

Exploring the Secondary Co-operative Model in the Supply of Fabric to Primary Sewing Co-operatives

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Abstract

This paper presents the role of a secondary co-operative in the supply of an input key to delivering a product by a co-operative movement focused on manufacturing. This study bases its focus on sewing co-operatives and uses the supply of fabric as an example that relates to a proposed secondary co-operative that would be established within a township community of South Africa to supply fabric to clothing manufacturing co-operatives. A literature grid specifying references and concepts used to arrive at the suggested model is also presented on the paper. Secondary co-operatives in supply chain management are key to inter-cooperation of manufacturing co-operatives and to sourcing quality inputs at reasonable rates. In conclusion it is specified that empirical studies could be done to improve and develop further the suggested model of supply chain management through a secondary co-operative structure. Policy makers in the areas of re-industrialization through co-operatives especially in emerging countries may consider secondary supply co-operatives to be drivers of inter co-operative cooperation and as providers of strategic operational support to the manufacturing co-operative movement particularly in clothing manufacturing which is a sector confronted with cheap clothing imports from low cost producing countries.

Keywords

Secondary Co-operative, Supply Chain, Fabric and Manufacturing

1. Introduction

The need for secondary co-operatives rose when individual primary co-operatives in production industries realised that the benefits of inter-cooperative cooperation included attracting corporate buyers and newer resources. In South Africa many co-operative are still new in the manufacturing arena which is why the need to establish secondary co-operatives is relevant (Abor & Quartey, 2010). Manufacturing in an environment with resource scarcity also requires co-operation with other industry members and other experienced role players in an industry (Chareonwongsak, 2017). Co-operatives in manufacturing can benefit from a secondary co-operative in numerous ways, these ways include (1) sharing industry knowledge (2) bidding for big contracts as a collective (3) joining marketing and sales operations to maximize income generation (4) reducing costs of inputs by sourcing from the primary co-operatives and (5) building recognition for the goals and aims of the manufacturing co-operative movement (Lehtonen, 2004). Co-operatives in any manufacturing sector are also challenged to compete with private firms which have values such as earning income for its shareholders, making profit and efficient value adding (Niewenhuizen, 2014) while on one hand co-operatives aim to ensure equal distribution of income among its members, creating value for the society and also ensuring further creation of equity as well as improvement of lives (Muthuma, 2012). On this paper we focus on how can establishing

a secondary co-operative improve the supply of fabric for sewing co-operatives and we also explore how such a co-operative can be sustained to serve a broader purpose of supporting its member primary co-operatives.

1.1 Textile and Clothing Industries Supply Chain

The efficient supply of products and services is driven by demand and also the number of suppliers or service providers available and willing to provide a particular product or service at a price customers are willing to pay and at a location accessible to the market (Li, Li, Shi & Xu, 2013). The supply of textile or fabrics is expensive for distributors relying on imports and this in turn is also expensive for the final users or the consumers of fabric (Doyran, 2013). What also expands the expense in the supply of imported fabric is that there is a small number of importers who then distribute the fabric which gives them the oligopolistic power in the market of clothing textile and fabric (Ngai, Peng, Alexander & Moon, 2014). In South Africa, unlike in ASIA (China, Bangladesh and other South East Asian Countries) where the manufacturing of clothing wear is big business and well supported, many small clothing manufacturers such as sewing co-operatives rely on supply from 3 big fabric importers for their production (Toms, 2012). These distributors are not located in close proximity to their consumers nor do they provide any transport or shipping service. Well established clothing retailers they prefer importing complete clothing wear which is ready for shelving and merchandising. These challenges also hit hard on economic development efforts of revitalizing the economies of previously disadvantaged areas such as townships which means bringing into these places job opportunities in form of manufacturing. However, manufacturing excellence requires sound supply chain systems to be in place which means they should be efficient, reliable and cost effective (Hernandez-Espallardo, Rodriguez-Orejuela & Sanchez-Perez, 2010). This research paper suggests that a secondary co-operative in the case of sewing co-operatives is essential to achieve an efficient supply of fabric and other associated supply chain activities. The next section gives an insight into inter-co-operatives' cooperation in South Africa.

1.2 Manufacturing Co-operatives' Cooperation in South Africa

Small businesses in South Africa, especially in township settings, benefit civilians to retain money (rand) in circulation within the township (Oyeku, Oduyoye, Asikhia, Kubouh & Elemo, 2014). However, weakly performing enterprises discourage the investment into small manufacturing enterprises based in the underdeveloped or even developing regions of a country such as South Africa (Fernandez, 2014). Inter-co-operatives cooperation, in short is referred to as inter-coop cooperation, this term refers to the efforts of a co-operative movement to organize itself, develop a supply chain which is dependent on the co-operatives within a particular industry and to enable trade activities to take place among co-operatives (Miani & Bernadi, 2014). This phenomena presents challenges such as those of organizing secondary co-operatives and also the need to address this research area with reference to manufacturing.

1.3 Research Problem

Co-operatives are thriving forms of enterprises and they are also complex in their own design (Battilani & Zamagni, 2012). They pursue both economic and social objectives at the same time. Co-operatives also compete in a harsh market environment driven by profitability and operational performance. The problem confronting sewing co-operatives in South Africa can be stated as the limited number of accessible suppliers of sewing fabric which leads to late deliveries, high costs of fabric and which also cause sewing co-operatives to deliver inadequate quality to its customers.

1.4 Objectives of the study

This research serves two objectives. The primary objective of this paper it is to provide a model for a secondary co-operative in manufacturing of clothing garments in a township based business environment, furthermore it is to provide commentary on the relevance of a secondary co-operative in strengthening manufacturing co-operatives. A secondary objective is to contribute to the continued debate on co-operatives performance and to point out their contribution in creating opportunities in manufacturing and revitalizing industries in developing economies such as South Africa (Starnawska, 2015). This study by attending to the above mentioned objectives will then address challenges facing the establishment of successful secondary co-operatives in manufacturing. This paper also base its research on a case of sewing co-operative in South Africa and proposal made to an international agent interested in funding of women-run manufacturing co-operatives.

2. Literature Review

The co-operative movement has an obligation to develop a competitive advantage as a collective and should also invest in building representation that protects the values of the co-operative movement while it is able to also compete

successfully in the harsh market place (Pezzini 5, 2004). Co-operatives in the manufacturing sector may invest in cost-sharing schemes for operating premises, marketing facilities and sharing of skills relevant to their trade in order to remain competitive in their area of business (Li, Li, Shu & Xu, 2013). Co-operatives can best implement collaboration and partnership through secondary co-operatives. A secondary co-operative is a senior body established by primary co-operatives to manage inter co-operative cooperation, partnerships, collaboration and supply chain to meet performance expectations of the co-operative movement and to improve on operational performance of each individual primary co-operative (Lehtonen, 2004). The supply of fabric requires an establishment of a reliable supply chain given the increasing trends of globalization, cheap import clothing and international competition on fashion (Ngai, Peng, Alexander & Moon, 2014), thus making a secondary co-operative focused on establishing and managing a supply chain a relevant pursuit for any co-operative movement that is focused on clothing production. According to Hernandez-Espallardo, Rodriguez-Orejuela and Sanchez-Perez (2010) based on a study conducted on the Colombian textile industry, for an inter-firm collaboration and supply chain network to be successful it requires adequate governance of the inter-firm relationships, which shall lead to knowledge sharing and learning within the collaboration. Collaboration for self-supply of fabric by co-operatives which are small players in the garment and apparel industry requires a strong support system that will coordinate and enable the co-operative clothing manufacturers to deliver quality garments, at an acceptable market price and also deliver to clients timeously (Doyran, 2013). There are different types and levels of co-operatives which are established for specific purpose of community and socio-economic development (Abor & Quartey, 2010), the next section describes the different co-operatives.

2.1 Different types of Co-operatives and their purpose

There are three forms of a co-operative enterprise, namely primary, secondary and tertiary (Department of Agriculture RSA, 2013:5-6). A primary co-operative is established by members of a community that have identified a gap that can be serviced or a need for a product that can be delivered through a co-operative, a primary co-operative also administers membership and allocation of shares for members (Godfrey, Muswema, Strydom, Mamafa & Mapako, 2015:8). A secondary co-operative is a joint operation of primary co-operatives in a similar sector interested in growing their footprint, sharing key resources such factory facilities, knowledge, supply of inputs and providing training to one another (The DTI, 2010:2). A tertiary co-operative focuses mainly on representing co-operatives interest in government forums and bargaining platforms, which includes the provision of marketing services and guiding of members into becoming affiliates into the global co-operative movement (The DTI, 2009:27). The different levels of the co-operative movement are key to cooperation amongst the co-operative enterprise, particularly those engaged in complex manufacturing activities and also those that are contracted by public and private sector organisations (Borda-Rodriguez & Vicari, 2015) and this is given attention on the next section.

2.2 Inter-industry cooperation

The co-operative movement has a long history and which is also linked to the Rochdale co-operative near Manchester in the United Kingdom which is why the area of knowledge about co-operatives is also relevant to manufacturing and it is also recognized in the development of Chinese rural communities (Bernadi & Miani, 2014:2014). Inter-industry cooperation refers to businesses or organisations which share similar objectives and which also provide services or products to similar markets joining their efforts to maximize performance of their production processes and sharing of common knowledge, this could also apply a buyer-supplier context (Toms, 2012). Inter-industry cooperation is not attractive to some enterprises, especially in the private sector, where price fixing and other collaborations around skimming markets are harshly punished by authorities (Choi, Choi, Jang & Park, 2014). Therefore, ethical and transparent collaboration processes are required to be in place for reporting purposes such as secondary co-operative structure in the sector of manufacturing co-operatives (Davis, 2016). Inter-industry cooperation influences access to key production inputs when an input item is largely sought after by multinational organisations and when it is also scarcely available in certain regions or countries, such as fabric for garment manufacturing in South Africa (Gnezdova, Kugelev, Ramanova & Ramanova, 2016) and this is discussed on the following section.

2.3 Fabric Supply Chain Management

According to Heizer & Render (2014:468) supply chain management can be defined as “the coordination of all supply chain activities involved in enhancing customer value”. The number of manufacturing co-operatives is growing due to funding and other resources reserved for social enterprises by funding agencies, banks and private enterprises interested in the role of social trading entities which is why efficiency in delivering value to the consumer is a must for manufacturing enterprises within the co-operative movement (Kalmi, 2013). Collaborative supply chains lead to productivity for their members such that the members achieve bargaining power and ability to eliminate costs associated with buying in smaller quantities from a chain of supply that is populated by many intermediaries (Neto,

2008). The role of a secondary co-operative would be to purchase large but required quantities of fabric, facilitate storage and transfer skills to primary co-operative on the use of fabric and implementing low-waste production which would benefit the supply chain and save on costs of fabric (Leblanc & Alzyoud, 2015). The following section presents the suggested model of developing a secondary co-operative for supply of a specific input to primary member co-operatives.

2.4 Supplier Secondary Co-operative Development Theoretical Model: Discussion

The model below is inspired by the conceptual model developed by Gnezdova et.al. (2016) named as the Union Structure of the Russian Agricultural Co-operatives. In this section we present not an alternative, but a context specific model of establishing a Supplier Secondary Co-operative.

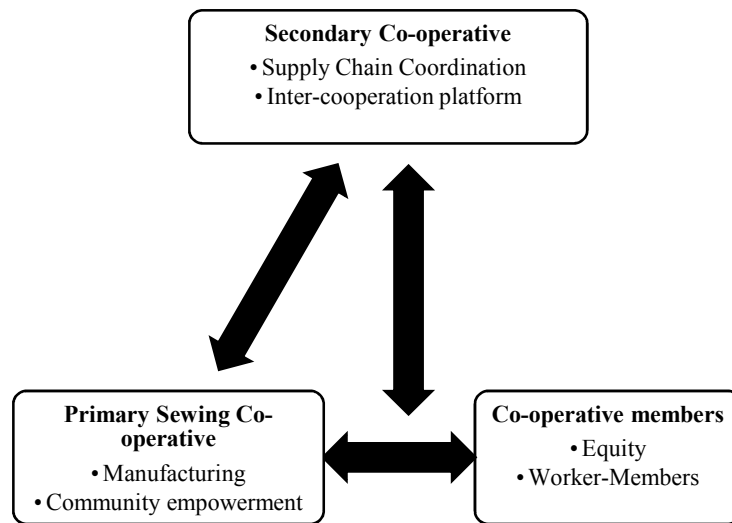


Figure 1. Secondary Co-operative Model

The above model seeks to address the problem of fabric supply amongst a group of sewing co-operatives contracted to large sewing projects. The role of Primary sewing co-operatives is to coordinate the involvement of individual worker-members and to govern equity as well as the business processes (Golovina, Nilsson & Wolz, 2013). Primary co-operatives by joining their efforts based on a Memorandum of Incorporation establish a secondary co-operative, therefore sound governance in any primary co-operative is important for the success of the secondary co-operative performance. Timely responses, knowledge sharing and joint-venturing are other essential components to a useful supply chain method such as a secondary co-operative (Delgado, 2014). The knowledge of manufacturing by the co-operative will determine the value derived from the secondary co-operative and the nature of community empowerment derived will also influence the choice of a co-operative whether to be part of a secondary co-operative or not. A secondary co-operative plays a key role in capacitating primary co-operatives in terms of supplying information, key inputs, offering short-term manufacturing loans, additional temporary labour and also by promoting inter-cooperation among co-operatives (Ogbeide, 2015). The relationship in co-operatives is not based on dominance of the other in a supply chain, rather empowering each role player to collectively make successful the operations of individual stakeholders, hence the arrows show equitable involvement of all stakeholders as displayed on the diagram (Battilani & Zamagni, 2012). A secondary co-operative which co-ordinates a chain of supplies also develops technological capabilities for its members which could be based on the Just-In-Time inventory management and can also manage a facility for material or storage of fabric (Cooper, 2008). We are convinced that the above model can improve the performance of co-operatives affiliated to an established supply secondary co-operative and this claim is also based on the research procedure which was employed on this research as presented on the following section.

3. Methodological Procedure

This research paper uses existing literature on supply chain management and on co-operatives development to unpack the inquiry about the potential role of structured industry cooperation (Bryman & Bell, 2011). The journal articles selected also reflect interdisciplinary and also reflect the pattern codes in the knowledge area of co-operatives (Welman, Kruger & Mithcell, 2005). The development of the suggested model of secondary co-operative development is based on literature and insight gathered from journal articles as specified on the literature grid as shown on Table

one (1). This literature grid comprises of eighteen (18) references and sixteen concepts which were explained by the authors indicated with ticks in the boxes.

Table 1. Literature Grid of Concepts

<div>Concepts</div> <div>Authors & References</div>	Co-operative	Supply Chain Man.	Industry Cooperation	Textile production	Collaboration	Facility Sharing	Garment mfg.	Fabric supply	Coordination	Mfg. excellence	Customer value	Skills Transfer & Emp.	Output Quantities	Competitive advantage	Co-operative Supplier	Globalisation
Li et.al. 2013						✓					✓			✓		
Lehtonen, 2004			✓				✓		✓							✓
Ngai, et.al. 2014					✓											
Hernandez et.al. 2010		✓		✓					✓				✓			
Doyran, 2013		✓	✓				✓	✓								✓
Abor, et.al. 2010	✓				✓							✓		✓		
Neto, 2008	✓					✓				✓	✓				✓	
Oyeku, et.al. 2014	✓	✓			✓									✓		
Bihari & Malhotra, 2016	✓		✓		✓				✓			✓				
Leblanc & Alzyoud, 2015	✓		✓		✓				✓			✓				
Davis, 2016	✓										✓			✓		
Kalmi, 2013	✓	✓	✓								✓					
Fernandez, 2014	✓	✓			✓				✓				✓			✓
Bernadi & Miani, 2014	✓		✓		✓											✓
Chareonwansak, 2017	✓								✓				✓			
Muthuma, 2012	✓		✓			✓			✓						✓	
Starnawska, 2015	✓		✓												✓	✓
Battiloni & Zamagni, 2012	✓				✓				✓	✓			✓			

A total of thirteen (13) authors have conducted their research on co-operative enterprises and a wide-spread of other themes. There is a common agreement amongst authors that collaboration and coordination on a supply chain is essential for industry performance. The discussion section includes a detailed analysis of this literature grid and is presented in two structures. The first structure is a table quantifying the number of times each concept is inscribed and discussed by the different authors and the years in which they published their work. The second structure is a bar chart displaying the number of times a concept's inscriptive discussion was on the literature as on the grid provided. All these tools are mainly to ensure that this research serves its objectives and that the conceptual model for secondary co-operative development is best described and substantiated. On the following section is also a complete table presenting the common challenges encountered in various continents with regards to the co-operative movement. The section which follows is also a discussion of the secondary co-operative's implications on the sewing co-operatives fabric supply and improving operational performance through cooperation among co-operatives as already presented on the literature review as inter-cooperation of co-operatives. In addition to all other components of the discussion section is simple co-operative development project structure which could be adopted by practitioners which aim to initiate projects aimed at developing secondary co-operatives in their communities.

4. Discussion of the Model's Implication to Sewing Co-operatives Movement

The model for secondary co-operative development suggested on this paper identifies key links which show that in the context of co-operative these enterprises are dependent on one another, a secondary co-operative is dependent on primary co-operatives and these co-operatives on their individual members, therefore this dependency relationship should be well governed by internal structure of a the primary and secondary co-operative (Kumari & Malhotra, 2016). In order for a secondary co-operative to gain trust it has to serve and stick to it primary purpose of existence unless that is changed by members through vote or any other democratic participation (Davis, 2016). A primary purpose of a co-operative established to be a supplier is to provide reasonable quality, benefit member co-operatives in terms of

profit distribution and also by delivering affordable inputs (fabric) in order to deliver affordable products (garments) to corporate buyers or government buyers (Nieman & Fouche, 1999). The problem that the model of this research seeks to address is that of limited suppliers which also have the undue control of the fabric supply market. The inter-co-operative supply chain of fabric based on the suggested model, will create opportunities for co-operative members, primary co-operatives and also add value to the production processes of co-operatives through efficiency (Lewandowski, 2014:16). Based on the theoretical model of this research study the literature review grid is quantified on the table which follows as is required to substantiate the relevance of the topic and objectives of this research and further after the quantification of the literature grid provided is the sample proposal steps in developing a secondary co-operative and which is a major contribution of this research.

Table: 1 Analysis of Literature Concepts on Secondary Co-operative Establishment

Co-operative Concepts – as on Literature Grid [Research Method Section]	Number of times authors address the co-operative enterprise concepts	Year(s) in which topics were published as on the Literature Grid [Research Methodology Section]
Co-operative, Skills Transfer & Employment	17	2008, 2010, 2012, 2013, 2014, 2015, 2016 & 2017
Facility Sharing & Industry Cooperation	11	2004, 2012, 2013, 2014, 2015 & 2016
Garment Manufacturing & Quantities of Output	5	2004, 2010, 2012, 2014 & 2017
Fabric Supply, Textile Production & Supply Chain Management	7	2010, 2013 & 2014
Coordination, Co-operative Supplier & Collaboration	20	2004, 2010, 2012, 2013, 2014, 2015, 2016 & 2017
Manufacturing Excellence & Competitive Advantage	6	2008, 2010, 2012, 2013, 2014 & 2016
Globalisation	5	2004, 2013, 2014 & 2015

The dominant concepts in the research on co-operatives based on the above tabulation is coordination, collaboration and co-operative supplier, which supports the notion of this study which is that through coordinated collaboration and organizing the co-operative sector into secondary co-operatives can benefit the movement of manufacturing co-operatives. Co-operative and skills transfer are other dominating concepts which represent co-operativism and the growing promotion of social inclusive economies and the growing research interest on the area of equitable industrial economies. A further analytical discussion is provided based on the graphical representation below.

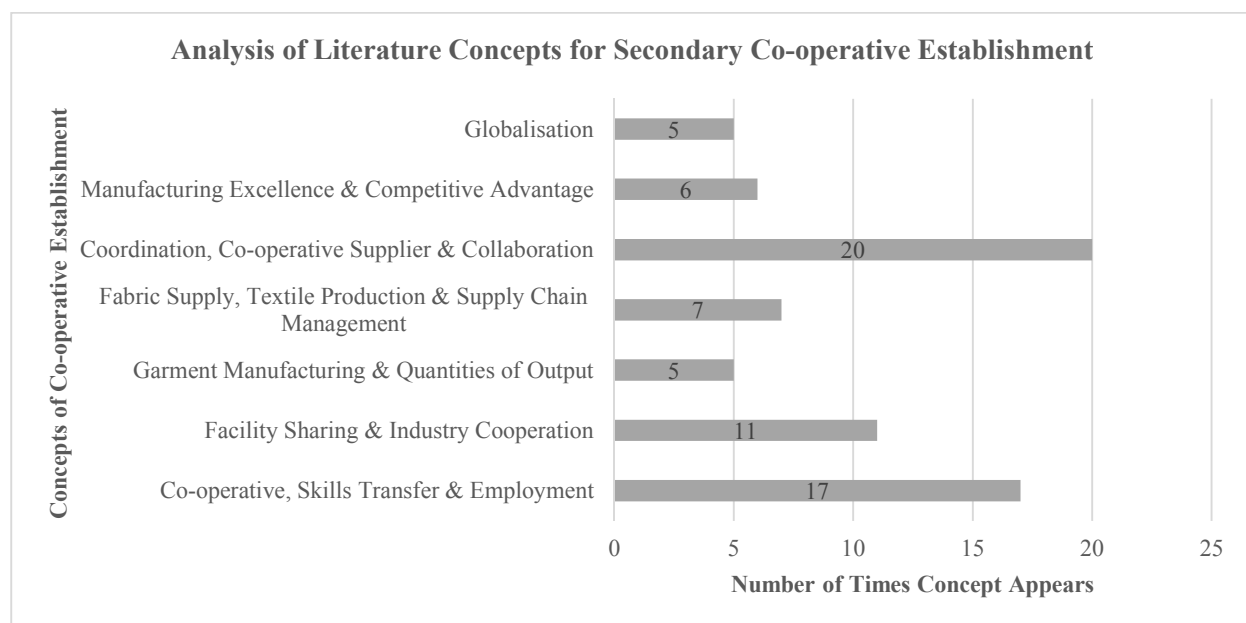


Figure: 2 Concept Analysis of Literature for Secondary Co-operative Establishment (Research Methodology Section)

Globalisation of co-operatives is not yet a popular trend amongst the researchers on production co-operatives based on the literature from 2004 to 2017 as referred to on this research paper. The current challenge with globalisation of co-operatives is the threat of demutualization of co-operatives and loss of co-operative values in the process of globalizing a co-operative enterprise. However, authors recognize the crucial role of global co-operative networks in creating access for co-operatives to trade internationally. The literature used on this analysis focuses on fabric supply, textile production and supply chain management which when these topics are combined they appear on the literature seven (7) times. Research on co-operatives places an emphasis on the co-operative movement itself (17 times), Industry cooperation (11 times), Coordination, Collaboration and Co-operative Supplier (20 times). It is essential that resources are made available by government industrial development departments for secondary supply co-operatives to grow and strengthen their co-operative cooperation as already supported by the literature.

4.1 Results and Analysis of Continental Reports on Production Co-operatives and Secondary Co-operatives

The following table shows evidence of the common challenges as identified in the major co-operative reports of large scale economic blocs. The table shows a continent, the title of the report referred to, the name of the institute which compiled the report, the year of compilation and the dominant challenges facing the co-operative movement.

Table: 2 Findings - Major Continental Challenges on Co-operative and Secondary Co-operative Development

Continent / Economic Bloc	Reporting Institute & Report Title	Year	Common Challenges Encountered by Production Co-operatives
United States of America	<i>Dave Grace Associates for United Nations Secretariat</i> Measuring the Size and Scope of the Co-operative Economy: Results of the 2014 Global Census on Co-operatives	2014	<ul style="list-style-type: none"> Ranking lower than the top 10 developed continents and low number of co-operatives in the United States of America. Limited promotion of co-operatives in the United States of America.
Central Asia	<i>Food and Agriculture Organisation of the United Nations</i> Co-operative Development in Central Asia	2013	<ul style="list-style-type: none"> Slow development due to underdeveloped market channels (Agricultural co-operatives). Government interference in allocation of credits and financial support leading to inefficiency and rampant corruption. Limited access to information and challenges with purchase of farm machinery and equipment.
Africa	<i>Cooperatives Europe</i> Building Inclusive Enterprises in Africa: Cooperative Case Studies	2015	<ul style="list-style-type: none"> Lack of access to finance and credit facilities. Poor access to markets and lack of strong cooperation among co-operatives Lack of sound policy and legal environments.
Australia	<i>Australian Centre for Philanthropy and Non-Profit Studies</i> Australian Cooperative Data, Research, Reports and Links	2010	<ul style="list-style-type: none"> Loss of members in co-operatives. Co-operatives used by government to escape bailing out private companies confronted by financial difficulties.
South America	<i>Brazilian Cooperative Organisation</i> Brazilian Cooperative Movement - OCB	2009	<ul style="list-style-type: none"> Need to grow exports of co-operatives production – there is a decline on some of the exports. Bankruptcy of production co-operatives leading to re-establishment of worker co-operatives.
Europe	<i>Cooperatives Europe</i> The Power of Cooperation: Cooperatives Europe Key Figures	2015	<ul style="list-style-type: none"> Stringent co-operative regulation, which is costly for small co-operatives to comply.

The distribution of the above analysis in years is from 2009 to 2015, which was a period of global recovery from the 2008 recession. The co-operatives movement in the United States of America did not show any growth based on the report used here whilst other continents have advanced their co-operative movements. The following section is a

simplified structure which illustrates steps in a project aimed to develop a cooperation within co-operatives which could lead into a secondary type of a co-operative enterprise.

4.2 Practical Pilot Project: Experimenting with the Secondary Co-operative Model

This paper reflects on the practical work undertaken by the researchers to explore the model through a community based project and initiative focusing on developing a secondary sewing co-operative which would address market access for primary co-operatives, facilitate training, coordinate the sharing of resources and promote cooperation among cooperatives.

ACTIVITY	PARTNER ORGANISATION	TIME FRAME	STATUS
PHASE 1: APPLIED TRAINING			
First Meeting with Cooperatives for Full Project Presentation and Joint Consultation	Strategic Organisations working with enterprise and production capacity development	Months Or Years	The state of completion and progress on the components of this phase
Training Stage 1: (Production, Quality Management, Process Management & Facility Management)			
Training Stage 2: Practical Training at the Cooperative			
Inspection Stage 1: Site Visit			
Applied Training: Co-operative Production Facility			
Measuring Impact: Based on reports			
PHASE 2: MASS MANUFACTURING & SHARED FACILITY IMPLEMENTATION			
Joint Consultation of Cooperatives: Finalise search for facility and consult cooperatives	Strategic Organisations working with enterprise and production capacity development (Potential Funders)	Months Or Years	The state of completion and progress on the components of this phase
Establishment of a Secondary Sewing Cooperative and setting up of production facility			
Resume pilot production from the shared production facility and intensify training of management and production teams			
Resume full production and training of unskilled sewing cooperatives			
Measure the impact			
PHASE 3: EXIT STRATEGY LEVEL			
Investigate problem areas and intervene	Strategic Organisations working with enterprise and production capacity development (Potential Corporate Buyers)	Months Or Years	The state of completion and progress on the components of this phase
Engage cooperatives on the proposed exit strategy of the Project for it to be independent.			
Measure the full impact of the project			
Implement Exit Strategy and Monitoring			

This above table shows that for a project of developing a co-operative movement funding is required and selecting a small group of co-operatives to participate is a must. The project should also be organised into phases and also take into consideration that not all members of a co-operative are well educated on complex production methods and even co-operative governance models such as a secondary co-operative strategy. Constant consultation with different stakeholders plays a vital role on the period the project would last for and the exit strategy of the project leaders. The following section is a presentation of a conclusion, recommendations and suggestions for future research.

5. Conclusion

This paper reminds the academic community in the fields of engineering of the role that collaboration can play in building productive capacity in small and medium manufacturing enterprises. The literature used on this paper is recent but also shows that there is a growing interest in supporting social enterprises making products for their communities and done by the same community members. Although private sector still creates the most economic opportunities and other trade initiatives, it is worth noting that the resilience of co-operatives is rather better than that of investor owned firms which commonly resort to retrenchment and restructuring during unfavorable economic times, unlike manufacturing co-operatives where worker-members are able to renegotiate their own salaries and share schemes to save both the co-operative, employment and retain buyers. The global challenges which humanity faces today also requires enterprises which are more humanistic in their approach to wealth creation, consumption of natural resources and ensuring equitable participation of most people in the economy, and this can be achieved through co-operatives. Private companies had been able for centuries to run the clothing manufacturing sector. However, the working conditions in the clothing manufacturing factories are devastating especially in Asia. These conditions include the payment of low salaries, working long hours, child labour and unsafe working conditions, this kind of a problem could be solved if skilled individuals organised themselves into worker co-operatives for production purposes but also secondary co-operatives to solicit training, education and also create market access. A secondary co-operative role is such that the primary co-operatives and their members will put in resources which can be shared by the members of the secondary co-operative to advance their communities and protect their own people from any potential exploitation associated with production in the textile sector, also a secondary co-operative can assist its member co-operatives to handle economic challenges associated with the continental problems indicated on section 4. The key recommendations are described on the following section.

5.1 Key Recommendations

It is recommended that technical researchers in the field of operations management reserve time to conduct research on manufacturing social enterprises as part of their community engagement. Although this might not be seen as a profitable exercise, it will benefit ordinary people. It is also recommended for African scholars of engineering to invest time in studying supply chains of co-operative enterprises as these are enterprises bringing development to rural communities and providing inputs for established private industries. In summary this research recommends the following:

- Government intervention to co-operative development should not interfere with the independence of production co-operatives and the co-operative movement at large.
- Education for co-operative movements should be designed to address the need for cooperation amongst co-operatives.
- The governance of secondary co-operatives should embrace transparency and focus on creating market access, create a resource pool for primary co-operatives which are members and invest in training its members on production efficiency, quality and distribution.

The last part of this paper gives an idea and direction which future research should take in the area of advancing the co-operative movement through cooperation.

5.2 Focus of future research

This study was limited only to focusing on sewing co-operatives and this study was selective of clothing co-operatives and literature reviewed. Therefore, an empirical study which would extend, develop further and test the suggested model is recommended as well as the testing of the pilot project plan for the development of a secondary co-operative.

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