



# Working Paper

**In the Quest for Semi-Industrialized Economy:  
Strategies for Agricultural-Based Industrialization  
through Co-operatives in Tanzania**

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# **In the Quest for Semi-Industrialized Economy: Strategies for Agricultural-Based Industrialization through Co-operatives in Tanzania**

Paulo Anania<sup>1</sup> and Dr. Paschal Nade<sup>2</sup>

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<sup>1</sup> Assistant Lecturer, Moshi Co-operative University (MoCU), Tanzania  
(Email: [ananiapf@yahoo.com](mailto:ananiapf@yahoo.com) ; [paulo.fute@mocu.ac.tz](mailto:paulo.fute@mocu.ac.tz)).

<sup>2</sup> Lecturer, Nelson Mandela African Institution of Science and Technology (NM-AIST), Tanzania (Email: [paschalbanga@gmail.com](mailto:paschalbanga@gmail.com)).

## ***Abstract***

Promoting industrial sector has been among key development strategies in most of developing countries including Tanzania. Industrialization has been insisted in Tanzania by all regimes since independence. In the quest to promote industrial economy, for decades, co-operatives have been involved directly and indirectly in the process. Government recognizes co-operatives as key development partners in the current move toward a middle income and semi-industrialized status. This calls for sorting out clearly on how co-operatives can engage in the industrialization process. This paper aims to share experience on practical and theoretical strategies on how best co-operatives can engage directly and indirectly in the industrialization process in Tanzania.

The authors adapted a qualitative approach by making a critical literature review to understand key issues and to guide discussions made in this paper. Content analysis was used to analyze collected qualitative data from reviewed works. Secondary data were also collected from various studies, including Government's reports to cement discussions made. Consultations through phone calls were also made where various stakeholders were contacted for purpose of verifying existing data and getting other data in relation to co-operative industrial investments in various places. The discussion focused on various strategies that co-operatives can directly and indirectly engage in the industrialization process.

The paper also describes the mechanisms that may be used to finance the industrialization process through co-operative and possible constraints to such investments.

The paper concludes that there are direct and indirect options that co-operatives may apply to enter into industrialization process and in financing the process. This is based on the assumption that co-operatives will adhere to aspects of technological improvement, managerial competence, innovation and quality control in their operations.

**Keywords:** Agriculture, Semi-industrialized, Co-operatives, Industrialization, Strategies

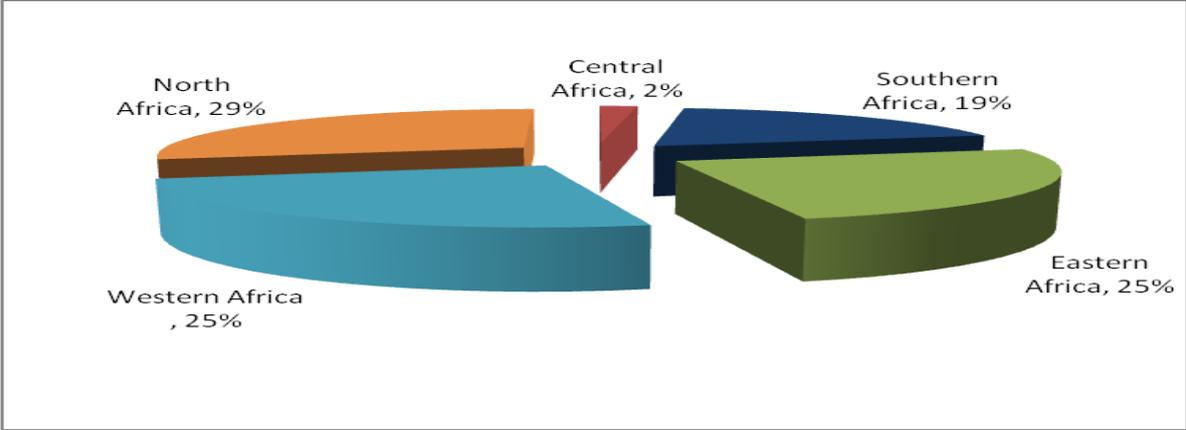
**JEL Codes:** O13, O14, P13

**1. Introduction**

The path to a developed state undoubtedly involves an industrialization process. Globally, industrialization has, at all times, been a main subject of development thinking since the WWII (Stiglitz *et al.*, 2017). It involves the shift from a former dominantly agricultural society towards an industrial one. In such transition small, medium and large-scale industries becomes the most characteristic form of production, a form which lead to simplification of work and replacement of manual labor by machines. Britain was the first country to industrialize in late 18<sup>th</sup> century (Lapperre, 2001) then other countries from Western Europe, North America and Asia followed. Chang, (2007) in (URT and UNIDO, 2012) revealed that the key issue distinguishing rich countries from poor ones is mostly their higher capabilities in manufacturing, where productivity is generally higher and such productivity has a tendency to grow faster than in the agriculture and services sectors. The history of industrialization in Africa, in particular the Sub Saharan region, is traced back from 1920s to late 1940s during colonial era (Mendes *et al.*, 2014).

In Africa, industrialization is not only seen as a means towards structural transformation but also the path to attain inclusive and sustainable growth of the economies (Moshi, 2014). For instance, in 2016 the industrial sector, especially manufacturing, indicated percentage increase in job creation as follows: Central Africa (2%), Southern Africa (19%), Eastern Africa (25%), Western Africa (25%) and North Africa (29%) (Stiglitz *et al.*, 2017) as indicated in Figure 1.

**Figure 1: Contribution of industrial sector in job creation**



Source: Constructed using data from Stiglitz *et al.*, 2017.

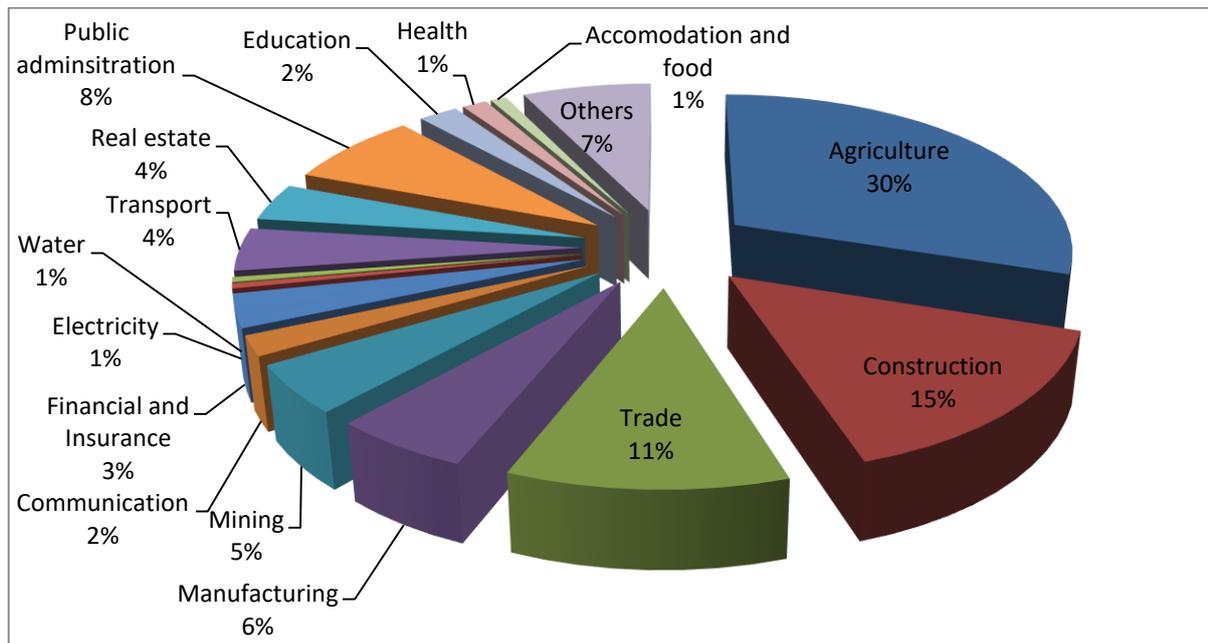
Tanzania, like many African countries, still depends on agrarian economy which employs over 11 million people (URT, 2016b), however efforts towards

industrialization have been taken for several years. The efforts taken by the country for industrialization can be described into different phases. It began by the transition from a colonial state to a centrally planned economy and then towards a market and private sector-led economy. The path is characterized by a complex historical process of economic change in Tanzania. The country inherited a very small and undiversified industrial sector at independence in 1961 (Wangwe *et al.*, 2014). The industrialization process of Tanzania can be grouped into five main phases from independence up to date. These phases are: phase one (1961-1967) where mainly inherited industries (220 industries) were promoted (Skarstein and Wangwe, 1986); phase two (1967 to 1985) state-owned industries (grew to 2000), later challenges emerged such as oil crisis of 1974/75 (Nyoni, 2006; Mwaigomole, 2009); phase three (1986 to 2000) industries run under Structural Adjustment Programmes (SAPs) and later Economic Recovery Programmes (ERPs) (Egbert, 2007; URT and UNIDO, 2012). Phase four (2000 to 2015) known as era of industrial development agenda where Tanzania through its Development Vision 2025 and through export processing zones act passed in 2002 guided the process (Mwang'onda *et al.*, 2018; Mendes *et al.*, 2014).

Phase five (2015 onwards) is considered as a rejuvenation period where industrialization remains a major policy agenda. Many efforts have been directed to ensure that the country moves on to middle income status before 2025. The current government under President John Pombe Magufuli has sustained previous efforts and initiated efforts to promote new industries. Among the efforts done so far there is investing in transport infrastructure (mostly roads and railways), reducing trade barriers and improving policies to attract foreign and domestic investments. The government's approach towards re-industrialization, among others, involves revival of the abandoned privatized industries and building new industries.

In recent years, Tanzania has been experiencing a good rate of economic growth based on its Gross Domestic Product (GDP) maintained at around 7%. For instance, GDP increased from 7.0% in 2016 to 7.1% in 2017 (URT, 2018b). Though not expanding fast in terms of growth and GDP contribution, the manufacturing industry is crucial to economic development. In 2017, manufacturing industry grew to 7.1% (a decline from 7.8% in 2016) and contributed to 6.3% of total employment (Mbelle and Kabanda, 2018). Despite the decline, the share of the sector to the GDP was 5.5% compared to 4.9% in 2016 (URT, 2018b). Figure 2 shows the contribution to GDP by sector in 2017.

**Figure 2: GDP composition by sectors in Tanzania**



Source: constructed using data from URT, 2018.

As a potential form of enterprise to promote socio-economic development of many people, co-operatives are considered as key player in supporting current move towards rapid industrialization process in Tanzania (Anania and Rwekaza, 2016). The same emphasis is put forward by the current Tanzanian regime (2015-2020) in encouraging co-operatives to enter fully in industrialization process. Despite the emphasis on the need for co-operatives to engage in the process, yet there is limited empirical knowledge to expose different strategic approaches that may be taken to promote co-operatives' involvement in industrialization. It is expected that this paper will help in sharing theoretical and practical knowledge to various stakeholders in co-operative movement and agriculture sectors on strategies to promote industrialization through co-operatives.

## **2. Review of Co-operatives' Involvement in Industrialization Process**

The path of co-operative participation to industrial development is not quite different from the path of industrialization in Tanzania. The co-operatives in Tanzania started several years ago, during the colonial era where, in 1925, Kilimanjaro Native Planters Association (KNPA) was established in Kilimanjaro. With the enactment of the Co-operatives Societies Ordinance in 1932, co-operatives got legal recognition through under strict colonial control

(Mruma, 2014). In 1933, the KNPA was transformed into Kilimanjaro Native Co-operative Union (KNCU). The idea of having co-operatives later spread in other areas (mostly in 1940s and 1950s) such as Ngara, Rungwe, Kagera and Lake zone regions. These co-operatives were agricultural and produced various cash crops in their areas. Other types of co-operatives kept on emerging year after year. Up to date, Tanzania has about 8,444 co-operatives (see Table 1) which about 3,175,251 members and 1,484,654 non-members (beneficiaries).

**Table 1: Number of co-operative societies by types in Tanzania up to October, 2018**

S/N	Types of co-operatives	Active	Dormant	Non-traceable	Total
1	AMCOS	1,707	248	150	2,105
2	Bee keeping	10	3	7	20
3	Consumer	7	2	27	36
4	Fishing	615	32	40	687
5	Housing	4	4	11	19
6	Industry	11	1	18	30
7	Irrigation	15	7	3	25
8	Livestock	76	39	66	181
9	Mining	81	10	4	95
10	Multipurpose	17	4	3	24
11	Others	15	255	22	292
12	SACCOS	1,505	2,097	1,168	4,770
13	Services	41	15	88	144
14	Transportation	11	1	4	16
	<b>Grand total</b>	<b>4,115 (48.7%)</b>	<b>2,718 (32.2%)</b>	<b>1,611 (19.1%)</b>	<b>8,444</b>

*Source:* TCDC field data, October, 2018.

The need for industries to process cash crops from agricultural co-operatives was necessary. As a result, some co-operatives started investing in industries to process products from their members. The context of co-operatives industrialization was mainly situated in agriculture sector and most of the industries were initiated through co-operatives Unions. For instance, Victoria Federation of Co-operative Unions Limited (VFCU) apart from facilitating access to farm inputs, storage and markets, it also invested in cotton ginneries (Mruma, 2014) for ginning cotton and extraction of edible oil. In Njombe, tea processing factory in Lupembe was also formed by producers in tea co-operatives. Other co-operative industries were also established in different areas growing other cash crops such as coffee, cashew nuts, tobacco and sisal. In reality, the agro-based industries have been the main model for early co-operatives engaged in industrialization process.

After Arusha Declaration in 1967, the government took deliberate efforts to establish various industries including the industrial co-operatives. For instance, in 1973, Tanganyika African National Union (TANU) gave a directive on promotion of small-scale industries, which included industrial co-operatives. Most of the industrial co-operatives received financial assistance from the government through the Regional Development Fund (RDF) (Mkwizu, 1984).

The fund aimed to support them in building workshops and buy tools. In supporting these industries, technical and marketing advice, training and machine hire-purchase schemes were extended through SIDO. Numerous industrial co-operatives were established by the spontaneous initiative of their members, but most of them started from the government initiative and inducement (ILO, 1978; Mkwizu, 1984; Abell, 1990). Therefore, Arusha Declaration paved the way toward promoting co-operative involvement in industrial economy, something that should be retained currently.

Co-operative industrialization faced challenges in mid 1970s during the implementation of Ujamaa and Villagization Act of 1975. The Act abolished primary co-operatives and their Unions (including their assets and investments). Each village was turned into a co-operative and the Crop Marketing Boards were formed to undertake functions of previous primary co-operatives and Unions (Mruma, 2014). The processing industries once managed by co-operative Unions were handed to crop boards such as those for coffee cotton and tea. With failure of the boards to operate co-operative business and meet members' needs, co-operative industries experienced operational challenges hence some collapsed.

Apart from agricultural-based industries, other industrial co-operatives also emerged focusing on other commodities. Some examples of these co-operative industries include: Kivuki Industrial Co-operative (Moshi), Uhandisi Industrial Co-operative (Arusha), Mwangaza Industrial Co-operative (Arusha) and Iringa Soap Making Industrial Co-operative (Iringa). Table 2 summarizes additional details about these former non-crop industrial co-operatives.

**Table 2: Non-agricultural industrial co-operative in 1970s**

Name of the Co-operative	Kivuki	Uhandisi	Mwangaza	Iringa
Year of Starting	1973	1976	1974	1976
Year of Registration	1977	1976	1977	1976
Initiative to Start	Governments' Inducement	Governments' Inducement	Government inducement and Members initiative	Government inducement and Members initiative
Initial Membership	60	14	13	100
Initial Grant	Regional Development Fund (RDF)	CUSO – SIDA	Local (National Bank of Commerce (NBC)	RDF
Fixed Investment (Tshs)	514,740	1,750,000	1,061,000	100,000
Membership Contribution	20 shares each Tshs 100 Entrance Fees 100/=	20 shares each Tshs. 100 Entrance fees Tshs. 100	20 shares each Tshs. 300/= Entrance fees Tshs. 200/=	1 share each Tshs. 100/= Entrance fees Tshs. 10/=

Product Type/Activity	Metal works and auto repair, steel window frames, Buckets, bicycle carriages, hospital equipment, chicken incubators, hoes, mattocks	Metal works and auto repair, windmills, window grills, brick making machine, wheelbarrows, ox-carts, hand water pumps, rivets & screws	Auto repairs, hand water pumps, wheelbarrow, ex-carts, trailers, tractor trailers, window grills, auto spare shop	Laundry soap, Toilet soap, 3 retail shop
Future Expansion Plans	Make Mortise Locks	Production of spare parts Build New Premise	Production of rubber Products. Build New Premise	Change production technique from cold to hot processing. Move to SIDO Industrial Estate

Source: Mkwizu, 1984.

The reformation of the co-operative movement began after enacting the Co-operative Societies Act of 1991. But still, the ownership of the processing industries remained under crop authorities hence led to slow rate of co-operatives' involvement in industrial development. However, there were some primary co-operatives which managed to establish their own small scale industries, for instance Dar es Salaam Small Industrial Cooperative (DASICO) in 1976 (Schwettmann, 2012). Other co-operative Unions managed to restore their industries from marketing board, such as, for example, Tanga Dairy Co-operative Union (TDCU) Ltd which regained the milk processing factory revived through Tanga dairy project. Other co-operative industries emerged covering members with common interests from different regions. An example is Tabora Beekeepers Co-operative Society Ltd which was formed in late 1990s to unite beekeepers from Tabora, Kigoma, Shinyanga, Mbeya and Rukwa regions to process honey for sale in foreign and local markets. Therefore, some co-operatives managed to regain their previous industries while other could not.

Despite the efforts put in promoting industrial co-operatives, their performance was affected by challenges such as: low wages and other motivations for workers, poor management capacity, capital shortages, poor technological capacity and limited supply of raw materials (including the imported one) (Mkwizu, 1984) and shift of their managers to private enterprises (Abell, 1990). However, despite all the challenges, co-operatives are potential partners in promoting small scale industries hence influence increase strength of SMEs sector (Nwankwo *et al.*, 2012). Yet, the composition of co-operatives in industrial establishments is very low. For instance, the 2015 Industrial Production Survey indicated that co-operatives establishments were only 8.3%. Other establishments were: sole proprietorship (43%); private limited company (24.1%); partnership (14.7%); public firms (5.9%); private

company (5.6%); parastatal (0.6%) and organizations had 1.1% (URT, 2018a). This calls for more efforts to promote more industrial establishments by co-operatives and their active involvement in promoting other industries.

Generally, the reviewed works show that industrial co-operatives share the same history of industrialization in Tanzania. In most cases, the industrial co-operatives were promoted by the government which provided them with funds and grants for initial capital investment. Like in non-co-operative industries, the state's control of production and later of market liberalization affected performance of industrial co-operatives. This calls for the need to strategize on the best ways to undertake industrial development and management by co-operatives.

This paper, therefore, intends to share various theoretical and experience-based strategies that may be employed to promote co-operative involvement in industrial economy given the prevailing opportunities. It also exposes means to finance co-operative industrialization and possible challenges to the industrialization process.

### **3. Data and Methods**

This paper has adapted a qualitative approach to present issues related to industrialization through co-operative organizations. The approach has enabled authors to make gain in-depth review and discussion of issues on the matter of co-operative involvement in industrial process. A critical review of 36 literatures in the field of co-operatives and industrialization was done. This involved a close scrutiny of academic papers, government reports, policies and internet sources in building sound presentation and discussion of the subject matter of this paper. The mobile phones interviews were also used as method to collect data. The authors also made a number of phone calls to various stakeholders in the existing industries and those with knowledge of such industries where co-operative role exists. A total of 20 participants were involved in interviews which involved collection of data and justification of the existence of various industrial initiatives by co-operatives. By groups, the stakeholders involved are: Board members of co-operative industries, Programme Officers in regional offices of Moshi Co-operative University (MoCU), staff in co-operative joint enterprises and District Co-operative Officers.

Some of data obtained include name of industries, shareholding and processing capacity. Content analysis has been applied to analyze the reviewed qualitative data. This involved creation of specific pattern of analytical themes which were

later grouped together to develop meaningful statements that support discussion of different thematic issues presented in various sections in this paper. In some cases, secondary numerical data have been included to support the qualitative data. The sources for specific data have been cited in various subsection of the paper. The tables and figures have also been used to present some data from different sources.

## **4. Results and Discussion**

The current study gives an overview on how best co-operatives in Tanzania can engage in industrial investments. With the everlasting call of the 5<sup>th</sup> Tanzanian government on industrialization plus the need to attain sustainable economy that benefits the majority, co-operatives are potential actors to achieve these goals. The discussion section is subdivided into four parts. These include: the overview of opportunities for co-operatives; direct and indirect strategies for co-operative involvement in industrialization; financing options for co-operative industrialization and challenges likely to face co-operatives; involvement in industrialization. The discussion of these issues follows hereafter.

### **4.1. An Overview of Opportunities for Tanzanian Co-operatives**

#### ***4.1.1. Investment opportunities***

Agricultural-based industries are potential in promoting Tanzanian economy. As the country is still dependent on agriculture, which gives livelihood to over 66.3% of the population (URT, 2018b) establishing industries targeting the sector is crucial. The individual farmers and those organized in groups and co-operatives form a foundation for agro-processing as suppliers of raw materials and as investors in other side. Given the high production of various agricultural commodities mostly in rural areas, there is a big opportunity to establish new, expanding existing and reviving industries to processing the commodities or manufacture finished goods of high demand. For instance, co-operatives can engage in industries dealing with sugar production, meat and fish processing and packaging, cereal flour production, milk processing and packaging. There is also a potential opportunity in forestry sector such as timber production and manufacturing of honey products. There are opportunities also in processing and manufacturing product from cash crops such as coffee, tea, tobacco, sisal, cotton, pyrethrum, cashew nut and others. Currently, there are only 12 industries processing cashew nuts (each with average of 10,000 tons annually) while the cashew nut output is 260,000 tons annually

(habarileo.co.tz). This indicates that more industries are needed to cover the gap and expected future output increase in cashew nut production. Further, speedy urbanization and growing incomes have led to more demand for value-added products in the agriculture sector but underdeveloped agro-processing firms have failed to provide significant levels of import substitution for the urban food market. This led to an increase in country's food import bill, for instance, to USD 963.9 million between 2006 and 2013 (URT, 2016a). Co-operatives' involvement in industrial economy can help to produce more demanded goods and reduce importation.

There are also prospects for investing in processing of farm products (and producing finished goods) such as cereals and milk. Over past 50 years, the outputs for maize and rice have increased to about 1.5 and 2.0 tons/ha, respectively. There are opportunities also to invest in meat processing due to the large number of livestock in the country. There are over 21.3 million cattle, 15.2 million goats, 6.4 million sheep, 1.9 million pigs, 35.1 million indigenous and 23 million exotic chicken (URT, 2016a). In dairy sub-sector, the average milk production is about 2.7 billion litres annually where only 30 percent is being processed by local factories while the rest is sold in informal markets while over 20 million litres of milk are also imported annually. There is also a significant increase in farm yield for food and cash crops countrywide due to improved farming practices, favorable climate, price stability, access to extension services, credits, fertilizers and other inputs. Cash crops production increased to 14.2% in 2017 compared to decrease by 13% in 2016 (URT, 2018b). All these give great opportunity for co-operatives to have plenty access to raw materials and invest in processing farm produce and animal products for local, regional and internal markets.

#### ***4.1.2. Economic and market opportunities***

There are several economic and market opportunities locally and internationally that may attract co-operative involvement in industrialization. For example, the increase in average income, population growth, rise of middle class and changing consumer preferences. Also the existing and upcoming regional economic blocks (like EAC and SADC), fair trade markets and other bilateral and multilateral trade agreements gives great opportunity for co-operatives to engage directly or indirectly in industrialization process to capture the markets (EAC, 2012). Tanzanian population has been increasing fast and currently it is over 52 million people. In 2017, the per capita income of Tanzania was equivalent to US Dollar 1,021 compared to US Dollar 958 in 2016, equivalent to an increase of 6.5% (URT, 2018b). Also globally, the middle class is expected to double between 2009 and 2030, from 1.8 billion to almost

5 billion i.e. 60% of the world population (ESPAS, 2015) while global population is expected to increase from 7.4 billion people in 2016 to 8.6 billion in 2030, 9.6 billion in 2050 and 11.2 billion in 2100 (Kay and Nagesha, 2016) leading to high demand of goods and services to meet the needs of the middle class and of the general population.

In Sub Saharan Africa, population is expected to grow from 1 billion people of 2015 to 3.9 billion people (34.8% of world population) by 2100 (Stiglitz *et al.*, 2017). The co-operatives have the opportunity to engage directly and indirectly in the production and the distribution of goods and services needed by the middle class and by the general population (Anania and Bee, 2018) including food products, beverages and other agricultural products. Co-operatives have also the chance to invest in industries due to improved trade relations with neighboring countries and trade agreements in regional blocks. In 2017 the East Africa Community (EAC) established the “One Stop Border Posts” to implement the Single Customs Territory where under the Common Market pillar, a total of 106 East African Standards were approved and gazette for textile products, leather and leather products, cereals, and nutritional and dairy products packaging. Further, the Southern African Development Community (SADC) during the 37<sup>th</sup> Ordinary Summit of the Heads of State and Government endorsed the plan to work with private sector in developing industries and trade including agro-processing. All these gives assured markets opportunities for goods from co-operative industries and their other joint investments.

#### **4.1.3. Political opportunities**

There is political will from current government which heavily invested in industrialization agenda. The government of Tanzania, for decades, has continued to promote co-operatives as partners in socio-economic development. Currently, there is a very strong political will of the regime in supporting co-operatives in the country. The government is emphasizing various stakeholders to engage in industrialization process where co-operatives are also taken on board. The presence of supportive political system and the prevailing call for more stakeholders’ involvement in industrialization, gives co-operatives a green light to engage in the process. The fifth government has shown interest to revive former collapsed and low performing industries including those owned by co-operatives. There is also a strong will from the government against corruption and other misuse of resources done by leaders in co-operatives. This involves trial for corrupt co-operatives leaders and return of stolen assets and funds. All these efforts are given assurance to co-

operatives on the safety, sustainability and everlasting government support on their industrial investments.

#### ***4.1.4. Policy and legislative environment***

The government has been improving the policy and legislative environment for co-operatives. This includes the legal transformation from state control era (1960s to 1970s) to free market era (1980s up to date) where cooperatives are given more autonomy to operate. Modifications to co-operative laws and policies took into considerations the needs of the co-operative environment and changing business environment where co-operatives operate. After market liberalization, the policy and legal frameworks for co-operatives have changed from Co-operative Societies Act of 1982 to the Act of 1991, Co-operative Development Policy of 1997 to the Policy of 2002 then the Co-operative Societies Act of 2003 and its Regulations of 2004. In 2013, the government enacted a new Co-operative Societies Act with its Regulations of 2014. (Anania and Bee, 2018).

## **4.2. Strategies for Co-operatives to Utilize Opportunities for Industrialization**

Co-operative enterprises in Tanzania can enter into industrial investment through two main approaches. They can directly invest on industries or they can support industrial investments done by other co-operatives, individuals, communities or the general public. The discussion on these strategies follows below.

### ***4.2.1. Direct strategies for industrialization***

The co-operatives in Tanzania can enter directly into industrial investment by applying the following strategies.

#### ***4.2.1.1. Self-co-operative initiatives to industrialization***

Under this strategy, a single co-operative society takes an initiative to establish its own industry to produce commodities goods. The industries (to be) established by co-operatives can take two main forms: organized at organizational level by all co-operative members or, individual members or in groups can have their small industries. If industries are formed at the level of the organization means, members will contribute to the capital to establish and operate their industries. The co-operative Board members and Managers will assume technical and supervisory role to manage all daily activities in the industry e.g. supply of inputs, raw materials, processing, production of goods, storage, marketing and distribution of goods. If such industries are formed by

individual members or groups, then a co-operative can become a technical centre where members can be assisted to get technologies, processing and other value addition services, marketing, transportation, organization of inputs/raw materials, search for financing, branding and other technical services.

Whether industries are set at individual/group or organizational level, it should be clear how the benefits and risks will be shared between members and their organization. For example, though received donor funding, some dairy co-operative Hai district initiated their own factories to develop milk products. Nronga Women Dairy Co-operative (processes 200 litres of milk daily) and Kalali Women Dairy Co-operative (processes 450 litres of milk daily). In Kigoma, Kasulu Beekeepers Co-operative Society has invested in processing quality bee products including honey. There is also an opportunity for a co-operative to register directly as an industrial co-operative rather than doing it and subsidiary business. In this approach industrial co-operatives can deal with one or more agricultural products or become multi-task societies. In Rombo district, Tarakea Women Sawmill (TAWOSA) co-operative deals with sawmilling activities such as timber harvest, transportation and selling of timber (Sumari, 2007) and also harvest maize processing unit to produce flour.

#### *4.2.1.2. Co-operative-to-Co-operative Strategy*

The co-operatives in Tanzania have the chance to cooperate among themselves for industrialization purpose. This opportunity has been missing for years, but the current Co-operative Societies Act of 2013 has allowed co-operatives to conduct joint businesses (Anania and Bee, 2018). Therefore, in line with such legal opportunity, co-operatives can engage in industrialization through joint-efforts. Two or more co-operatives in a given district or region can join hands to establish various kinds of industries viable in their areas or based on national and global demand. A strategy can work well whether individual co-operatives have no adequate resources, management and technological capacity to engage in industries. Through joint efforts, co-operatives can establish industries through sharing financial, human, physical and technical resources required. The strategy can also help to spread risks in investment, ease repayment of external capital, improve capacity to access external technical services, marketing, distribution of goods and supply of needed raw materials and other inputs.

Co-operatives in a jointly formed industry, however, should agree on best operational and organizational structure, shareholding, distribution of risks and returns on investment and other processes associated with the joint industry.

Among the co-operative industries established by this strategy, there is the Kanyovu Coffee Curing Co-operative Joint Enterprise Ltd (KCCCJE). The Joint enterprise is made of 11 primary coffee co-operatives from Kibondo, Kasulu and Kigoma districts in Kigoma region. In the Kilimanjaro region, a number of joint enterprises and joint ventures have been initiated such as Kilimanjaro Dairy Co-operative Joint Enterprise (KDCJE) made of 16 dairy co-operatives and also Uru East and Mruwia Joint Venture and Western Mruwia Joint Venture for coffee (Anania and Towo, 2016). Although none of these owns industries but they lay good foundation to undertake industrial investments dealing with produce from their members.

There is also the Tanganyika Coffee Curing Company (TCCCo) Ltd in Moshi municipality. In shareholding structure, the company is owned by the Kilimanjaro Native Co-operative Union (KNCU Ltd) with 54%. Other owners are: Tanganyika Coffee Growers Association (TCGA, 31%), Arusha Co-operative Union (ACU, 10%), VUASU (2%), Tanga Region Co-operative Union (TARECU, 1.5%), Morogoro Region Co-operative Union (MORECU, 0.5%), Rift Valley Co-operative Union (RIVACU, 0.5%) and Kanyovu AMCOS (0.5%). USDA (2005) argued that co-operative joint business helps to strengthen manufacturing and marketing functions, enlarge market outlets and distribute the financial risks associated with business.

#### *4.2.1.3. Co-operative-Government partnerships*

For decades, the government of Tanzania has been a partner in national co-operative movement playing the role of promoting, supervising and capacity building through its co-operative support institutions. Given that the government has shown interest to promote both industrialization and co-operative development, then there is a possibility for the government to enter into partnership with co-operatives at primary, Union or federation levels to establish and operate various industries. However, there should be agreement on shareholding issues, contributions required and management structure without compromising co-operative principle of “autonomy and independence”. Furthermore, an industry can be formed solely by co-operatives then sell shares to the government or the government can sell shares to co-operatives to be partner in industries formed by the government. The Mbozi Coffee Curing Company Ltd (MCCCo Ltd) located in Mlowo industrial area in Mbozi District operates under this model. Its ownership comprises 68.27% of shares by coffee farmers (through various Co-operative Unions) while the government of Tanzania owns 31.73%. MCCCo Ltd processes about 21,000 tons of raw coffee annually. The co-operative-government partnership

model can also be applied in current revival and establishment of new industries across the country.

#### *4.2.1.4. Co-operative-private partnership*

Tanzanian Co-operative Societies Act of 2013 has also given an opportunity for co-operatives to engage in partnership business with private actors being individual or companies. In this case, co-operatives can use this chance to establish industries through partnership with private investors. In this strategy different approaches can be applied, such as: co-operatives and identify a private partner to invest with and establish industries by sharing resources together. A co-operative or private investor can establish the industry then later invite the other through selling shares. Further, based on the “Co-operative business participation model”, co-operatives can assign some of their activities to private actors. Therefore, it is possible that co-operatives can establish industries on their own and then commission some of the activities to private actors and make them partners in investment, supply of inputs/raw materials, processing and marketing of goods.

In Tanzania, Tanga Fresh Ltd is one example of co-operative-private owned industry. Through Tanga Dairy Co-operative Union (TDCU) Ltd, dairy co-operatives owns 42.5% share in the factory while the rest is owned by private investors. Co-operative-private partnership has advantages for co-operatives. In Zambia, sugarcane farmers’ co-operative partnered with a processing company where they acquired some company’s shares, got Board seats and had access to technology, capital, managerial competence and market from investors (Ruede, 2014; Anania and Bee, 2018). In USA, the Mountain States Lamb Co-operative and Midwest Elderberry Co-operative have included private investors as partners. They have a special shareholding system according to which they sell A class shares to members (for patronage) and annual membership fee; B class shares are sold to co-operatives’ investors who hold majority shares and do possess decision making power (Grashuis, 2018). Therefore, co-operatives interested in establishing new industries or revive and expand existing ones may opt to co-invest with private investors to operate their business.

#### *4.2.1.5. Industrialization through vertical co-operative organizations*

There is also a possibility for co-operatives to engage in industrialization through vertical organizations (secondary and tertiary structures) such as Unions and the Federation. Through this strategy, industries can be established in two ways. First, the Unions (in districts/regions) and Federation can establish industries by mobilizing resources on their own or through external sources.

Co-operatives can then join as shareholders to the industries. Second, primary co-operatives can mobilize internal and/or external resources and establish industries at the Union or Federation level where all involved co-operatives will be shareholders, while Unions and/or Federations become custodians and managers of the businesses. This style has existed for years, mostly in socialist era where primary co-operatives had industries at Union levels. Some examples of this strategy include the Maize milling factory by Njombe Region Co-operative Union (NJORECU) where the Union undertakes the business on behalf of its primary co-operatives. Kagera Co-operative Union (KCU) Ltd also established BUKOP Ltd for coffee curing factory. Currently, Tandahimba and Newala Co-operative Union (TANECU) Ltd is building a factory for processing cashew nut from members in its primary co-operatives. Simiyu Co-operative Union (SIMCU) Ltd is another example where it owns two cotton ginneries for cotton processing.

#### *4.2.1.6. Multi-stakeholders (Tripartite) approach to industrialization*

This strategy is similar to co-operative-private strategy, but it includes more actors in the process. The strategy brings on board the co-operatives, government institutions and private investors (organizations, groups or/and individuals). The investing partners will contribute to the capital of industrial investments and decide on the shareholding structure for the investment. It is advisable that co-operatives (primary or Union) maintain the majority of shares in the investment. The involvement of the private sector is beneficial in terms of capital contribution, technology transfer an innovation and also management capacity for the investment. A practical example of this strategy is Tanganyika Instant Coffee Public Limited Company (TANICA) in Kagera region. Annually, it produces about 500 tons of instant coffee and currently also produces bottled drinking water. From year 2005, the company ownership changed from majority government shareholding into other investors i.e. Kagera Co-operative Union (KCU) Ltd and Karagwe District Co-operative Union (KDCU) Ltd. Other shareholders are the Tanzania Federation of Co-operatives (TFC), Government Treasury and TANICA workers.

#### *4.2.1.7. Formation of Pure Industrial Co-operatives*

This strategy is similar to the “co-operative self-initiative strategy” mentioned above but it slightly differs as here, a co-operative registers and operates purely as an industrial co-operative. The registered industrial co-operative may perform one or multiple activities such as processing commodities from other suppliers/producers including agricultural co-operatives and groups or producing finished commodities for consumption. They may also be producing

equipment that may be used in different activities throughout different agricultural value chains. Some of these pure co-operative industries are: Dar es Salaam Small Industries Co-operative (DASICO) in Dar es Salaam and Uhunzi Co-operative Society and Wajamaa Trading and Engineering Contracting (WATECCO) Co-operative Society in Mbeya region. Apart from producing facilities and equipment for farming activities, there are also prospects to invest in production of equipment to improve fishing activities. URT (2016a) argued that Tanzania has vast fishery resources with marine water covering 64,000 squares kilometers and a coastal line of 1,424 kms. While fresh water fisheries cover 62,000 squares kilometers. But still the fishery sector mostly consists of small fishers and fish farmers who usually apply traditional technology.

#### **4.2.2. Indirect strategies**

In case co-operatives do not establish industries on their own, they can also participate in industrialization indirectly i.e. give support to established industries by other co-operatives, public or private sector. The indirect strategies include the following:

##### *4.2.2.1. Supply of inputs for industrial production*

There is a possibility for co-operatives to support industrial development by being major suppliers of raw materials. Raw materials are crucial for sustaining industrial production (Andreoni, 2017). Co-operatives need to utilize the opportunities available in terms of raw material demand different processors and manufacturers. Agricultural based co-operatives can supply their crops and animal products to the firms using such materials to produce different goods. For instance, dairy co-operatives can maximize output and sell to milk processor and reduce milk importation, horticultural co-operatives can supply fruits to industries producing juice and other beverages. Livestock keeping co-operatives can supply livestock to meat processors and animal skins to firms producing bags, shoes etc. The same can be done to co-operatives producing cereal crops and cash crops like tea, coffee, cotton, sisal and tobacco by making reliable supply of such raw materials to domestic industries to minimize imports of raw materials.

Co-operatives may also engage in business of supplying equipment, machinery and other facilities needed by local industries. For instance, some co-operatives can work as agents for imports needed by domestic industries, supply machinery and spare parts needed for local industries. Some examples in this strategy are the dairy co-operatives and groups in Njombe region which have

been among potential suppliers of raw milk to Asasi Dairy Factory in Iringa region. In Lupembe, Njombe a co-operative joint enterprise known as *Muungano wa Vyama vya Ushirika Lupembe* (MUVYULU) Ltd has been supplying tea leaves through its tea farms to Lupembe Tea Estate (a tea processing factory). Similarly, in Rungwe district (Mbeya) the tea processors rely also on supply of tea leaves from farmers such as Rungwe Small Tea Growers Association (RSTGA). In Arusha city, most of the food processing industries have been relying much on the supply of raw materials from agricultural marketing co-operatives in nearby regions include Manyara.

Further, the Annual Survey of Industrial Production of 2015 indicated that most of the manufacturers in firms which use agricultural products as raw materials still import large share of such materials even if the amount of locally produced raw materials is high. Table 3 shows the amount spent in procuring raw materials for foreign and local suppliers. This indicates the need for co-operatives to quickly react in capturing this gap by investing more in producing quality and affordable raw materials for local firms.

**Table 3: Raw Materials Purchased in Tanzania Mainland**

S/N	Product category	Raw materials Purchased (in TZS “000”)		Total
		Imported	Local	
1	Products of agriculture, horticulture and market gardening	692,344,398	782,027,615	1,474,372,013
2	Live animals and animal products	113,909	39,788,749	39,902,658
3	Forestry and logging products	14,844,474	20,494,477	35,338,951
4	Fish and other fishing products	124,827	26,831,719	26,956,546
5	Meat, fish, fruit, vegetables, oils and fats	10,692,459	48,628,429	59,320,888
6	Dairy products	-	1,591,584	1,591,584
7	Grain mill products, starches and starch products; other food products	47,490,854	229,976,653	277,467,507
8	Beverages	50,157,999	10,791,662	60,949,661
<b>TOTAL</b> (computed by authors)		<b>815,768,920 (41.3%)</b>	<b>1,160,130,888 (58.7%)</b>	<b>1,975,899,808</b>

Source: URT, (2018a), *Annual Survey of Industrial Production (ASIP)*, 2015.

#### 4.2.2.2. Financing small and medium industries

The process of securing financing is among the most difficult stages in any investment. Co-operatives in Tanzania can help in industrialization by acting as sources of funds for small and even medium industries in the country. This can be done in different ways: first, primary co-operatives or Unions can assign part of their net income to support small scale industries in their areas. This can either be part of their “social responsibility” or give such funds as loans or grant to local industries in their areas. Second, financial co-operatives such as savings and credit co-operatives (SACCOS) and co-operative banks can act as source of

capital to finance establishment and expansion of local industries by co-operatives or private people in their areas. Once such industries have stabilized, these financial institutions can get loan term borrowers or even making future partnerships in investment. Supporting local industries financially may be helpful in circulating idle money in some financial co-operatives and increase capital base through lending to potential borrowers such as industries.

#### *4.2.2.3. Market coordination*

Another indirect strategy for co-operatives to support industrialization is by coordinating marketing role for the goods produced by other co-operatives or private local producers. In this case, co-operatives can act as marketing agents and get paid services commissions from manufactures or processors they support. The co-operatives can act as marketing agents by seeking customers both locally and globally then handle the distribution function and even export role for the produced goods from local firms. However, this strategy needs to be applied by a specialized co-operative which will mostly engage in marketing issues and have enough competent manpower to handle such activities locally and internationally. Clear agreements should be made on payment of commission or sharing of benefits, distribution risk and performance criteria for the marketing co-operatives. In USA, the dairy bargaining co-operatives play this role by marketing milk from other producers (USDA, 2005).

#### *4.2.2.4. Insurance services*

Co-operatives can support industrialization also by engaging as insurance service provider to local firms. Co-operative insurance sub-sector in Tanzania is almost not existing, giving opportunities for co-operatives to enter in this business and insure local industries. The established local industries (will) need insurance services to protect their assets, human resources, products in the distribution channels etc. Co-operatives can invest to offer services to industries such as workers' health insurance, asset insurance (e.g. vehicles, machinery, warehouse and other assets) and the goods moved from industries to the final markets. Dar es Salaam Small Industries Co-operative (DASICO), for example, has enabled its members to access health services and it provides them with insurance cover against sickness and death. Co-operative Insurance firms are highly needed to offer insurance services to industrial co-operatives and other small and medium industries owned solely or joint by co-operatives.

### **4.3. The Financing Options for Co-operatives in Industrialization Process**

Financing industrialization through co-operative societies can be done in a number of ways. Among the options of financing the process, there is engaging large financial co-operatives such as SACCOS and Co-operative banks to offer capital for establishment and expansion or revival of co-operative-owned industries. The existing banks, such as Tanzania Agricultural Development Bank (TADB) and Tanzania Investment Bank (TIB), are directly connected to industrial investment and agriculture. The commercial banks may also take part in this move. They all need to put more resources to support establishment of industries by co-operatives. The government, through Ministries responsible for agriculture and industries as well as the Local Government Authorities (LGAs), needs to set significant portion of its budget for promoting establishment, expansion or revival of small and medium scale industries including those for co-operatives.

There are also options for participation of private sectors to fund formation and/or expansion of co-operative industries. The community donation approach can also be used to finance co-operative industrialization. Communities may donate funds and become shareholders in given established co-operative industry and get the cake of the benefits (including profits) to be created. Where possible, donor funding may also be useful in supporting establishment and expansion or revival of industries owned by co-operatives.

### **4.4. Possible Drawbacks for Effective Co-operative Involvement in Industrialization**

In our opinions, the effective involvement of co-operatives in industrial economy may be hindered by a number of reasons. It is clear that operating industrial activities requires adequate capital to operate sustainability. Costs for establishments, raw materials, labor, utilities, processing, marketing and others need adequate financing and other assets such as machineries and land. Sustainable co-operative involvement in industrialization may be affected with minimal capital to initiate and operate and even expanding their industrial activities. Some studies show that unlike the Investor-Owned Firms (IOFs) whose growth depend much on diversification and advertising strategies, the growth of co-operative industries depends much of capital structure and intensity (Oustapassidis *et al.*,1998). Even from the experience of earliest industrial co-operatives in Western countries, their growth was mainly affected with shortage of capital (Shirom, 2008).

Favorable development policies and plans need to be placed to promote involvement of co-operatives in the industrialization process. The existing policies (such as SIDP, 2020) and national development plans such as the National Five-Year Development Plan (FYDP II) 2016/17 to 2020/21, Mini Tiger Plan 2020, Agricultural Sector Development Program (ASDP II, 2016), Tanzania Long Terms Perspective Plan (2010/12 to 2025/26), Co-operative Development Policy of 2002, just to mention few, have not clearly considered the co-operatives' involvement in national industrialization move. Rather the call for co-operatives' involvement in the process has been highly spoken by politicians and other government officials.

Lack of enough competent manpower is also likely to affect industrial development through co-operatives. Like in the Investor-Owned Firms (IOFs), co-operative industries need high competent staff that can perform their activities effectively and efficiently. Competent managers are also highly needed to run co-operative industries, hence putting more attractive environment may bring on board motivated competent managers to work with co-operatives. Nyoni, (2006) argued that educated staff has more exposure and contacts hence may be able to run the business properly. Competent human resources also help in promoting innovation in emerging enterprises and adapting use of ICT (Wangwe *et al.*, 2014). Competent management and other staff help in adapting to market challenges and brings transformations in industrial co-operatives (Tapiero, 1989).

Better technologies are highly needed to promote strong co-operative industries. Most of co-operative industries existing today have been established several years ago, making them technologically backward in some extent. Continuous update of their technologies for processing, production, packaging, storage, marketing and other operations is crucial. In current move to promote co-operative involvement in industrialization, technological improvement may make such industries competitive (Wangwe *et al.*, 2014; Katundu, 2018). With improved technologies to empower manufacturing, co-operatives and other small town industries can create more jobs and income (Aeroe, 1992). Technological capacity will also help in expanding capacity utilization (Moshi, 2014) of raw materials by co-operative industries. Further, technological improvement will put industrial co-operatives in safe position to produce high quality products and cope with competitions from IOFs.

## 5. Conclusion

The trend and process of industrialization in Tanzania have passed through a series of phases. From the colonial to state control to market liberalization era, still industrialization was regarded as among the most valuable strategies to promote national development. Even in current government, industrialization is still seen as a means to ensure Tanzania becomes a middle-income economy. In this case, the involvement of various stakeholders in the industrialization is inevitable. Co-operative societies have for decade been potential partners in promoting development including in the industrialization process. In our focus on co-operative organizations, their participation to national industrial development can be directly through self-initiatives by individual co-operatives, registering co-operatives as pure industrial entities, cooperation among co-operatives and with private sector and government as well as using secondary societies such as Co-operative Unions can help co-operative involvement in industrializations.

Co-operatives can also indirectly enter the industrialization process, such as supply of inputs, market coordination for industrial goods, financing industrial activities and offering insurance services. In the process to promote co-operatives' involvement in industrialization, financing is very important. The access to finance can be done by the involvement of financial co-operatives and banks, government institutions, donor funding and community contributions. Further, given that the industrial environments have been highly dynamic, issues such as limited capital, lack of well supporting national policies and plans, manpower shortage and limited managerial competence, technological access challenges, competition and limited diversification may impinge on effective involvement of co-operative in industrialization. These give them new perspective as they engage in industrialization process.

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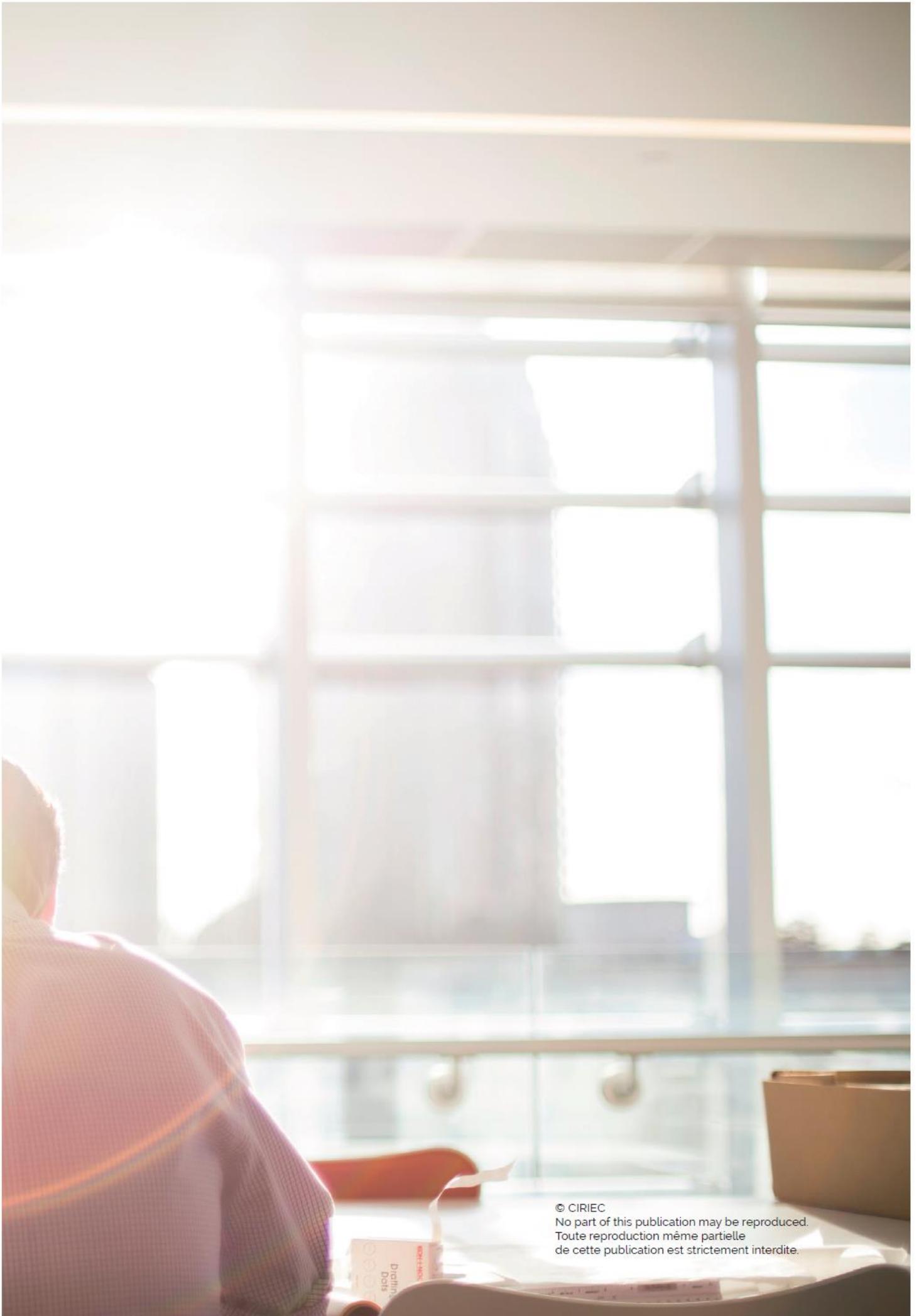
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Université de Liège | Quartier Agora | Place des Orateurs 1 | Bâtiment B33 -  
boîte 6 | BE-4000 Liège (Belgium) | T +32 (0)4 366 27 46 | F +32 (0)4 366 29 58  
ciriec@ulg.ac.be | www.ciriec.ulg.ac.be