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Driving factors to become an agri-input dealer: Implications for institutionalising public-private partnership in extension service delivery

¹Naveen Kumar Gattupalli, ¹Gopichand B, ²Kanchan Bhagwat and ³Mahantesh Shirur

¹Academic Associate, National Institute of Agricultural Extension Management (MANAGE), Hyderabad, Telangana, India

²Consultant, MANAGE, Hyderabad, Telangana, India

³Principal Scientist, ICAR-National Academy of Agricultural Research Management (NAARM), Hyderabad, Telangana, India

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Corresponding Author: Mahantesh Shirur

Abstract

Agri-input dealership in India was traditionally confined to urban businessmen in the absence of any statute requiring necessary qualification or competency for many years. This led to several problems like unscrupulous recommendation of chemicals and fertilisers causing substantial financial loss to farmers on several occasions. In recent times, the agri-business is confined to either agriculture graduates or for those acquiring a degree or certificate course covering agriculture chemicals in its curriculum. To facilitate this, National Institute of Agricultural Extension Management (MANAGE) offers a one-year Diploma course-DAESI to educate the agri-input dealers and to impart basic agriculture knowledge to them. The present study conducted across 10 Indian states aims to know the driving factors behind entrepreneurial aspirations of the candidates enrolling and completing the DAESI programme under self-finance scheme where candidates bear all the expenses to complete the course and obtain the diploma. The study revealed that majority of graduates from the rural area showed interest to enrol for DAESI programme and to establish their own enterprises. As DAESI Diploma is a means to authorise them apply for agri-input business establishment, many also enrolled in the programme to continue their family business by validating their licence. Willingness to serve as para extension workers also emerged as an important motivating factor for the participants to enrol for DAESI programme suggesting a huge scope for convergence in delivering extension services to farmers on PPP mode.

Keywords: DAESI, agri-input dealers, MANAGE, entrepreneurship, agri-business

Introduction

In the new world economic order, many consider employment as very essential for individual wellbeing and social security leading to economic progress of the nation. Unemployment causes underutilization of labour and human resources, resulting in decreased economic productivity (Nair, 2020)^[29]. The unemployment rate was highest among youth than adults ILO (2024)^[17]. The youth unemployment rate has been rising over the past several decades from 5.6 per cent in 2000 to 6.2 per cent in 2012, and then increasing threefold, to nearly 18 per cent in 2018, and reaching around 15.1 per cent in 2020. Unemployment among educated youths is particularly high and had exceeded global averages by 2018 ILO (2022)^[18].

In the era of globalization, the opportunities of employment have transcended the traditional sectors, and the entrepreneurship has emerged as a prominent means of accommodating the growing number of employable youths. Hence, entrepreneurship is emerging as a key driving force of a country's economic and cultural progress. Developing an entrepreneurial culture and supporting entrepreneurs is crucial for creating jobs in the agricultural sector (Khayri *et al.*, 2011)^[22]. This is particularly important for countries with prominently agrarian economy. The entrepreneurial ecosystem is starting to flourish again as a result of

globalization shifting the comparative advantage of high-cost location to knowledge-based activities with high cost transfer (Audretsch *et al.*, 2005)^[3]. Entrepreneurial motivations asserts that unemployment can lead to business creation as people look to become self-employed to avoid unemployment (Van der Zwan *et al.*, 2016)^[37].

According to economic theories of entrepreneurship, enterprise and economic growth takes place when economic conditions are favourable. In a welfare state, the policies - especially the economic incentives by the Government play a crucial role in promoting entrepreneurship culture. The research on entrepreneurial policy interventions and monetary policies has revealed a favourable and significant impact on growth and development (Campos *et al.*, 2021)^[9]. The employment scenario in India was significantly impacted by the introduction of liberalisation policies in the early 1990s, leading to a significant boost in economic development. Throughout the years, various governments have launched multiple programmes and schemes aimed at enhancing the employability of the population (Goyal & Jagtap, 2020)^[15]. The Ministry of Agriculture and Farmers' Welfare in India regularly rolls out several schemes benefitting various category of stakeholders. One such scheme by the Government of India is the Diploma in Agricultural Extension Services for Input dealers (DAESI)

benefitting the agri-input dealers.

Agri-input dealers are prime source of information to the farming community. In addition to providing inputs and credit, their contribution to the dissemination of Agricultural technology is highly praised by farmers due to their approachability and likability (Argade *et al.*, 2015) ^[2]. Nevertheless, most of the agri-input dealers do not have a formal education in agriculture, resulting in incorrect advice that can result in financial loss for farmers. To overcome this, National Institute of Agricultural Extension Management (MANAGE) launched a one-year Diploma course DAESI in the year 2003 to educate the agri-input dealers and to transform them into para extension workers to serve the farming community.

Recognizing the significance of this initiative, the Ministry of Agriculture and Farmers Welfare rolled it as an official government scheme and provided financial assistance through the Sub-Mission on Agricultural Extension (SMAE) from 2015-16 onwards. The scheme operates in two modes as Central Sector Plan Scheme for existing agri-input dealers to renew their license to carry out their business for which Government will subsidize the 50% of course fee. The other mode was Self-Finance scheme where the unemployed youth will enrol the course by paying the entire course fee. So far, over one lakh agri-input dealers are trained under this scheme by MANAGE and its network of training institutes since its inception. The DAESI programme aims to create new employment opportunities for the youth through establishment of agri-input shops in the rural areas and helps in transformation of rural agrarian economy. An army of trained agri-input dealers may serve as reckoning force in furthering the public-private partnership efforts in delivering extension services to the farmers through institutionalising them as para-extension workers.

Materials and Methods

DAESI Program is implemented in 20 states out of 28 states in India covering 89.38% geographical area and 90.80% of population. From this region, the research was carried out in 10 states with highest number of candidates enrolled under self-finance scheme of the DAESI program. The data was collected exclusively from the trainees of the self-finance DAESI batches completed during 2018-21 by purposively selecting the candidates not having agri-input license at the time of their enrolment in the DAESI programme. A total of 600 respondents were interviewed for the study. The present study is intended to know the driving factors behind entrepreneurial aspirations the candidates completing the DAESI programme under self-finance scheme. The results were analysed using the descriptive statistics.

Results and Discussion

Profile characteristics of the respondents

The personal characteristics of the respondents presented in Table 1 reveals that majority of the respondents were male (93.8%). This result lesser female candidates enrolling in DAESI was also previously reported by (Jhansi *et al.*, 2022; Ogunlade *et al.*, 2012) ^[20, 30]. Agri-input business is traditionally marked by the dominance of men (Ogunlade *et al.* 2012) ^[30]. This trend could be ascribed to long working hours at the retail shop, jobs demanding more of physical

activity and exposure to chemicals. Lack of collateral, lack of self-esteem, dependency on family, lack of information on credit options and lack of access to productive resources can be major challenges affecting the survival and growth of women-owned small agribusinesses (Mkumbwa, 2018) ^[27]. Although the number of women enrolled in the DAESI program has declined, the number has increased over the years from 418 (2018-19) to 1,069 (2022-23), making the rate for the past five years 155.74%.

Even though the enrolment of female candidates is very less (6.20%), it is interesting and encouraging to know that female candidates are showing interest to establish agri-input business on their own. The lesser number of female candidates also presents as an interesting case as their willingness to venture into male dominant profession speaks of their attitude to break the stereotype of agri-business enterprises in India. One important reason for this trend could be agri-input business bequeathed by their parents or male family members partnering with them to share the business responsibilities.

The data shows that majority (80.6%) of the respondents were adult and young with age between 18 to 44 years. This resonates well with the studies (Jhansi *et al.*, 2022; Ogunlade *et al.*, 2012; Meena and Badhala, 2024; Shirur *et al.*, 2017) ^[20, 30, 25, 35] which have reported that on an average the entrepreneurs in other agri-businesses are either in the middle or old age category. From the data, it can be inferred that a large number of youth are attracted towards the DAESI course for establishment of an agri-input dealer shop. Age impacts entrepreneurial success by influencing opportunities, challenges, and financial management skills (Martin, 2021) ^[23]. Young people are motivated to learn more about new things and tend to recognize opportunities quickly and exploit them accordingly, which are core characteristics of entrepreneurs (Bai *et al.*, 2022) ^[4]. Youth and adult entrepreneurship are not only a means of overcoming unemployment; it can also provide broader benefits, such as improving young people's social and psychological well-being and providing them with enterprising competencies.

From the table, it can be known that more than three-fourth (80.70%) of the respondents had formal education of above 12th standard with about 46.5% of respondents having a graduate or post-graduate degree. This result is consistent with several prior studies (Jhansi *et al.*, 2022; Ogunlade *et al.*, 2012; Meena and Badhala, 2024; Khambala *et al.*, 2024) ^[20, 30, 25, 21]. The result also indicates that educated and unemployed youth are attracted towards the DAESI course for establishment of an agri-enterprise. Qualified and educated agri-input dealers also serves the interests of the farmers.

Research and Extension are two important factors that play a major role in agriculture development. Enhancing farm productivity depends crucially on the advancements in new technologies, their inputs, post-harvest processing, and the marketing and pricing of farm produce. On the flip side, communicating all this information to farmers is a crucial challenge for those involved. Most farmers lack knowledge about the specific types and quantities of agrochemicals needed for various crops and modern technologies (Elakkiya & Asokhan, 2021) ^[13]. Agri-input dealers are greatly contributing to reaching farmers by not only supplying

Agri-inputs, but also offering technological support (FAO, 2017) [14]. Education plays a very prominent role in development of communication skills and ability to disseminate the scientific practices to farmers.

Table 1: Profile characteristics of the respondents n=600

Gender			
No	Characteristic	Number	Percentage
	Male	563	93.8
	Female	37	6.2
Age			
	Youth (18 to 24 Years)	53	8.8
	Adult (25 to 44 Years)	431	71.8
	Middle Aged (45 to 64 Years)	115	19.2
	Old Age (Above 64 Years)	1	.2
Education			
	SSC	116	19.3
	12th	205	34.2
	Graduate	236	39.3
	Postgraduate and above	43	7.2
Type of Family			
	Nuclear	226	37.7
	Joint	374	62.3
Family Size			
	Small Size (Up to 4 Members)	226	37.70
	Medium Size (5 to 7 Members)	292	48.70
	Large Size (Above 7 Members)	82	13.70
Major Occupation			
	Agriculture	348	58.00
	Business/Agri-Input Business	228	38.00
	Private Employee	24	4.0
Annual Income			
	Up to 1,00,000	215	35.8
	1,00,001 to 2,00,000	166	27.7
	2,00,001 to 3,00,000	92	15.3
	3,00,001 to 4,00,000	34	5.7
	4,00,001 to 5,00,000	53	8.8
	Above 5,00,000	40	6.7
Size of Land Holding n=520			
	Marginal (Upto 1 ha)	212	40.76
	Small (1.01 to 2.0ha)	165	31.73
	Medium (2.01 to 4.0 ha)	92	17.69
	Large (Above 4 ha)	51	9.80

Education gives entrepreneurs cognitive ability to better evaluate and exploit entrepreneurial possibilities, boosts self-confidence, and minimizes perceived risk (Jiménez *et al.* 2015) [19]. With more education and encouragement, young people should be able to realize their entrepreneurial ambitions. This fosters economic growth in our communities and creates new jobs and career opportunities, regardless of economic conditions (Raposo *et al.*, 2011) [33]. As a result, the connection between education and entrepreneurship is extensive and significant. Family type and family size in the context of present study helps the researcher to know about the support system existing in the family. The data presented in the table shows that more than three-fifth (62.30%) of the respondents belong to joint family category with more than 5 members in the family. This finding is in harmony with the findings of (Khambala *et al.*, 2024; Yoganandan *et al.*, 2022) [21, 38]. Joint family helps an individual member to share the views and learn new knowledge, skill and experiences from the veteran members of the family. Family size influences

entrepreneurship through resource availability and decision-making dynamics. Larger families have more resources and more diverse perspectives (Chang *et al.*, 2012) [10]. Family support was seen as an important motivating factor for women to become successful agricultural entrepreneurs, as in many societies young women rely on their family members' opinions when making business and personal decisions (Madhumitha and Karthikeyan, 2020) [26].

In families with an entrepreneurial culture, individuals may feel motivated to follow the footsteps of their parents or other family members and run a business (Bloemen-Bekx *et al.*, 2019; Dewitt *et al.*, 2022) [6, 11]. Additionally, family members can also provide emotional support and motivation so that individuals do not give up easily when they face challenges in running a business (Harahap *et al.*, 2023) [16]. Family members act as a source of capital when starting a business. Typically, people who want to start a business do not have enough capital to finance the business (Bradley *et al.*, 2012; Boudreaux & Nikolaev, 2019) [8, 7]. Therefore, family members can be a source of initial capital when starting a business. Family plays a vital role in the development of entrepreneurship, particularly in providing the necessary support and education for individuals who desire to establish their own firm (Harahap *et al.*, 2023) [16]. Land holding is an important attribute for establishing an agri-enterprise. They can generally increase net income and ensure income stability. The data reveals that close to three-fourth (72.39%) of the respondents belong to small and marginal category of land holding. A farm size refers to the amount of land used for agricultural processes to produce food and other crops, which determines the agripreneurs' production capacity and volume of company operations. It demonstrates the farm's profit-making potential. Land is a key factor of production as most agricultural activities take place in rural areas. Hence, youth who have access to land take up farming. Hence, access to land plays a key role in enabling youth to participate in agriculture and related businesses (MukaiLa *et al.* 2024) [28]. This is in line with Maritim, 2020 [24] who reported that youth's access to land was the main reason for their participation in agribusiness.

Land ownership patterns are a critical aspect that ultimately influences the ability to engage in agribusiness activities. It determines agricultural entrepreneurs' earning potential and, therefore, their income level and it was also found that agripreneurs who have their own land can do business better than those who cultivate in leased lands (Yoganandan *et al.*, 2022) [38]. As a landowner, his direct experience of pest and nutrient management strategies will help him guide his fellow farmers with more authenticity. The input cost for agriculture for input dealers can be less as they get at cheaper prices for purchasing them in bulk for their business purpose.

The occupation gives status of economic condition of the respondents. The table shows that nearly two-third (65.80%) of the respondents were engaged in the agriculture followed by agri-business dealership. Similar findings were observed by Jhansi *et al.*, 2022 [20]; Panja *et al.*, 2021 [31] and Srishailam *et al.*, 2021 [36]

The data on annual income gives an idea about the economic condition of person to go for occupation preferred, and hence the annual income of the respondents plays a major role in establishment of shops. The data

reveals that more than one-third (35.80%) of the respondents were having annual income up to Rs. 100,000, followed by 27.70% having annual income in the range of Rs. 100,000 to Rs. 200,000. Just about 6.7% of were having annual income of Rs. 500,000. The results are in line with the findings of Jhansi *et al.*, 2022 ^[20]; Panja *et al.*, 2021 ^[31], Srishailam *et al.* 2021 ^[36].

Financial assets are another important precursor to an entrepreneur's growth efforts. High-income households are not only better equipped to offer the required financial resources to fuel entrepreneurial business growth, but they are also more likely to see more entrepreneurial growth prospects because of their social status (Dunn, 2000) ^[12].

Source of information about DAESI program

Information and awareness about diploma course play a major role in the enrolment of DAESI Program. The Nodal Training Institutes (NTIs) at district level i.e. Agriculture Department/ATMA/KVKs plays a major role in the information dissemination and publicity about DAESI program. The data on source of information about DAESI program reveals that Agricultural Department is the major source of information (66.66%) about DAESI program, followed by fellow input dealers/ friends (29.83%). WhatsApp (22.66%) and Newspaper (17.33%) were the other important means to access the information on DAESI by candidates. Agricultural Department/ATMA being the

nodal agency at district level for the enrolment of DAESI program, its position as primary source of information about DAESI program is on expected lines.

Table 2: Source of information about DAESI program n=600

No	Source of Information	Number	Percent
1.	Agriculture department/ATMA	400	66.66
2.	Other input dealers	179	29.83
3.	Whatsapp	136	22.66
4.	Newspaper	104	17.33
5.	Television	22	3.66
6.	Radio	9	1.5
7.	Leaflets/pamphlets	4	0.6
8.	Magazines	3	0.5
9.	E mail	3	0.5
10.	Facebook	3	0.5
	Total	600	100.00

Motivation to join in DAESI program

Motivation is an intrinsic factor that drives a person to succeed in their profession. Enrolment in the DAESI course is certainly influenced by an individual's inner desire to start a business or gain knowledge. Moreover, as the DAESI diploma is an optional course it is important to know the factor influencing the candidates for enrolment in the DAESI course.

Table 3: Primary motivation to join in DAESI Program n=600

No	Motivation to Join DAESI Program	Number	Percent
1.	To obtain diploma certificate to transfer license to my name	245	40.83
2.	To become a para-extension worker to help farming community through consultancy	218	36.33
3.	Agri-input dealer shop in your own area is very profitable	162	27.00
4.	Your own family requirement of inputs is very high	30	5.00
5.	Other	38	6.33

More than two-fifth of the respondents (40.83%) had expressed their motivation to join DAESI program as to obtain diploma certificate to transfer input selling license to their name, followed by 36.33% expressing the desire to become a para-extension worker to help farming community through consultancy. The number of respondents willing to serve as para extension workers is very significant. Since there is need to bridge the large gap between the extension service provider to farmer ratio (1:1156) (DFI, 2017), there is an urgent need to narrow this gap through public-private partnership in extension service delivery to farmers. In this context, the network of DAESI trained input dealers need to be institutionalised and use their services to support the efforts of public extension machinery in the country.

About 27.00% of the respondents opined that agri-input dealer shop is profitable in their own area and that motivated them to enrol for DAESI course (Jhansi *et al.*, 2022) ^[20] in their study found the major motivation for agri-entrepreneurs is to increase household income and expand primary agriculture business in line with our findings. To be self-employed was another major reason for establishing agri-enterprises. This may be related to the need for financial security through effective business management.

Conclusion

The agriculture sector provides an opportunity for young

people, especially women, to develop skills to become self-reliant through targeted knowledge and technical interventions. Women play various roles in agricultural growth and development. They contribute to economic growth but face many challenges. The Ministry of Agriculture has implemented various programs and policies to promote agricultural development so that women groups can become successful agro-entrepreneurs and increase their sources of income. Even though the enrolment of women is less compared to men but the enthusiasm to establish agri-input business is highly appreciated and measures should be taken to promote women in agri-input business by providing policy and economic support. The department of agriculture should take proactive measures for wider publicity of DAESI programme among the rural youth to promote self-employment as they are the major source of information about the DAESI programme. The facilitators of DAESI programme should motivate the agri-input dealers to support agriculture department as para extension professionals in delivering timely and effective advisory services to farmers. Several policy recommendations given below will help the youth in the enrolment of these courses to promote entrepreneurship.

Policy Recommendations

1. Many candidates expressing the willingness to become

para-extension worker and to help farming community through extension as their primary motivation to join DAESI program suggests the huge scope of army of agri-input dealers working in tandem with extension agencies in all the states of the country. An enabling policy must facilitate furthering the public-private partnership in extension service delivery in India by institutionalizing their role as para-extension workers to work in convergence with department of agriculture in all states.

2. Public authorities should strengthen the regulation of market institutions that are responsible for the allocation of space for women agripreneurs in the market. Further research should focus on the role of government in promoting women in small-scale agri-input business.
3. Government should also incorporate livelihood and skills development in all programmes that support women so that they can confidently and proactively seek information about credit opportunities offered by business and financial institutions especially for the agri-input enterprise. Incentives such as no collateral and single-digit interest rates should be targeted at young women to help them access more credit to start agricultural businesses.
4. Service-oriented entrepreneurship holds great potential in Indian agriculture. With labour shortages in agriculture becoming a serious issue, the need to provide services as a package also presents a business opportunity for young people. The DAESI trained input dealers may be supported by Government in establishing Custom Hiring Centres and Service centres for better delivery of services to farmers.

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