



## CO-OPERATIVES AS SUSTAINABLE MEANS TO SUPPORT UNIVERSITY EDUCATION: EXPERIENCE FROM TANZANIA AND FINLAND

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### Abstract

The Triple Helix Model for university-industry-government interactions, highlighting the enhanced role of the university in the transition from industrial to knowledge-based society, has become widespread in co-operative innovation and entrepreneurship studies. In this paper, we discuss the role of co-operatives in supporting University education within the Triple Helix Model of Innovation to enhance socio-economic development. The Model demonstrates how communications operate between University, Industry and Government. These linkages are shaped by market selections, innovative dynamics, and network controls at the global level. At the local level, the relations are normally shaped by Local translations at the interfaces such as adaptation mechanisms within the institutions. The Model proposes that Universities impart knowledge and skills to students while the industry provides an opportunity to students to translate knowledge into practice through project work. We are proposing that Universities should use co-operatives for students' practice. Since, collaborating with co-operatives provide the chance to develop competences in shaping the Industrialisation process that would otherwise be only taught in theory or applied only in the context of the classroom.

### I. Introduction

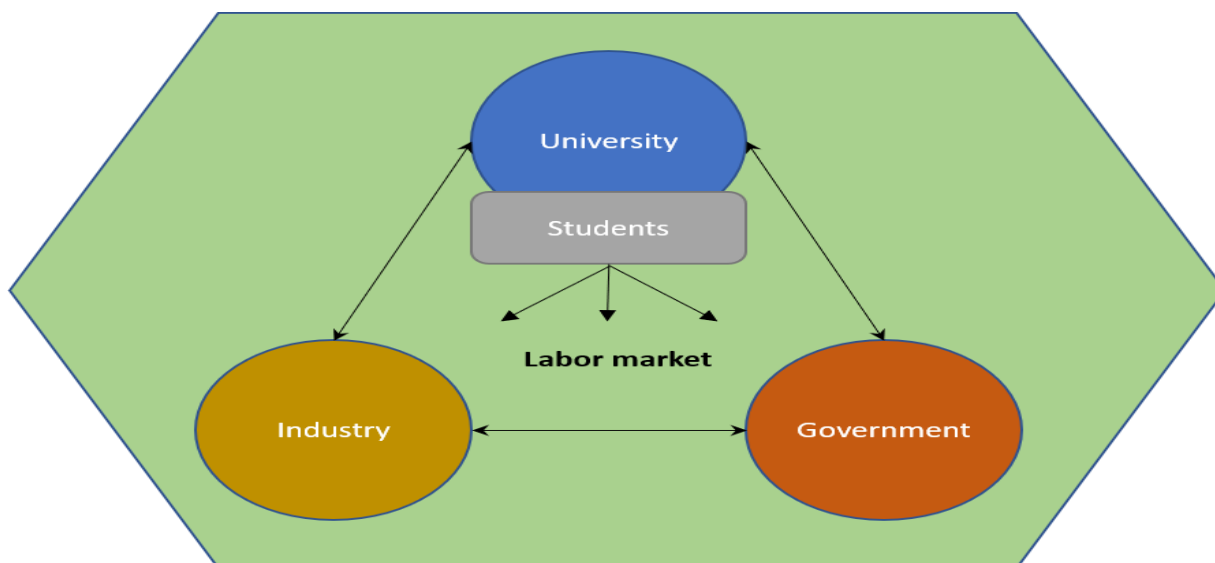
The idea of the triple helix (TH) is to harness the influence of synergy amongst academics, business and government, focusing at helping communities develop their economic well-being through knowledge transfer and applicable product innovation, particularly for co-operatives (Fitriani *et al.*, 2020). Most universities operate within what can be formally referred to as the triple helix innovation model<sup>26</sup> (see Figure 1) for fostering economic and social development. Universities ultimately aim at delivering competent and mature students ready to enter the labour market. Students traditionally acquire knowledge with the help of their teachers, and can get the opportunity to put knowledge into practice through project work, in collaboration with companies through the well-established University-Industry Networks (Kunttu, 2017). Collaborating with companies such as co-operatives, when they are pre-established and especially if they are incubated, provides the chance to participate in working life and develop competences that would otherwise be only taught in theory or applied only in the context of the classroom (Putkonen *et al.*, 2010; Konst and Kairisto-Mertanen, 2020). This article aims at exploring the value in using co-operatives as a means to support university education and support students in a sustainable and innovative way throughout their learning process at the university. The application of the triple helix innovation model using co-operatives will improve the teaching and learning processes at the University and enhance employability of students.

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<sup>26</sup> "The Triple Helix Concept". Stanford University Triple Helix Research Group. 11 July 2011.



**Figure 1: The triple Helix and the labour market**

Universities globally are concerned with employability of students. This is because of increased unemployment among graduates, especially among developing countries. Number of University graduates who enter the labour market annually exceeds the available job opportunities. In Tanzania, for example, new entrants into the labour market each year from colleges and universities countrywide are estimated to be between 800,000 and 1,000,000 while new job vacancies from both public and private sectors are estimated to be 630,000 (Katundu and Gabagambi, 2016). This means that between 170,000 and 370,000 new entrants into the labour market end up being jobless annually. These figures are expected to rise when a cumulative approach is used. Katundu and Gabagambi (2016) further report that, unemployment in Tanzania is accelerated by the disparity between the supply of and the demand for labour in the labour market, increasing pressures of urban employment with the outflow of rural surplus labour to non-agricultural sectors and the increased number of new entrants in the labour market.

Cognizant of the mismatch between supply of and demand for labour and the needs of the labour market; researchers from Turku University of Applied Sciences (TUAS), Finland; Tumaini University Dar es Salaam College (TUDarCo), Tanzania; Moshi Co-operative University (MoCU), Tanzania and Mwenge Catholic University (MWECAU), Tanzania developed the “Sustainable Business and Employability through HEIs’ Innovative Pedagogy (SUSIE)” project. SUSIE aims to enhance graduates’ employability through three (3) result areas: (i) Strengthened capacity building improved by sustainable leadership and strategy work, (ii) Enhanced relevance and pedagogical capacity by increasing active (e-) pedagogy competence of teachers, (iii) Improved, accessible and interactive learning environments by establishing interactive Campus HUBs and e-learning facilities to public libraries.

In the context of the SUSIE Project<sup>27</sup>, Tanzanian and Finnish Higher Education Institutions (HEI) cooperate, in the span of 2020-2022, towards a common agenda for developing the FIN-TAN 2.0 pedagogy model. FIN-TAN 2.0 builds on the Innopeda (TURKU AMK, 2020) and the FinTan (Hyttinen *et al.*, 2020) pedagogy models. The SUSIE project and the FIN-TAN 2.0 pedagogy model aim at supporting sustainable employability. Co-operatives make an important contribution to the economic development, employment and community welfare. Co-operative is a form of business that is currently used in the Tanzanian educational system for project work, and in the Finnish educational system as student businesses. In this article, we look at the state-of-the-art in using co-operatives as a mean to support university education and impact labour market in Tanzania and Finland for sustainable development of agricultural co-operatives in the current sphere of Industrialisation.

## **2. General Context and Background of Co-operatives as Member-Based Institutions**

Co-operatives are vital member-based organisations which play an instrumental role in employment creation and income generation for the poor (Mhembwe and Dube, 2017). In recent years, there has been a noticeable increase in the concern shown by academic institutions and other sectors on co-operatives as a means to

<sup>27</sup> See <https://susie.turkuamk.fi/>, last viewed 24.06.2021

improve livelihood (Guzman *et al.*, 2019). This is happening as a result of co-operatives' role in improving livelihoods during economic downturns compared to other forms of associations (Monteleone and Reito, 2017). Co-operatives can pool resources, including capital and negotiating powers among its members to purchase services or negotiate jointly (Lowe *et al.*, 2019). Co-operatives are autonomous associations of persons united voluntarily and jointly to form enterprises that are democratically controlled to meet their various needs (ILO, 2014). Co-operatives follow a democratic decision-making model whereby members own and manage associations by raising the required capital, shouldering the risks involved, bearing the losses, and sharing returns in the end. The motives for this are found in the values and principles on which co-operatives are based to differentiate themselves from other forms of organisations. Defined by the International Co-operative Alliance (ICA), these values represent the basis of co-operative operations, being classified as self-help, self-responsibility, democracy, equality, equity, and solidarity of which human beings are placed before capital (Guzman *et al.*, 2019).

From a sustainable development perspective, co-operatives are valuable alternatives to profit-driven enterprises. In this form of business, benefits are given for people directly involved rather than for anonymous owners and investors. It can provide "*multiple values in terms of livelihoods, strengthened community bonds and trust, proximity to members/consumers, and reduced need for motorised transport, and often an ability to take greater responsibility for environmental impacts*". Government support of these kinds of initiatives and their supporting institutions is already occurring (Bengtsson *et al.*, 2018).

### **3. Co-operatives in Tanzania**

Co-operatives in Tanzania and elsewhere in the world operate in both urban and rural settings aiming at improving the livelihoods of its people. In Tanzania, co-operatives existed before and after independence as an engine for socio-economic development and linked to implementing various government policies (Rwekaza and Anania, 2021). The co-operative areas of activity are varied and include agriculture, fishery, mining, health, education, dairy, finance, housing and consumer goods and services. Co-operatives formed in the mentioned areas achieve their objectives through a democratic process in which each member has an equal voice. The co-operatives, as well as their underlying principles, are rooted in the philosophy of the Rochdale Pioneers in England, who established a consumer co-operative store. The founding of the Rochdale Society of Equitable Pioneers in 1844 is regarded as an initiative to the contemporary co-operatives which exist in Tanzania today.

The co-operative movement has come to be known as a movement of the aged. However, co-operatives in educational institutions especially universities can be a means to support learning to university students with youth taking an active role (Dongre *et al.*, 2020). University students are an important asset for co-operatives since they will be the co-operatives' future leaders and have a greater capability for innovation, democracy and entrepreneurship. The main purpose of this kind of learning is to establish a sense of independence among university students, crafting an atmosphere of learning by doing training in the application of techniques obtained from classroom lectures. This will also instil democratic values and attitudes among students and encourage the spirit of self-help and nurturing leadership skills among the young generation which is all about co-operative principles and values. Therefore, students with entrepreneurial skills can form co-operatives and start a business when they have poor prospects of finding a job in the labour market (Monteleone and Reito, 2017).

### **4. Co-operatives in Finland**

In Finland, a co-operative is one of the available legal forms of business<sup>28</sup> that an entrepreneur may select for engaging towards supporting his/her economic and business interests. Co-operatives cover a wide range of activities, and it is so ubiquitous that in Finland, there are about 80 % of Finnish people who are members of at least one co-operative, for a total of over 4000 co-operatives operating in the country. Co-operatives are particularly suitable for collaborative entrepreneurship, and in practice there are different types of co-operatives<sup>29</sup>:

Consumer co-operative: where the member of the co-operative is a customer, which happens, for instance, in the retail sector. This type of co-operatives is well spread in Finland. The membership usually offers certain advantages to the consumers who can, for example, get discounts in the co-operative shop. The card provides data that can be analysed by the co-operative, for possibly making use of incentives in marketing campaigns.

Service Co-operative (for instance a co-operative bank or a mutual insurance company); where those using the services of the co-operative are members. This is very similar to the consumer co-operative, in the way that the member of the co-operative is a consumer. The difference is that the benefit for the consumer is a service.

<sup>28</sup> See <https://www.suomi.fi/company/starting-a-business/forms-of-enterprise/guide/Co-operative> last viewed 24.06.2021

<sup>29</sup> See <https://pellervo.fi/en/english/co-operative-business-model/> last viewed 24.06.2021

Producer Co-operative (for instance, a dairy co-operative); where the producers of a given product are members. This traditionally happens in the production of raw materials, for example in the farming sector. The co-operative would be used for the purpose of investing in expensive assets and machinery that would be then used fairly towards all members of the Co-operative.

Worker Co-operative (for instance, a co-operative of journalists); where the co-operative is the employer of the members. This form of co-operative is the one that provides an opportunity for the student to engage into an entrepreneurial career at the time of study. It is important to note that as long as the number of co-operative owners is above 7, the student keeps the official main status of *student*, not *entrepreneur*. Therefore, the student is not obliged to subscribe to obligatory legal entrepreneur expenses (e.g. insurance). In each of those types of co-operatives, the key idea is the equality for each member in terms of efforts, decision-making power and benefits. The form is essentially the same for all of them, but the purpose differs.

## **5. The use of Co-operatives in Classic Education**

University strategy typically aims at transmitting theoretical knowledge and as well empowering students with up-to-date practices in the workplace. This ensures that the students are fully capable of entering the labour market with the necessary skills. For every university lecturer, the challenge is great to keep up with the on-going changes and innovation in the industry. University lecturers typically work with case studies that they have developed themselves or that can be found in textbooks. At best, lecturers maintain a dynamic linkage with industry partners so that there is a possibility for students to work with concrete on-going cases. A teacher can work with a unique case study, split the classroom into teams, and ask each student team to develop solutions based on the problem presented in the case study. At best, the problem is not made too obvious to the students so that the student team is engaged in both activities of determining precisely the problem as well as reflecting on its candidate solutions and proposal for best solution. It is typical that teams would provide different solutions, allowing for further reflection in the course. However, the diversity of the solutions proposed by students may depend on parameters such as the complexity of the case, the potential for innovation, maturity and background of students as well as the time and guidance/support given to the students. Through the problem-solving process, the sharing of experience in the classroom and the final joint reflection, students develop competences, learning by doing and sharing. Finally, whether they are rough, or selected and refined, the results of the problem-solving process can be presented in a final seminar to the co-operative representative. From a pedagogical perspective, case studies are a very interesting support tool for the lecturers. In the field of business education, for example, the span of competences developed through the problem-solving process is wide. The problem can be bound to a specific field of knowledge (marketing, sales, finance, and management). In addition to that, we can present some of the transversal competences that are developed along the way:

Leadership and Communication skills are developed by the student when the student is working in the problem-solving team, interacting with team mates. Project management skills are developed by the student when proceeding through the project scheduling, planning and execution phases in order to resolve the problem. Communication skills are developed by the student when collaborating with the co-operative, if the case is proposed by an active co-operative. Communication skills are developed throughout the project phases, for example when sharing results whether at milestone or for finalisation.

Finally, working with a partner that is a co-operative, in real time through a case study has a positive impact for the lecturer who keeps aware of the on-going changes in the industry. Students also feel empowered and responsible, helping them to grow mature, as they know that the outcome of their efforts may not stay in the classroom but may turn into a reality as the co-operative may use the results. However, activating government and public bodies' participation synchronously to the University-Industry collaboration can be tedious in the context of a single course, if the lecturer has little leverage and all the more if the industry-company partner size is relatively small.

## 6. The use of Co-operatives in "Incubated Education"

### 6.1. Incorporating a co-operative during the time of studies

In Turku University of Applied Science, in the Business Degree Programme, students have the possibility to develop their entrepreneurial competence starting from their second year of study through incorporating into a co-operative. The co-operative is the foundation for a project-based learning environment that develops a student's entrepreneurial mindset. The co-operatives are under the umbrella of a university incubator that is called "Bisnes Akademia (BA)", and each co-operative is supported by a dedicated coach. Students would establish a *worker* type of co-operative, where the co-operative is the employer of the members. Students have, therefore, to engage in building the necessary blocks to sustain the co-operative's objectives, while working in the co-operative and thereby learning/studying.

From the educational perspective, students are engaged in 4 specific activities:

- a) *a learning agreement agreed between the student and his coach to identify the learning objectives to be fulfilled through the work in the co-operative,*
- b) *reading circles where students share the knowledge acquired through own readings,*
- c) *training sessions for the students to acquire knowledge and practice before applying their newly acquired skills in the context of the activities of the co-operative, and*
- d) *projects carried on behalf of the co-operative as a registered company, this is "real life" practice.*

Then, the building blocks of the co-operative as a learning environment allow the students to develop skills in a wide range of areas that connect with the university curricula. The innovation competence is critical in this context, as most co-operatives are service based companies that start without any predefined service range nor corporate identity. They strive in a highly competitive local environment and try to internationalise at least 6 months after incorporation. We review the competence and learning building blocks in the next section. This type of learning is not well developed in Tanzania. HEIs participating in the SUSIE project may use it as an opportunity to develop such programmes.

### 6.2. Students' Activities in the Co-operative and the University Curricula Linkages

Based on the student co-operatives coaching experience in Turku University of Applied Sciences, coaches confirm that it is possible to show the connections between the students' daily operations while running the co-operative and the University curricula competences<sup>30</sup>. As a matter of fact, it is not always intuitive nor obvious for the student what those connections are, all the more when the student is working at full pace during the day, and tries to report on the time spent in developing various competences at the end of the working day. This is where the coach also supports the student in reflecting on the competences developed, and especially in the case where one activity may be eligible for the development of different competences at the same time. The work of the student team that incubates a co-operative can be represented through conceptual blocks, as shown in Table I (see appendix I). For each of the blocks, we highlight the connections to competence development that is relevant under the curricula considered (business education). The developed competences are summarised in the following list:

- Self-management
- Performance management
- Team management
- Leadership
- Organisational management
- Strategic management
- Communication
- supplier relationship management
- Stakeholder management
- Public relationship management
- Customer relationship management
- Marketing
- Sales
- Project management
- Portfolio management
- Budgeting
- Cost control
- Career management
- Presentation skills

<sup>30</sup> Notes of coaches meeting, Turku University of Applied Sciences, BisnesAkademia, 2021.

- Collaboration skills
- Human resource management
- Corporate responsibility
- Sustainable development
- Quality Management
- Knowledge management
- Corporate identity
- Ideation
- Innovation
- Product design and planning
- Product management
- Law
- Contract management
- Financial management
- Accounting
- Crisis management
- Change management
- Data management
- Customer data management

Based on the conceptual blocks, it is possible to present a visual diagram that illustrates the learning blocks as through the student co-operative perspective (in fig. 2). This tool can greatly help the reflection between the student and the lecturer/coach at times that it is difficult for the student to understand what competences he has developed during the day. The diagram can be used as a mind-map that features all eligible student activities which support the development of competences within the framework of the University curricula.

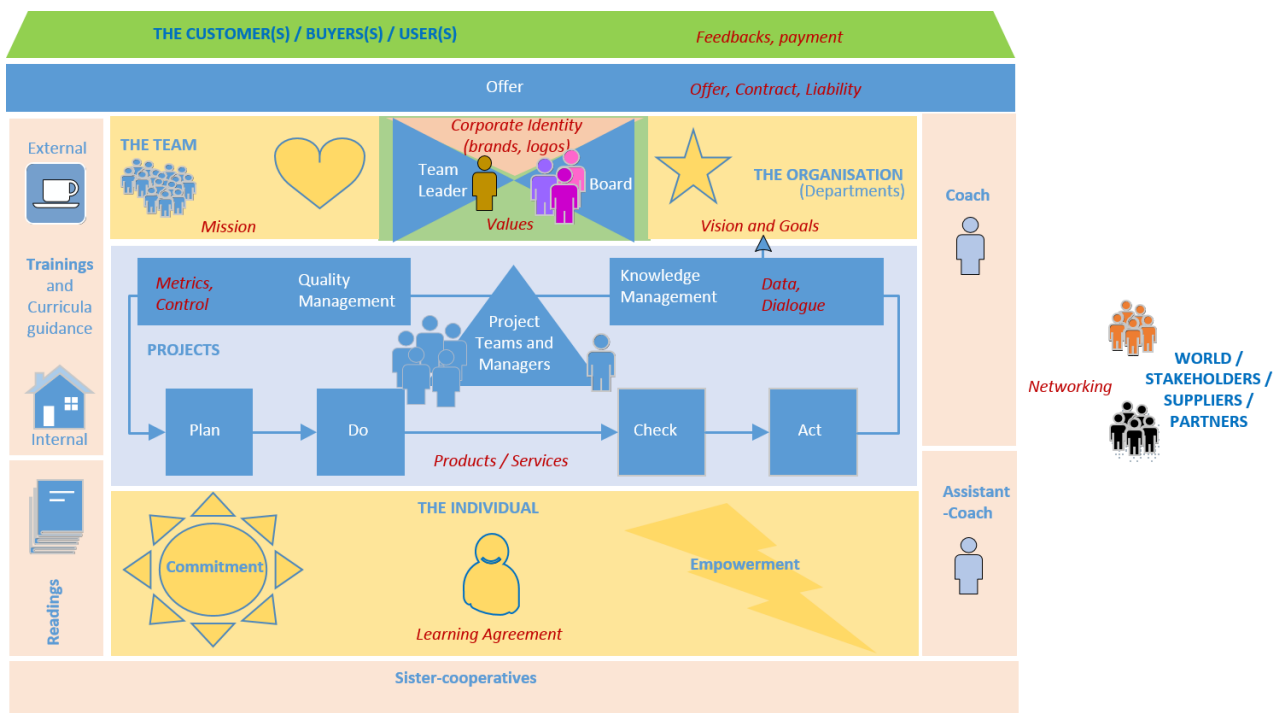


Figure 2: The conceptual building blocks of a student co-operative based on the BisnesAkademia student Incubator of Turku University of Applied Sciences

### 6.3. Empowering Students in Enabling the Triple-Helix

The work in an incubated co-operative brings a certain number of new obligations to students and lecturers. It is a new educational paradigm and the lecturer would behave as a coach rather than a lecturer. For the students, a critical new challenge is to reach out to partners and develop in the local ecosystem. For the born globals (Knight and Cavusgil, 2004), it will be necessary to foster international Cooperation and possibly expand to foreign markets. Incubation during the time of studies offers an opportunity for the students to use more powerful leverage, when networking and interacting with local partners. Indeed, students regularly face the difficulty of engaging industry or public bodies' partners in their demand for collaboration or projects. This is partly due to a lack of experience and maturity, but also because of a lack of legitimacy. When the student introduces him/herself as an entrepreneur, for example in an email, he/she is more likely to catch the attention of the partner. We can, therefore consider that incubation at the time of studies through the co-operative form of business is comfortable for students, and can be a source of activation of the Triple-Helix. A Co-operative as a form of business can support University education within the Triple Helix Model of Innovation to enhance socio-economic development.

## 7. Conclusion

The collaboration between co-operatives and University is promising in providing higher education with activities for competence development while delivering value for co-operatives in increasing employment, economic growth, social welfare and economic competitiveness in shaping the Industrialisation process in co-operatives. This can be especially true within the framework of the triple-helix, where Universities and co-operatives collaborate for fostering regional development, in support of public policy. Encouraging public-private partnerships between Government, co-operatives and University, as promoted by the United Nations through SDG 17 can deliver even greater value. In this article, we were able to introduce a powerful tool that can be used in University classrooms for helping the coaches/lecturers identify student activities when students are taking part in a business incubation process within a co-operative while studying. Knowledge takes on a very important role in bridging the process of change that enhances development and industrial growth among co-operatives. Therefore, collaboration and interaction among three sectors (university, co-operatives, and government) in the model is in great need to develop co-operative innovation and economic value in this era of industrialisation. All three leading players of the model can benefit from the approach to co-operatives for sake of the country's economic growth and employment creation. It would be interesting to further explore co-operatives' strategies towards enhancing sustainable employability by integrating some elements of sustainable development in the discussion, in line with the UN 2030 Agenda, taking in consideration economic, social, environmental and political aspects as well as in line with the African Union Agenda 2063<sup>31</sup>.

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