



# Exploring The Role Of Academic Institutions In Creating Socially Responsible Start-Ups

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## Abstract

**Purpose** – This research paper explores the pivotal role of academic institutions in fostering socially responsible start-ups. These academic start-ups emerge from university research, and provide a distinct advantage in spearheading innovation. This paper investigates the role of academic institutions in fostering academic start-ups that prioritise sustainability and social responsibility.

**Design/methodology/approach** – Through a comprehensive literature review, the paper identifies key areas where academic startups have made substantial impacts. Additionally, the study highlights the role of these startups in advocating for regulatory changes and increasing public consciousness regarding sustainable practices.

**Findings** –The findings demonstrate that academic startups bring innovative solutions and engage in significant collaborations with industry partners, government agencies, and local communities to enhance the effectiveness of socially responsible academically-driven start-ups. Nevertheless, the research also pinpoints the challenges faced by these startups, including financial limitations, reluctance from the market, and regulatory complexities.

**Research limitations/implications** – The study provides a comprehensive background for industry and academia. It provides new avenues for funding agencies and lays grounds for amendments and policy changes for the government.

**Originality/value** – A model framework is developed showcasing the role of academic institutions in creating a more sustainable and socially responsible future for the industry.

**Keywords:** Academic start-ups, social responsibility, sustainability, innovation.

## 1. Introduction and Background

Traditionally, academic institutions and universities have transferred knowledge through conventional methods like publications, workshops, conferences, and student instructions but over the years, academic institutions have learned to transfer knowledge and technology (Cunningham et al., 2019) through patents, licensing, intellectual property, startup firms, business incubators, and technical parks. This has given a new dimension to education. Universities and institutions are becoming progressively more active in creating new ventures in addition to producing and disseminating scientific knowledge (Chen et al., 2023). Recent trends in the growth of scientific research, scientific creative thinking, and easy access to information and technology have motivated

academically-driven start-ups (Sieg et al., 2023). The term "academic entrepreneurship" describes the process of starting and running new businesses that are based on knowledge and technology created through academic research. It includes utilising knowledge and intellectual property obtained in academia to generate economic value and commercial opportunities (Meng et al., 2019). It comprises the collective endeavours of faculty members, and doctoral and postgraduate students that revolve around commercial endeavours and aim to create collaboration opportunities between the commercial and scientific domains. These start-ups could be student start-ups or university start-ups. Student start-ups are based on ideas, innovations, and assets of university students where the host university does not likely take any ownership interest. University start-ups are often those built on university-owned assets, such as software, copyrights, patents, trademarks, and technical data, that result from core activities that are either internally or externally funded. These university start-ups are further segregated into spin-off and spin-out entities. While maintaining a cooperative, market-driven connection with the university, spin-off firms are distinguished by their financial and personal independence from the university. Conversely, spin-out businesses are noted by their strong financial and personal ties to the institution and their close collaboration with it (Fini et al., 2020).

Utilizing these scholarly start-ups, academic institutions have raised public awareness of sustainable practices and contributed to the attainment of sustainable development. Sustainability in performance can be measured from three dimensions. According to the triple bottom line (Kirkwood & Walton, 2014), sustainable development considers growth and development while integrating environmental, economic, and social considerations in a balanced manner. Their key focus is on generating economic and societal benefits while utilising few resources (Shibin et al., 2018). The ability of an organisation to decrease the generation of solid waste, pollution of the air and water, consumption of toxic and hazardous products, and the frequency of environmental accidents is a key indicator of its environmental performance (Zhu et al., 2024). Economic performance can be evaluated using a variety of metrics, such as increased labour productivity, cost containment, inventory investment reduction, product value recovery, and profitability. Corporate social responsibility is one of the social dimensions of an organisation. It addresses issues related to human rights, equity in service accessibility, and public health and safety.

The present study aims to explore the role of academic institutions in building socially responsible start-ups. The paper is divided into five sections. Section 2 deals with the research methodology. Section 3 explains the conceptual model framework designed after considering the literature. Section 4 elaborates discussions on the findings. The paper concludes with section 5 giving practical implications and suggestions for future studies.

## 2. Research Methodology

The study employs a literary analysis methodology that involves a comprehensive evaluation of the literature available on academic research. The content analysis technique, which has been verified by multiple recent investigations, has been employed in the present research (Hina et al., 2021; Talwar et al., 2021). The technique utilises the following steps:

*Step I: Planning the review by finalising the research criteria.*

The study adheres to the guidelines offered by Hina et al. (2021). The first step in conducting a literature survey is establishing a study protocol. To direct the research in its early stages, a research question is finalised. The procedures involve choosing a search approach and locating relevant literature. The databases used to conduct the study were Scopus, Web of Sciences, and Google Scholar.

*Step II: Determining the eligibility by refining the inclusion and exclusion criteria.* Using a Boolean search of keywords including (“academic” OR “university”) AND (“incubation” OR “innovation” OR “entrepreneurship” OR “startup” OR “spin-off” OR “technology transfer”) were

used to search the databases. The initial search generated a list of publications that had to be screened in the next step.

### *Step III: Data extraction, inclusion, and exclusion criteria*

From the total list of articles produced, only peer-reviewed journal papers were included in the search parameters. The scope of the study was restricted to the following areas: "Economics, Finance, Business & Industry." Only papers published in English were taken. The forward and backward citation chaining articles were added to the expanded search parameters. After the exclusion of conference papers, editorials, and papers written in other languages, duplicate research papers were identified and eliminated. In addition to the usual bibliographic details such as the journal title, author, and year, the screening criteria were expanded to include each article's abstract. Thereafter, false positives were eliminated.

### *Step IV: Information extraction*

The final list of 34 pertinent research papers was obtained after screening and validating the research papers. The search indicated that over the years a lot of work has been done in the areas of process and product innovations. So, there is a need to synthesize this information in a manner that could be utilised by both industry and academia. The results have been synthesised in the following sections.

## 3. Conceptual Framework

A framework has been created, as shown in Figure 1., in light of Lüdeke-Freund's (2020) suggestion that conceptual frameworks are crucial bridges between preliminary accounts of occurrences and theories that may explain and forecast these phenomena.

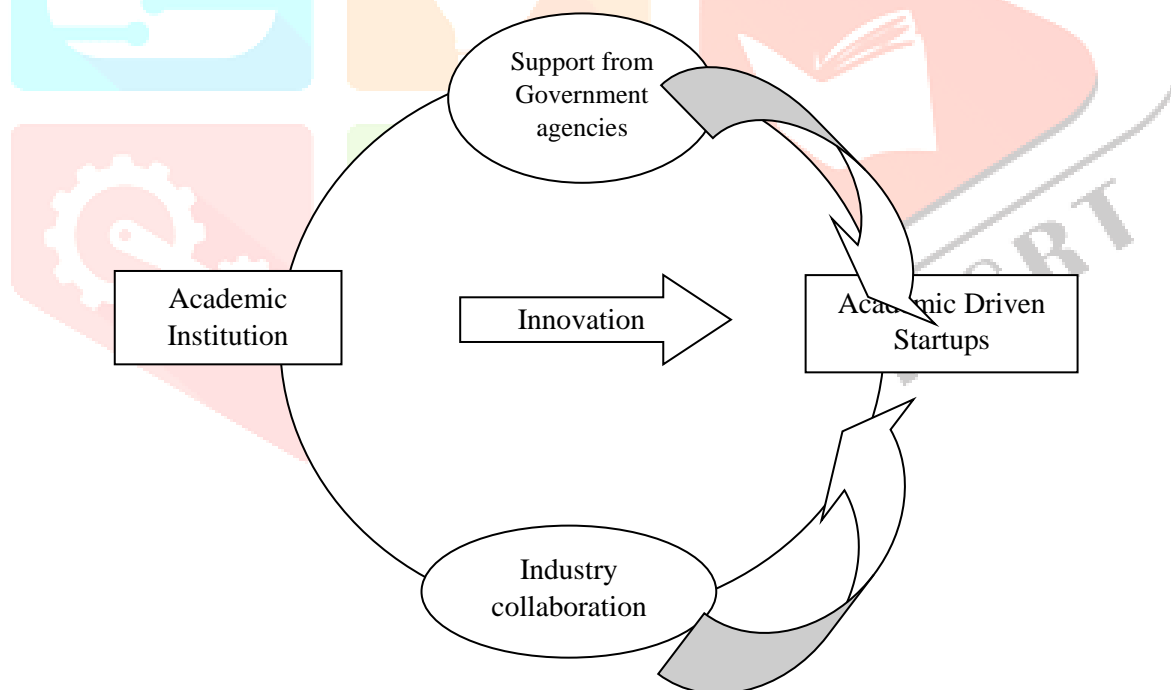


Figure 1. Conceptual framework

According to the knowledge spillover theory of entrepreneurship (KSTE), academic entrepreneurs are essential to the sharing, interpreting, and transferring of knowledge between higher education and business (Sapir, 2021). According to Minola et al. (2021), academic entrepreneurs found firms to leverage the non-commercial knowledge that universities and research centers hold to develop new products. As an extension to the same context, the developed model framework (Figure 1.) states that academic institutions form the fundamental support system required for starting a business venture. They provide the necessary tangible infrastructure through research laboratories, incubation centers etc. and legal support with patent protections, licenses.

Their industry and government partners not only act as mentors but also provide managerial support and provide the necessary funding required from time to time. They also help in introducing innovation to the market and commercialise the inventions through business associations. The collective efforts of faculty members and students revolve around business endeavours and aim to create opportunities for collaboration between the scientific and business domains. This is a difficult process since, unlike traditional entrepreneurship, which involves a single person or small group of people, this process occurs inside the operational framework of a complete organisation (Sieg et al., 2023). The faculty guidance, and technical support along with the required industry and government support for sustainable innovation act as key drivers of sustainable development through the creation of socially responsible startups. The findings demonstrate that academic startups not only bring in innovative solutions but also engage in significant collaborations with industry partners, government agencies, and local communities to enhance the effectiveness of systems.

#### 4. Results and Discussion

The literature states that entrepreneurship has contributed to economic growth, regeneration, and development. Over the years, worldwide academic institutions have participated in creating an environment that is favourable for startups, and supporting a sustainable ecosystem for them (Klafstad, 2019). Academic institutions and universities have been pivotal in creating sustainable and socially responsible startups. The universities define sets of rules and regulations for setting up spinoff activity within the institution (Fini et al., 2020). These rules formalise the conditions within the industry for incubating the venture (Muscio et al., 2016). Internal rules streamline the procedures and avoid the arousal of conflicts among parties. Universities also design both incentive and risk-sharing schemes for parties involved in the commercialisation of the innovation. Rewards for knowledge transfer act as an important driver for the faculty. Rewards could take the shape of shares in licenses, equity ownership, profit sharing, capital gains, royalty payments, etc.

Table 1: Role of Academic Institutions

<i>Sno.</i>	<i>Facilities</i>	<i>Explanations</i>
1.	Tangible Infrastructure	Physical assets and equipment, R&D laboratories, business incubators
2.	Intangible Infrastructure	Licenses, Patent protections, technical skill, Human Capital, exchange of ideas
3.	Financial Infrastructure	Seed funding, venture capital, social capital
4.	Entrepreneurial support	managerial support, training opportunities, government regulations, financial and non-financial incentives
5.	Government Agencies	Programmes, Schemes, mechanisms, reforms, grants
6.	Industry Collaborations	Seed capital, mentoring, commercial disclosures of inventions, business networks, shared office assistance
7.	Institutional support	Business Plan competitions, Best research project awards, faculty consultants, library services

It is not only the university regulations that play a vital role but the dedicated university offices for licensing and patenting, infrastructure development, industry liaisoning, R&D facilities, and consulting services also facilitate the growth of entrepreneurial activity (Fini et al., 2009). Table 1. depicts the role of universities and academic institutions in setting up academic-driven startups.

##### 3.1 Tangible Infrastructure

Physical assets, buildings, furniture, machinery, tools, and equipment, research labs, supplies, and equipment, as well as business incubators and technology parks, are all considered tangible infrastructure provided by universities within their campuses (Fini et al., 2009; Roche et al., 2020). These physical spaces are necessary prerequisites for anyone intending to launch a startup. These

facilities shield the person from initial investment risks and offer protection for commencing their business.

### *3.2 Intangible Infrastructure*

Research indicates that enterprises situated in an area with a high density of comparable businesses benefit from their closeness because they have easier access to workers, information, and support systems (Muscio et al., 2016). This is because universities foster a natural environment for the sharing of ideas by encouraging teamwork, closer interactions, and partnerships through formal and informal networks within the institution. Together, academic personnel, students, and technical staff focus on developing new ideas and improving technical expertise through research and development (Roche et al., 2020). According to studies, spin-offs are more prevalent in sectors of the economy where patents are more useful, and academic institutions take legal considerations such as patent protections seriously and obtain licenses before moving further with commercialization.

### *3.3 Financial Infrastructure*

Universities collaborate with alumni, industry partners, and government agencies. If these institutions deem that the business idea has some commercialisation potential, they provide the necessary funding at different stages of the startup through seed funding, venture capital, social capital, etc. in exchange for rewards that could take the shape of shares in licenses, equity ownership, profit sharing, capital gains, etc (Pattnaik et al., 2023).

### *3.4 Entrepreneurial support*

Academic-driven startups may obtain essential managerial support and training possibilities from university offices for industry liaisoning, and consulting services. In addition, universities also manage to pay off students for their labour through financial incentives like stipends, consultancy fees, and other benefits. Rather than financial incentives, faculty members prefer to be recognised for their contributions (Hahn et al., 2019). Earning patents for their inventions are counted as accomplishments that make them eligible for awards, promotions, and recognition (Wang et al., 2021).

### *3.5 Government Agencies*

Due to their close proximity with government agencies, academic institutions are well-positioned to take advantage of the various growth and development schemes and programmes that are available. These institutions also work in tandem with the existing and amended policies framed for the benefit of society and become eligible to receive grants for sustainable innovations (Fini et al., 2009). Following these mechanisms single-handedly would be troublesome for novice and inexperienced minds.

### *3.6 Industry Collaborations*

There are memorandums of understanding (MoU) that are signed between industry and academia serve as a blueprint for industry-academia collaborations (Aydemir et al., 2022). In this arrangement, the industry offers a variety of services like mentoring, training opportunities, commercial disclosures of inventions, business networks, shared office assistance, marketing etc. to the academia.

### *3.7 Institutional support*

Academic-driven start-ups are backed by strong institutional support. These institutions carry out Business Plan Competitions (BPCs) and other contests throughout the academic year to find out the best projects, business proposals, and feasible ideas for commercialisation (Lewicka & Bollampally, 2022). Groups of students and faculties commit themselves through different stages of the academic-driven startups.

In addition to the aforementioned variables that support academic startups in their success, research also indicates that academic startups may face relative disadvantages when it comes to introducing novel technology to the market. Specifically, academic startups have a lower chance and risk of attaining a liquidity event than non-academic startups. (Roche et al., 2020). Studies also indicate that tiny spin-offs and start-ups may not be able to benefit from the socially conscious or sustainable framework techniques employed by large established organisations (Henry et al., 2020). Thus, to foster a welcoming atmosphere for start-ups, academic institutions advocate for amending the existing regulatory setup.

## 5. Conclusion

Both industry and academia are considered essential pillars for innovation and economic growth (Roach et al., 2015). The study was conducted to understand the role of academic institutions in creating socially responsible startups. The research establishes that academic institutions have boosted the spirit of innovation and entrepreneurship among youth. They have laid the foundation for the rise of academic-driven start-ups by providing a conducive environment encouraging innovations in science and technology through knowledge transfer and faculty support. They foster the growth of academic startups and act as drivers of change by creating socially responsible startups. These university-based businesses create new jobs, increase resource efficiency, and lessen adverse social and environmental effects—all of which support the growth and sustenance of human existence (Morales et al., 2022). According to Dhir et al. (2023), socially conscious startups also boost corporate competitiveness and accelerate the shift to a more resilient and sustainable economy.

However, academic startups may face market reluctance when it comes to introducing novel technology to the market. Specifically, they address the lesser risk of attaining liquidity issues than non-academic startups. (Roche et al., 2020). They also advocate reforms in the existing regulatory framework making them more practical and adoptable for small start-ups.

The present study has practical implications for all industry, academia, and regulatory authorities. Firstly, the survey discovered that universities have a history of working in the fields of process and product innovation. The study emphasises the necessity of investigating the commercialization possibilities in the supply chain and reverse logistics area, with practical consequences for academic institutions. To increase the sustainability and circularity of the current businesses, it is necessary to manage the significant packaging waste that is produced by the growing trend of home delivery services. Secondly, changes should be made to the classical lecture system to introduce to practice-oriented approach for students to influence student intentions for starting up business ventures. Thirdly, there should be amendments made to the existing regulatory framework to provide a more congenial environment for small start-ups.

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