

# **The Potential Supply Of University Educated Agribusiness Entrepreneurs: A Sri Lankan Perspective**

Peter Rosa  
Department of Management and Organisation  
University of Stirling  
Stirling FK9 4LA  
Scotland  
++ 44 (0)1786 467417 (phone) pjr1@stirling.ac.uk

Weejaye Jayatilaka  
Faculty of Agriculture  
University of Peradeniya  
Peradeniya, Sri Lanka

Sarath Kodithuwakku  
University of Peradeniya

## **Abstract**

The paper discusses the need for high quality agricultural entrepreneurs in the light of wider debates on agribusiness development, and explores these issues empirically through a survey of the entrepreneurial career aspirations of Sri Lankan students from Peradeniya. Agricultural students are more enterprising in their attitudes and aspirations than their local reputation suggests. They nevertheless are strongly orientated secure professional careers in government service and employment. It is suggested that the supply of highly qualified agricultural entrepreneurs may be less affected by motivation than by lack of knowledge and resources on how to effectively set up new profitable ventures.

## **Introduction**

In developing countries, the agricultural sector usually accounts for a large proportion of GDP, with a majority of people occupied in agricultural production, either as labourers on large scale multinational enterprises, or as small 'subsistence' farmers. The large-scale agribusiness sector is fully integrated into the world economy, and an essential source of foreign exchange. It is associated with progress, modernisation and nation building. The subsistence economy, however, symbolises poverty. It is where tribal peoples or peasants struggle to survive. It has been common to attribute their poverty to backwardness and ignorance, increasingly unable to eke out a livelihood with a smaller share of land resources as population grows, or as soil and pastures deteriorate. Such people not only lack the technology, capital and education to maximise the shrinking agricultural resources at their disposal, but also are noted for being conservative and risk averse. They have become a natural target by

governments for programmes of modernisation. These involve not only improvements in the physical infrastructure and the transfer of technical knowledge but also the upgrading of the farmer's basic skills and motivations, and the improvement of support and advice.

It is now rare to find any small scale farmer who uses agricultural production for subsistence alone, or who is unaware of the wider economic and political environment. Nearly all small scale farmers may rely on some of their production for subsistence, but they also need money. Improvements in farming technique have made them less self-sufficient in materials and tools of production, as scientific improvements need consumer products to implement them efficiently (pesticides, herbicides, special hybrids, veterinary medicines, modern machinery etc.). They are no longer independent of government regulations, and need income to meet tax commitments, schooling, medicines, clothing and a host of consumer temptations. Viewed in this way, the 'backward, subsistence' peasant farmer is a myth. Most small scale farmers in developing countries are, in reality, micro agribusinesses.

Recognition by anthropologists of widespread *de facto* integration of rural peasant farmers within the wider modern economy, has undermined simplistic evolutionary theories of the modernisation process (Long 1977). Stereotyped views of cultural backwardness as an explanation for underdevelopment, stress the persistence of pre-western cultural values, which can only be remedied through education, technological modernisation and the socialisation of people into consumer markets (Rostow 1964). A recent variant of this is the need to modernise the former socialist command economies after years of relative backwardness caused by the crude implementation of Marxist economics, ideologies and policies. In these scenarios, it has been assumed that rural people have either not acquired the enterprising spirit and knowledge needed to thrive in the modern capitalist world, or to have lost this spirit. Millions of dollars have been spent trying to instil entrepreneurial motivation and know how in "backward" peoples in developing countries.

Development anthropologists, however, have demonstrated that rural farmers in less developed countries have commonly been integrated into sophisticated moneyed economies for at least several generations, and fully understand the values of a consumer society. Their responses to imposed modernising initiatives are sophisticated and diverse, and full of examples of entrepreneurial ingenuity and motivation (Long 1992; Hobart 1994). Indeed far from observing cultural backwardness and ignorance, researchers to developing countries cannot help but be impressed by the widespread entrepreneurial vitality (Fadahunsi 1996). Many researchers in the field have been aware for many years (eg. Bohannan and Dalton 1992) of the vitality of the informal sector in developing countries, a sector which small scale agribusinesses form an important element. The persistence of the assumption of backwardness by policy makers who operated remotely from the field, has meant that it was not until the early 1980s that the importance of the informal sector became fully appreciated. Policies of enterprise development since the early 1980s have increasingly targeted the informal sector, which is seen as the sector most likely to absorb rising unemployment (Haasbrock 1996, King 1996).

This can pose a logical dilemma. If entrepreneurship is so prevalent and the informal sector so dynamic, why bother trying to increase the supply of entrepreneurs in general, and entrepreneurial farmers in particular? Is it not sufficient to improve the infrastructure and general demand in the economy, and leave the people alone to get on with exploiting the new opportunities offered? Counter arguments centre on the fact that entrepreneurship can be merely survivalist, unless combined with education, improved scientific knowledge and good practice, and a supportive enterprise culture (Gibb 1987; Gibb 1993a; 1993b).

Kilby (1971) was the first to point out the paradox that an entrepreneurial and dynamic population could still be associated with chronic indigenous underdevelopment in more formal parts of the economy. He hypothesised that entrepreneurship has a number of roles, and that it is possible for people to be entrepreneurial in some roles, and not in others. In Nigeria he found that 'entrepreneurial performance in roles involving exchange relationships and political administration is vigorous and effective. On the other hand entrepreneurs do not apply themselves with equal intensity or skill to their tasks in the realm of management control and technology. Deficiencies in these latter areas represent in many instances the operational bottleneck to indigenous industrial development' (Kilby 1971:35). The paradox applies equally well to the agricultural sector in developing countries, where entrepreneurial but survivalist small scale farmers coexist with large scale multinationals, but have failed to make the transition into prosperous modern indigenous farming enterprises, or related agribusinesses. In this context the abundance of enterprising but survivalist small farmers contrast with a scarcity of highly educated agri-entrepreneurs. This points to problems in the education system, in particular that leading agricultural educational establishments have failed to deliver sufficient graduates with the motivation and skills necessary to start businesses in the formal agribusiness sector.

Specialist government agricultural research and educational establishments have traditionally played an important role in modernising agriculture through devising, enhancing and disseminating improved technological production systems. They provide improved crop varieties and breeds of stock, information on better agricultural management, and design and help implement support schemes and outreach services to farmers. They also directly or indirectly staff this process. They train an annual cohort of agricultural graduates destined to conduct research, disseminate good practice, and support the farmers in the field. They also produce new managers for running large scale agricultural enterprises. The educational system in agricultural universities and colleges in less developed countries has thus encouraged the development and perpetuation of a professional class of agricultural graduates. Such graduates are produced in developing countries too, but there is an important difference. Many US or European agricultural students come directly from sophisticated farming backgrounds, and seek (economic opportunities permitting) careers in owning and running their own farm. Many graduate and join their family farm, and adapt their new knowledge gained at agricultural college to improve its performance. In a study of 3,100 UK University graduates, for example, returning to run the family farm or family agricultural merchandising business was a common career choice amongst graduates from agricultural courses (Rosa 1994). In less developed countries, however, many agricultural students come from families that are not directly

small scale farmers (the sons or daughters of government officials, for example). Even when they do come from a small farming background, however, the incentive for returning to manage their parent's small scale survivalist agribusiness is not an attractive option. Nor do they necessarily aspire to owning or managing large scale farms, as these are often either owned by large multinationals, or are so expensive to set up or acquire that owning one is not a realistic option either. The incentives for an entrepreneurial farming career are thus low, and many graduates end up in the public sector as officials promoting government agricultural policy and extension services. This ultimately produces a generation of professionals with scientific acumen, but with less experience or sympathy for the special business problems and operating conditions faced by the small scale farmers they seek to help and support.

Such a system also deprives the economy of the entrepreneurial gifts of a generation of highly qualified agricultural students who, in more favourable environments, would be creating new larger-scale agribusiness ventures. The informal sector in most less developed countries as indicated earlier, is not short of dynamic entrepreneurs. However they are handicapped by a lack of education. They do not tend to seek opportunities in the formal business sector. This tends to result in an unbalanced economy, where petty entrepreneurs develop thriving micro businesses in the informal sector, and large multinational enterprises dominate the formal, but where there is little indigenous creation of medium sized businesses. In Eastern Europe, this phenomenon is referred to as the "socialist black hole", and in Africa, the "missing middle". In developing countries the 'missing middle' is recognisable by the few indigenous middle sized food processing, packaging, distribution and retail businesses in indigenous ownership. There is clearly a role for more entrepreneurial activity by agricultural graduates.

### **Sri Lankan agricultural sector**

The agricultural sector in Sri Lanka accounts for about 24 percent of the nations' GDP. About 2.2 million people directly employed in agriculture which remains an important source of income for about 70 percent of the population. Around 31 percent of the total land area in Sri Lanka is under cultivation (Samarathunga and Dasanayake, 1991), of which about one-half is devoted to plantation crops, 45 percent to paddy production and the remainder to the production of other crops, including fruits and vegetables (Schermerhon, 1986).

Socialist governments in the 1960s and 1970s pursued policies of planned intervention and protectionism in agriculture. There was considerable emphasis on import substitution for rice and other food crops (Gunatilleke *et al.*, 1992; Thorbecke and Svejnar, 1987; Lee, 1977), and farmers were protected even within the domestic market. For instance, guaranteed price schemes combined with state purchase of products provided the farmers with assured markets with stable prices. This was possible as the state was both the importer and largest distributor through food rationing. In addition to almost free land (at a nominal rent) and water, farmers benefited from subsidies of fertilisers, and low duties on agro-chemicals and tractors. (Gunatilleke *et al.*, 1992 ; Moore, 1984). Therefore, the agricultural sector with its heavily protected and regulated market and its wide array of subsidies and other forms of state support, developed an environment of reliance on the state. These policies,

which began to be reversed in 1977, stifled the development of an entrepreneurial population capable of identifying and exploiting new economic opportunities (Gunathilleke et al, 1992:185; Tharmaratnam, 1986).

Today there is a greater appreciation of the private sector. This started with the introduction of the open economic policy package by the government in November 1977 which was mainly aimed at encouraging an export oriented free market economy (Gunathilleke *et al.*, 1992; Bruton *et al.*, 1992; Shanmugarathnam, 1984, Karunan, 1992; Tharmaratnam, 1986). The post 1977 reforms dismantled most of the exchange controls and import quota systems, removed subsidies and administered prices (Gunathilleke *et al.*, 1992) and liberalised the internal trade of farm products (Karunan, 1992:114). Furthermore, the role of the government sector of marketing the agricultural products was gradually diminished (RONCO, 1986).

The open economic policy sought to provide incentives to private investors in agricultural production. The basic strategy was to promote export-oriented agribusiness through multinational collaborations (Karunan, 1992). In this context, a large acreage of state lands previously earmarked for irrigation and small scale distribution under the "Mahaveli Programmes" were distributed by the government to private sector firms rather than retaining them under state control. Large scale export oriented agricultural firms were thus able to move into the rural sector and persuade and organise the small producer to produce valuable exports for them (i.e. gherkin, ornamental fish, cut flower, foliage etc.). The firms provided technical know how, credit and market distribution (Gunathilleke *et al.*, 1992). This, however, was not necessarily a one way client. patron relationship. As Siriwardena (1989) points out, this often developed into a complex state of interdependency, where both traders and farmers were able to entrepreneurially gain from the relationship Unlike the days of protectionism, farmers and agribusiness operators have to be sensitive to the demands of domestic and export markets. Thus., with the introduction of open economic policies, farmers/agribusiness operators in Sri Lanka were allowed to respond to market forces which were operated in a competitive, dynamic and therefore very uncertain environment with a myriad of opportunities, which demanded entrepreneurial talents to pursue them.

This developing grass roots entrepreneurialism in Sri Lanka, however, has been slow to affect the entrepreneurial supply of well qualified agricultural graduates, who until the 1990s were firmly orientated to well paid and secure white collar jobs in the public sector or large scale enterprises. Only in the last few years has the world trend of insecure job prospects begun to afflict Sri Lanka. With this has come a growing realisation that more entrepreneurial career paths may not be useful, and in some cases, necessary. The need for increasing the supply of graduate entrepreneurs, and for entrepreneurial education and training, is growing. Traditionally, however, there has been a little emphasis on business education in Schools and Universities of the country (Tharmaratnam,1986). This is true for all the agricultural colleges and the universities in the country too. In these institutions, students have been normally prepared for employment and not self employment, and have been trained to be production orientated, rather than entrepreneurial or market led.

The Faculty of Agriculture, University of Peradeniya was the first to introduce courses in agribusiness management at the University level in the country, and to start to introduce entrepreneurial subjects into its curriculum. These courses started in earnest in 1994. However in embarking on this strategic change towards a more enterprising education, little was known about the entrepreneurial career aspirations of the undergraduate and postgraduate students at the Faculty of Agriculture. The survey that we report on below was an attempt to gauge the levels of indigenous entrepreneurship amongst students before intervention started in the education process. It was conducted in 1994, before enterprise courses and courses in agribusiness management with an entrepreneurial component were embarked on.

The questionnaire draws upon measuring instruments developed at the University of Stirling for a large survey of the entrepreneurial career aspirations and destinations of Scottish and Northern English University graduates (Rosa and McAlpine 1990). Key questions were asked on the attractiveness of career options in public and private sector agribusiness and non agribusiness employment and self employment, on whether students had had a business idea, and what this was, and whether they had followed it up. They were also asked whether they intended to set up an agribusiness in the future (full-time, part-time), when in the future, and what the business was likely to be. Some background questions which experience showed were potential indicators or determinants of entrepreneurial behaviour, were also asked. These included details of school education, major courses being taken, year of study, work experience, family and regional background.

The questionnaires were distributed to undergraduate and postgraduate students throughout the faculty of agriculture during classes, and collected by class tutors. Nearly all given out were handed back. The total sample consists of 195 responses

## **Results**

Academic staff when interviewed invariably thought that the students were not entrepreneurial in their attitudes, and firmly aspired to secure careers in government organisations. This appeared to be born out when one of us (Rosa) addressed postgraduate students from the Faculty of Agriculture. When asked to hold up their hands if they were intending to start their own business or farm in the future, only two did so out of a full lecture hall.

At one level the survey appeared to support this view. Table 1 shows that most students found careers in a Government agricultural organisation or a large agribusiness company attractive, and hardly anyone found these to be the least preferred option. However this taken in isolation would be misleading. Table 1 shows two dominant effects, that agricultural careers are much more preferred than non agricultural ones (not surprising in agricultural students), and that large organisations are preferred to small. Nevertheless a surprising percentage (surprising in the light of anecdotal evidence) found the prospect of owning their own agribusiness attractive (60%), a figure higher than becoming a farm manager. Owning their own agribusiness

was the most preferred option of 15 per cent, appreciably lower than those that most preferred large agribusiness enterprises, but still higher than the other options listed.

Moreover only 3 per cent thought that owning an agribusiness was their least preferred option.

Table 1: Attraction and preference for major career options:

Occupation Job in:	Attractive %	Not Attractive %	Most preferred %	Least preferred %
Government organisation (non agricultural)	32.6	47.0	6.8	18.1
Government organisation (agricultural)	75.9	14.5	33.0	5.3
Large agribusiness company	78.1	11.7	23.0	4.3
Small/medium agribusiness company	42.4	25.6	3.7	6.4
Large business (non agribusiness)	28.8	51.1	2.6	12.2
Small/medium business (non agribusiness)	13.7	62.6	0.0	21.8
Farm manager	49.7	23.5	10.5	6.9
Your own agribusiness	59.7	23.7	15.7	3.7
Your own business (not an agribusiness)	<u>31.4</u>	<u>46.5</u>	<u>4.7</u>	<u>21.3</u>
TOTAL	na*	na*	100	100

Total sample number = 196

\* The first two columns are based on a 5 point Likert scale, with “very attractive” and “attractive” pooled to form “attractive”- and “unattractive” and “very unattractive” pooled to form “not attractive”. Each cell in these two columns has an implicit “NO” category, bringing the total percentage to 100%. For example 32.6% found a Government Organisation attractive, and an implicit 67.4% did not. The second two columns simply report which occupational category was most preferred, and which was least preferred. Hence the column percentages add up to 100%.

The higher than expected entrepreneurial potential of the students is further confirmed by the results in Table 2. Most students thought it likely that they might start a business in the future. A surprisingly high percentage (11 per cent) intended to start a full-time agribusiness soon, and a third intended to start a part-time business. A small number had already started a business. For the rest, a significant proportion saw starting an agribusiness as a longer term option.

Table 2: Likelihood of starting a full-time or part-time business in the future

Likely to start a business-	Full n.	Time %	Part n	Time %
Yes, soon	22	11.4	58	30.5
Yes after some years	95	49.2	97	51.1
Have started a part-time Business in the past	-	-	5	2.6
Already have a part-time Business	-	-	1	0.5
No, never	96	39.4	29	15.3

## Business ideas

The proportion who stated that they had had a business idea was high, at 43%. This is similar to the proportion found in surveys of UK University graduates (Scott and Twomey 1988; Rosa and McAlpine 1990). Around a third of those who had had a business idea had tried to follow it up in some way, and put the idea into action. Most business ideas were dominated by agricultural enterprises (horticulture, animal husbandry, flowers). Few wanted to start a business outside the agricultural sector, but these included market consultancy and garment manufacturing. Significantly there were no aspirations to enter food processing, an area with considerable entrepreneurial potential in Sri Lanka.

## Some determinants of entrepreneurial aspiration

The questionnaire contained some indicators that previous research has demonstrated might influence entrepreneurial career aspiration. These include sex, age, previous work experience, father's occupation, type of course, year of course, regional background (Scott and Twomey 1988; Rosa and McAlpine 1990; Rosa 1994). Multivariate analyses (discriminant, logit regression) were performed with several dependent variables (having a business idea, attractiveness of setting up one's own agribusiness, whether setting up one's own business is the most preferred career option, intention of starting a full-time business, intention of setting up a part-time business. In all the analyses, significant multivariate relationships were established between the independent variables and each dependent. Of all the independent variables, however, sex of respondent turned out to be by far the best determinant. Men were twice as likely to have a business idea (59% versus 28%); much more likely to find a career in one's own agribusiness very attractive (40% versus 29%); and much more likely to find one's own agribusiness to be the most preferable career option (27% versus 13%). Finally although men and women were similar in the proportion

who wanted to start a part-time business soon, the proportion of men was much higher in the equivalent case for full-time businesses (45% versus 33%).

This would imply that women are not necessarily less entrepreneurial, but more realistic in their career prospects. They are nearly as likely as men to intend to start a part-time business, but when they are presented with the more demanding prospect of starting a full-time one, they are much less likely to aspire to it. It may well be that a full time career option for women, particularly a full-time entrepreneurial one, may be much more difficult to reconcile with home life and domestic commitments than would be the case for men.

Of the other variables, only father's occupation and education showed any relationship. Students whose fathers ran their own agribusiness were (just) significantly more likely to be associated with the possession of a business idea.

## Conclusions

The results of the survey only partially support the prevalent view in Sri Lanka that agricultural graduates are not enterprising, and are sharply focused on secure professional careers in government service or the large firm sector. Although they tend to find a professional career attractive, a majority also find owning their own agribusiness attractive. A significant minority have had business ideas, pursued them, and intend to start a business in the future. These responses, moreover, were produced by a cohort who were not yet subject to curricular changes designed to enhance entrepreneurial performance.

These trends are similar to those found in graduates elsewhere (Scott and Twomey 1988; Rosa and McAlpine 1990). The demand for graduates to fill professional employment is always the premier force determining career outcome, but the entrepreneurial spirit is a detectable and significant factor. Growing graduate unemployment and long term job insecurity are forces that would result in higher rates of self employment amongst graduates. These, however, are negative forces for promoting entrepreneurial supply. More positive are forces that attract graduates to start new businesses in areas of strong market opportunity, with considerable growth and employment potential.

An important question is thus whether such market opportunities are not being recognised or not being attempted. If so, is this due to the failure of the education system to educate properly for entrepreneurship in the formal agribusiness sector? There is no research at present to indicate whether there is, in fact, unmet demand for highly educated entrepreneurs to exploit. In the agribusiness sectors, we can only observe that the "missing middle" is strong, that Sri Lanka appears to have few modern **middle sized** farms, food processing factories, agricultural supply and distribution merchants, agricultural technology spinoff companies compared to other countries. It would be unusual if political and environmental constraints were powerful enough to totally inhibit market opportunities in these sectors. We can provisionally assume, therefore, that opportunities do exist, and may be increasing as the Sri Lankan economy continues to liberalise. If so, the issue becomes whether the

entrepreneurial supply of highly qualified agricultural entrepreneurs is being stifled in some way. The findings of the study imply that lack of entrepreneurial aspiration is less of a problem, than lack of education and resources on how to put this aspiration into practice. Agricultural students have been taught more on how to produce than how to extract commercial value from what they produce. Quite simply Sri Lanka, as in many less developed countries, has not so much lacked entrepreneurs, but has not succeeded in producing the specialist entrepreneurs with education and practical knowledge needed to start larger agribusinesses. This may be complicated by a middle class social environment that may be less tolerant of entrepreneurial adventure. This may be particularly inhibiting for educated female students, the gender results show. Ultimately, as Gibb (1993) argues, the development of a supportive enterprise culture is essential to overcome these barriers if entrepreneurship is to thrive in those sectors where education and knowledge are necessary prerequisites to success. Establishing such a culture, as Gibb demonstrates, is not just limited to how curricula are constructed and taught, but involves a critical appraisal of a much wider range of social and economic institutions.

The University of Peradeniya is now developing undergraduate and postgraduate programmes to promote entrepreneurship and management skills amongst its agricultural students. The present survey provides a base from which follow up surveys can be conducted in the future to help measure the impact of these curricular changes on student entrepreneurial career aspirations. This kind of exploratory research before development initiatives and changes are carried out is rarely done, but should be considered in future initiatives.

## **Acknowledgements:**

The research team acknowledge the contribution of the British Overseas Development Administration and the British Council in funding the research collaboration between the Universities of Peradeniya and Stirling. Special thanks are due to Dr Rupa Wickramaratne for her patient support throughout this collaboration.

## **References**

- Bohannen, P. and Dalton, G. (1962) *Markets in Africa*, Northwestern University Press.
- Bruton, H.J., Abesekara. G., Sanderatne. N., and Yusof. Z.A. (1992). *The Political Economy of Poverty Equity and Growth: Sri Lanka and Malaysia*. Oxford University Press.
- Fadahusni, A. (1996) Indigenous entrepreneurship and cross-border trade in Western Nigeria, in Rosa, P. ; Scott, M. and Klandt, H. (eds.), *Educating Entrepreneurs in Modernising Economies*, Aldershot: Avebury.
- Gibb, A. (1987) Enterprise Culture - Its Meaning and Implications for Education and Training. *Journal of European Industrial Training* 11 (2).
- Gibb, A. (1993a) Small business development in Central and Eastern Europe opportunity for a rethink? *Journal of Business Venturing* Vol 8 (6), 461-486.

- Gibb, A.A. (1993b), The enterprise culture and education : understanding enterprise education and its links with small business entrepreneurship and wider educational goals; *International Small Business Journal*, **Vol. 11**.
- Gunatilleke, G., Perera, M., Wanigaratne, R.A.M.C., Fernando, R.E., Laksman, W.D., Chandrasiri, J.K.M.D., and Wanigaratne, R.D. (1992). "Rural poverty in Sri Lanka: priority issues and policy measures". *Asian Development Review* (Vol. 10, No.2).
- Haasbrock, D, (1996) Entrepreneurship training for the informal sector in South Africa, in Rosa, P. ; Scott, M. and Klandt, H. (eds.), *Educating Entrepreneurs in Modernising Economies*, Aldershot: Avebury.
- Hobart, M. (1993) *An Anthropological Critique of Development*, London/New York: Routledge
- Karunan, V.P, (1992). *Peasant Protest and Rural Elite Strategies in Asia: case Studies of India, the Philippines and Sri Lanka*. Catholic University of Nijmegen. Netherlands.
- Kilby, P. (1971) *Hunting the Heffalump*, in Kilby, P. (ed.) *Entrepreneurship and Economic Development*. New York: The Free Press
- King, K. (1996) *JuaKali, Kenya, Change and Development in an Informal Economy*, London/Nairobi:James Currey
- Lee, E, (1977). "Development and income distribution: A case study of Sri Lanka and Malaysia". *World development report* (Vol.5, No. 4)
- Long, N. (1976) *An Introduction to the Sociology of Rural Development*, London :Tavistock.
- Long, N. and Long, A. (1992) *Battlefields of Knowledge, the Interlocking of theory and Practice in Social Research and Development*, London: Routledge
- Moor, M. (1984). Categorizing space: Urban-rural or core-periphery in Sri Lanka. *The Journal of Development Studies* (Vol. 20, No.3)
- RONCO, (1986). *Agricultural Marketing Development in Sri Lanka: Strategy for domestic and export marketing of subsidiary field crops and vegetables*. RONCO consulting corporation. Washington, D.C.
- Rosa, P. (1994) *The Long Term Supply of Graduate Entrepreneurs: Insights from a Scottish Study*. Report to the New Ventures Team, Scotland Business Birthrate Campaign, Scottish Enterprise 1-35.
- Rosa, P. and McAlpine, A. (1991) Graduate career orientation towards enterprise. In Davies, L. and Gibb, A. (eds) *Recent Research in Entrepreneurship*. Aldershot:Gower : 73-105
- Rostow, W.W. (1964) *The Stages of Economic Growth - a Non-Communist Manifesto*,Cambridge:Cambridge University Press.
- Samarathunga, P.A. and Dissanayake, D.M.W.T. (1991). Potentials and problems of income and employment generation through small-scale processing of coarse grains, pluses, roots and tubers in Sri Lanka. *CGPRT Publication* (Vol.26).
- Schermerhorn, R. W. (1987). A Comparative Analysis of fruit and vegetable marketing in developing countries. *GTS Report Postharvest Institute For Perishables/USAID* (Vol.82).
- Scott, M. & Twomey, D (1988) The long term supply of entrepreneurs: student's career aspirations in relation to entrepreneurship. *Journal of Small Business Management* **26 (4)**: 5-13. (1988)
- Shanmugarathnam, N. (1984). Sri Lanka's "New" economic policies and agriculture. *Social Scientist* (Vol. 12).

- Siriwardena, S.S. (1989) *From Planned Intervention to Negotiated Development*.  
PhD Thesis: University of Wageningen, Holland.
- Thorbecke, E. and Svejnar, J. (1987). Economic Policies and Agricultural Performances in Sri Lanka. OECD.
- Tharmarathnam, D.S.R. (1986). Entrepreneurship in Sri Lanka, some constraints to and measures for overcoming them. *Sri Lanka Journal of Social Science* Vol 9.