists.

At this point I recollect that poem from Gitanjali by Rabindranath Tagore

"I thought that my voyage had come to its end

At the last limit of my power

That the path before me was closed

That provisions were exhausted and

The time come to take shelter in a silent obscurity.

But I find that thy will knows no end in me

And old words die out on the tongue.

New melodies break forth from the heart

And where the old tracks are lost.

New country is revealed with its wonders.

In that haven of Freedom let my country Awake!"

- Rabindranath Tagore Gitanjali Poem 37

Following this inspiring lines from Dada Thakur, I do not want anybody to write that obituary of agricultural Economics. I want them to wake up and see that we, as human beings, we need not be agricultural economists only as degree holders, I can call myself as trained agricultural economist but my heart bleeds because, I need to give for the people for whom it is meant. We

need detoxification of our analytical armoury in agricultural economics. Detoxification is used in medical sciences detoxification in the sense that the entire research scenario; the entire agricultural economics teaching and research scenarios need to have a critical look within and correct ourselves. This detoxification in knowledge is something which is essential. Knowledge is not for the sake of knowledge, knowledge is for the application of it; unless we apply the knowledge, we cannot say that we are the owner / creator of the knowledge and this ownership without its application is something which is parasitical; we should not be parasites on the society.

At the end of this long lecture, I thank you for the patience and this honour given to me I had promised Kalamkar that I would write this lecture and send it to him. I did that. I am sure that, all of you would start introspecting to detoxify the researchers and the learners.

With these words, I thank you all, I thank *Pujya Bhishmapitamah* Professor Pathak and Prof. Kalamkar, over and above all, I thank Dr. Ashok Dalwai, a good friend of mine and he readily agreed to be here with us and be a listener.

Thank you very much.

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For more copy of lecture, please write to us :

Dr. S.S. Kalamkar
Director and Professor
Agro-Economic Research Centre
(Ministry of Agriculture & Farmers Welfare, Govt. of India)
H.M. Patel Institute of Rural Development,
Opp. Nanadalaya Temple, Post Box No. 24,
Sardar Patel University,
Vallabh Vidyanagar 388120
Dist. Anand, Gujarat, India
Ph. No. +91-2692-230106, 230799;
Fax- +91-2692-233106
Email: directoraercgujarat@gmail.com
Website: www.aercspu.ac.in

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Prof. R. S. Deshpande

Professor R S Deshpande is currently Director and Advisor, Centre for Development Studies, PES University, Bangalore, where he started courses on MSc in Applied Economics and MSc in Development Studies. He is also Honorary Visiting Professor, Institute for Social and Economic Change (ISEC), Bangalore. He was formerly Rajiv Gandhi National Fellow, Indian Council of Social Science Research (ICSSR), and before that Director of ISEC. Dr. Deshpande steered the mega study on "Farmer at the Millennium" and completed many research studies. He has authored 17 books and more that 140 research papers published in national and international journals. Professor Deshpande was invited as visiting Professor to the University of Ottawa, Canada; Saskatchewan Institute of Policy Planning, Regina, University of Paris, France, Lund University, Sweden. He worked as a consultant to the World Bank, Asian Development Bank, Land Equity Australia etc. He is recipient of many awards and Gold medals.

He received a Lifetime Achievement Award from Dr Babasaheb Ambedkar Marathwada University, where he was educated. He was the President of the Indian Society of Agricultural Economics, Platinum Jubilee Conference, held at Punjab Agricultural University, Ludhiana in November, 2015. He is member of many Boards of Studies, Governing Boards of Institutions/ Universities and prestigious Government Committees. Apart from all these he is a poet and an artist.