

*Full Length Research*

# Supply chain management on project profitability a case study of Teuscher investment project in Rwanda.

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The purpose of this study was to examine the adoption of the Supply Chain Management on the project profitability: A case study of Teuscher investment project in Rwanda. The study employed descriptive design. Pre-tested questionnaires, interviews, focus group discussions, questionnaires were administered to the selected respondents through drop and pick later technique in a period of six months. A sample size of 50 respondents was drawn from the sample frame using simple random sampling technique. Data were entered in SPSS statistic version 16, cleaned and sorted and then analyzed into descriptive statistics that included frequencies, percentages that was presented in tables, charts and histograms. There was inferential statistics carried out to determine levels of statistical significance using chi square. Despite all the interventions, in Rwanda, there is limited information/data available on the effect of supply chain on product profitability, up-to-date information on challenges and if it serves as a driving force for agriculture project to be more profitable in international market. The result indicated that majority 64% of the respondents were male and 36% were female while 54% of the respondents were degree holders, 24% diploma, 6% postgraduate and 16% certificate and below This difference may be due to the nature, employment policy of the work which involves dealing with machines, skills, knowledgeable and carrying heavy loads which females and low levels of education may not prefer doing or employed. Most of respondents were from department, 46% from production department, 52% worked with the company between 1-5years implying that they have worked for a reasonable period to know about supply chain management, coffee production of and the profitability. On supply chain management systems 76% of the respondents agreed that was used in Teuscher Investment, 84% agreed its contribution to the profitability of a company with 28% selected ERP system as very efficient 44% it reduces the chances of human error, shorter planning times and faster inventory turnover. There is a strong positive correlation between supply chain management and profitability since  $r = 0.914^*$  and significant level = 0.01 meaning that when supply chain management is effective profits will increase. In conclusion SCM system used in Teuscher Investment is ERP system that was an effective realistic and flexible SCM system and had significant benefit for any business when implemented well the main challenges were maintenance, implementation costs and selected training costs. Teuscher Investment should try and improve on supply chain management to meet its set vision, mission and objectives, respond quickly to changes in demand and determine accurate customer delivery dates, partnerships and reduction of long supply chains, putting suggestion boxes for the organization and do more networking and advertising of their products.

**Keywords:** Profitability, Price, Coffee, Management, Supply chain, Rwanda

## INTRODUCTION

Coffee is the biggest foreign currency earner in Rwanda, in some years accounting for over 70 % of all exports (Schluter et al., 2001). Around 470, 000 small holders grow coffee in Rwanda on approximately 37, 000 hectares. Since 1992, production and quality of coffee have been adversely affected as a result of war and the subsequent abandonment of coffee areas Kaplinsky, (2004). Production is currently approximately at 16,040 tons, down from 97,000 tons in 2002 Murekezi, (2003); OCIR Cafe, (2015). In order to be competitive in the world market, many exporting companies including the coffee industry in Rwanda have to meet the challenges and demands posed by the current global trading environment. The history of coffee in Rwanda dates back to 1905 when German missionaries introduced coffee plantations in the highlands Murekezi, (2009); Cavallari, *et al.*, (2017). Since early 1920s, the country became an exporter of semi-washed bourbon Arabica coffee. The colonial authorities enhanced its production through intensive extension services and by 1927 it became mandatory to farm coffee in Rwanda Chopra, and Meindl, (2007); Goff, (2006).

According to (Lin and Tsai 2011), the question is how these companies can use their competitive advantage in the global supply chain to run their global market operations. Globalization has restructured the business world and introduced the concept of a global supply chain; a global supply chain consists of companies networking and outsourcing all over the world Eskola, (2005); Jin, and Kang, (2013). In a global supply chain, outsourcing has brought the promise of better margins and has become big business. There are several reasons for doing outsourcing. Outsourcing is a popular strategy for many industries to reduce production costs and enable the industries to focus on core competition MacDonald, (2007). The reasons can be grouped into five areas: financial, technology, resource management, managerial and personal Castro, *et al.*, (2013); Webber, and Labaste, (2009). Profitability is the ability of a business to earn a profit. A profit is what is left of the revenue a business generates after it pays all expenses directly related to the generation of the revenue, such as producing a product, and other expenses related to the conduct of the business activities Lysons, and Farrington, (2016).

Many organizations have begun to recognize that supply chain management is the key to building sustainable competitive edge for their products and services hence enhancing the profitability of Rwandan coffee in effective way in international market. In the current global market, industries have to plan and design an effective supply chain, either upstream or downstream so that to satisfy customers in effective way. In current global terms, supply chain management

is now better known as global supply chain management and involves the fundamental balancing of supply and demand on a global basis Weinberger, and Lumpkin, (2007). According to Meyr, and Rohde, (2015), global supply chains are a source of competitive advantage. An effective supply chain provides opportunities to create competitive advantage and lead to agricultural projects to be more profitable Vurro, *et al.*, (2009); Planning, A. (2013). The effective management of a supply chain is measured by the decline in lead time, decline of raw material, improved product quality and efficiency which affect the company and business profitability Johnson, (2005); Kaplan, (2007). According to Kaplinsky, (2004); Kleindorfer, (2005), business enterprises now focus on supply chain management to improve quality and lead-time. Rwandan coffee is not more profitable in a global free trade market. This is because of their low level of competitiveness, high transportation costs. In order to meet the challenges that Rwandan coffee is facing of an accelerated global economy, supply chains have become a key component to Rwandan coffee to be more profitable in international market Since many coffee exporters come from developing countries, the profits generated by the coffee industry helps to facilitate the distribution of wealth from middle and high-income countries to developing countries. In addition, coffee exports also play a vital role in servicing foreign debt (Boudreaux, (2007); Nestle, (2004). This area of globalization, the concept and implementation of a supply chain is an integral component of industrial activity. The supply chain concept and its mechanism has been a part of industrial activity for some time now for agricultural projects Petit, (2007). Coffee industry in Rwanda, like all industries cannot function effectively and be more profitable without effective supply chain management for coffee, the chain is usually complicated and differs from country to country but in general it includes: growers, intermediaries, processors, government agencies, exporters, dealers/brokers, roasters and retailers Murekezi, (2003). However, as O'brien, (2015) state there are constraints that affect developing countries from achieving global supply chain competitive advantage and these constraints are lack of infrastructure such as transportation, communication, skillful labor and technology utilities and the equipment. By setting up a supply chain, a company will be able to establish itself as a global industry with a worldwide distribution network. It is on the above back ground that the researcher was interested to carry out this study in order to find out whether supply chain in Rwanda well implemented can affect positively the profitability of agriculture projects hence gaining a competitive advantage in the market place taking Teuscher Investment project as case study.

## METHODOLOGY

A cross-sectional survey was conducted, based on the 2014 census of Teuscher Investment limited, total number of workers was 98 in three months in the period of 2016-2017 and using a simplified process of determining the sample size for a finite population, Krejcie and Morgan (1970) table, the ultimate sample size was determined to be 50 respondents. A total number of workers were 98 and using a simplified process of determining the sample size for a finite population 50 workers were randomly selected using systematic random sampling method at Teuscher Investment Company located in Kicukiro-Kigali town. The data were collected, cleaned, sorted and entered into excel spread sheets and analyzed in (SPSS, 16 versions)

## RESULTS

This result contains presentation, analysis and discussion of findings using the objectives under this study. The study examines supply chain management and profitability of agricultural projects in Rwanda.

### Descriptive statistics

The descriptive statistics shows the personal information of the respondent which includes gender of the respondents, education level, age of the respondents, department of the respondents and duration worked in the company.

### Gender of respondents

**Table 1:** Showing gender of respondents

Gender	Frequency	Percentage
Male	32	64
Female	18	36
<b>Total</b>	<b>50</b>	<b>100</b>

**Source:** primary data

Results in Table 1 indicate that, 64% of the respondents were male and 36% were female. Majority of the respondents were male. This shows that more males were employed in Teuscher Investment Project than female because of the nature of the work which involves dealing with machines and carrying heavy loads which females may not prefer doing this is in agreement

with the report by Hill, and Vigneri, (2014); Kagira, *et al.*, (2012).

### Education level of the respondents

Results in Table 2 indicate that, 54% of the respondents were degree holders, 24% diploma, 6% postgraduate and 16% certificate and below. Majority of the respondents were degree holders. This shows that employment policy requires that the staff should be at least degree holders who are knowledgeable and have the skills to help management achieve the desired vision, mission and objective of the organization.

### Age distribution of the respondents

Results in the Table 3 indicate that, 16% of the respondents fall under the age of 41-50, 30% belonged to the age group 31-40, 36% fall under the age of 26-30 years, 8% were above 50 years and 5% were under 26 years. Majority of the respondents belong to the age group 26-30. Implying that the company has energetic and responsible employees who carry out their work effectively and understand supply chain management as supported by the research by Planning, A. (2013).

### Department

Results in Figure 1 indicate that, 12% of the respondents were from finance department, 28% from management department, 46% from production department this may be due to heavy, hard work needed within the company, 6% from purchasing department and 8% from stores department. This agrees with the report by Webber, and Labaste, (2009). Majority of the respondents were from production department. This shows that more people are employed in production of coffee.

### Duration worked in the Company

Results in Table 4 indicate that, 28% of the respondents have worked between 5-10 years, 52% between 1-5 years and 20% of the respondents have worked for less than 1 year. Majority of the respondents have worked between 1-3 years, implying that they have worked with the company for a reasonable period may be to maintain the experienced, skilled, reduce on employment expenditures, trainings for new workers and to know about supply chain management and the profitability of Teuscher Investment Project this is in agreement with report by Reynolds, *et al.*, (2007).

**Table 2:** Education level of the respondents

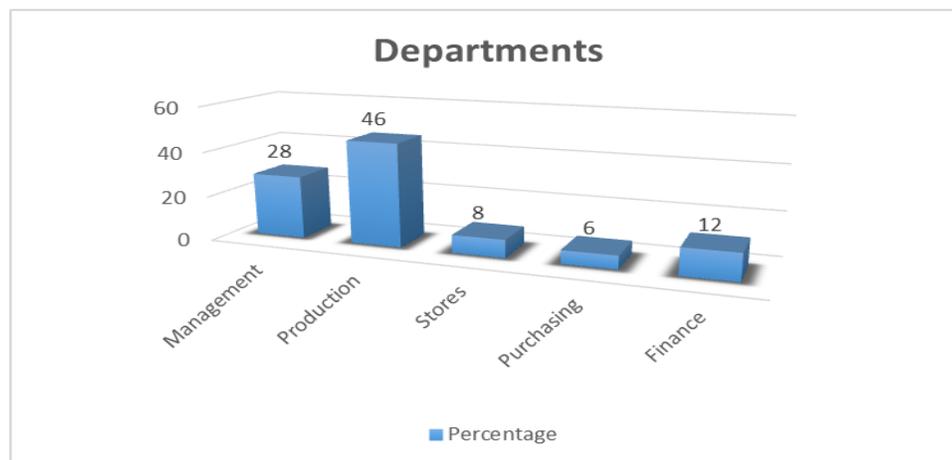
Education level	Frequency	Percentage
Certificate and below	8	16
Diploma	12	24
Degree	27	54
Post graduate	3	6
Total	50	100%

Source: primary data

**Table 3:** Showing the age distribution of the respondents

Age	Frequency	Percentage
Under 26 years	5	10
26-30 years	18	36
31-40 years	15	30
41-50 years	8	16
Above 50 years	4	8
Total	50	100%

Source: primary data

**Figure 1:** Showing departments (Source: primary data)**Table 4:** Showing Duration worked in the Company

Duration	Frequency	Percentage
Less than 1 year	10	20
1-5years	26	52
5-10years	14	28
Total	50	100%

Source: primary data

Results in Table 5 indicate that, 76% of the respondents agreed that supply chain management systems were used in Teuscher Investment and 24%

disagreed. Majority of the respondents agreed. This shows that supply chain management systems are a competitive strategy for integrating suppliers and

**Table 5:** showing response on the presence of Supply Chain Management Systems

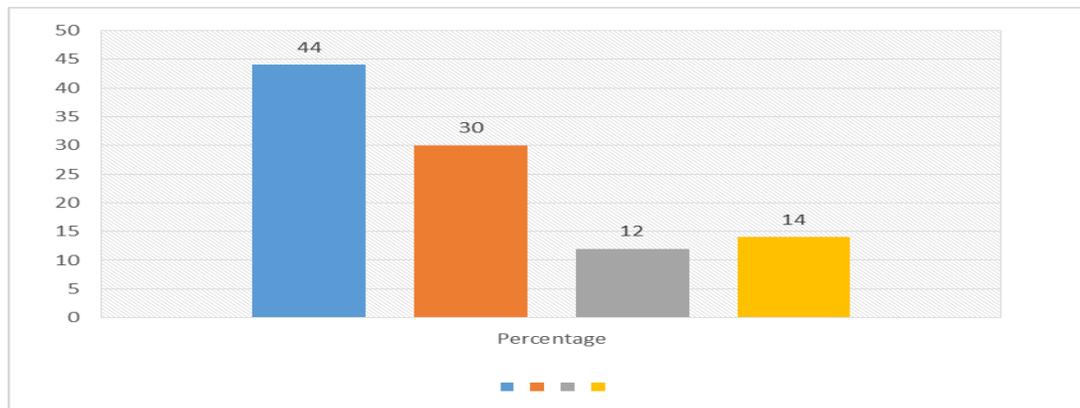
Response	frequency	percentage
Yes	38	76%
No	12	24%
<b>Total</b>	<b>50</b>	<b>100%</b>

Source: primary data

**Table 6:** Table Showing the Supply Chain Management systems used Teuscher Investment

Supply chain management systems	Frequency	Percentage
ERP Systems	14	28
Advanced planning and Scheduling systems	10	20
Ware house management system	6	12
Quality Management system	3	6
Manufacturing Execution System	12	24
MRP system	4	8
Vendor managed system	1	2
<b>Total</b>	<b>50</b>	<b>100%</b>

Source: primary data



**Figure 2:** Showing Performance of Supply Chain Management systems

customers. Although 28% disagreed it cannot overturn the outcome because the majority have said yes this is also as reported by Petit, (2007).

The results in table 6 indicated that 28% selected ERP system, 2% selected Vendor Managed Systems. Majority of the respondents selected ERP system. This shows that ERP system is very efficient. It is used to automate and integrate business processes, share data and practices across the organization the population in this study was limited to the employees of Teuscher Investment Project that was all 98 workers. And the total number of the population understudy was 50 employees of Teuscher Investment Project as case study. It has resulted into potential benefits such as

declines in inventory, reduction in working capital and abundant information on customer needs, produce and access to real time information. This is in agreement with MacDonald, K. (2007); Smith, and Xiao, H. (2008) that ERP systems result in potential benefits such as declines in inventory, reduction in working capital and abundant information on customer needs.

**Performance of Supply Chain Management systems**

Results in the Figure 2 indicate that, 44% of the respondents agreed that the performance of the SCM system was very good, 30% indicated good, 12%

**Table 7:** Table showing the Responses on Challenges in implementing the Supply Chain Management systems

Responses	Frequency	Percentage
Yes	25	50%
Not sure	14	28%
No	11	22%
Total	50	100%

**Source:** primary data

indicated poor and 14% indicated very poor. Majority of the respondents agreed that the performance of the supply chain management system was very good. This shows that the performance of Supply Chain Management systems is very good it reduces the chances of human error, shorter planning times and faster inventory turnover. This is in agreement with Soosay, and Sloan, (2005), that supplies chain management system leads to first inventory turnover.

### **Responses on Challenges in implementing the Supply Chain Management systems**

Results in Table 7 indicate that, 50% of the respondents accepted the company faced challenges in implementing the Supply Chain Management system, 28% were not sure and 22% did not accept. Majority agreed that the company faced challenges in implementing the Supply Chain Management system. This means there are challenges faced in implementing the Supply Chain Management system.

#### **The Challenges Faced by the Company.**

Results in Figure 3 indicate that, 44% of the respondents selected maintenance and implementation costs, 32% selected training costs and 24% selected others. Majority of the respondents selected maintenance and implementation costs as a challenge faced when implementing SCM system. This means that maintenance and implementation costs hinder organization to implement SCM systems due to fear of incurring costs and some organizations cannot afford. This is in agreement with Lambert, *et al.*, (1998), Kleindorfer, and Saad, (2005) that Excessive rigidity, high implementation costs and inflexibility are challenges of implementing SCM systems. There are difficulties in maintaining SCM systems like ERP system especially when customization is involved Webber, and Labaste, (2009) the maintaining costs are high. According to Barrett, *et al.*, (2012) an upgrade cost can amount to 25% to 33% of the initial ERP implementation. ERP has

been criticized for being too expensive to implement as such only large organizations with deep pockets were able to afford ERP systems with cloud computing.

#### **Response on supply chain management system increasing productivity**

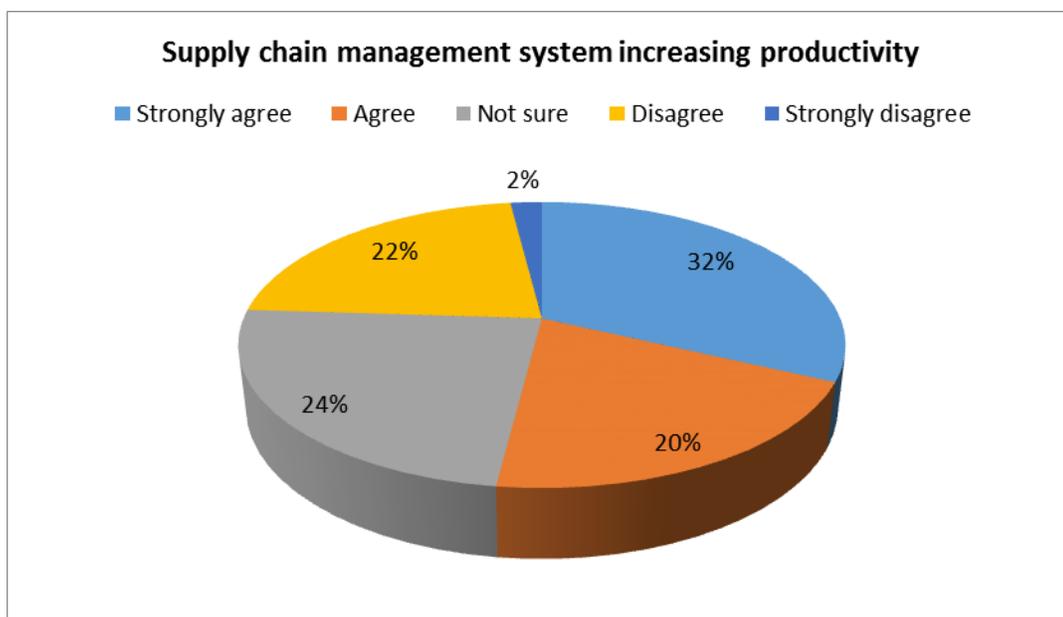
Results in Figure 4 indicate that, 20% of the respondents agreed that supply chain management system increases productivity, 32% strongly agreed, 24% were not sure, 22% disagreed and 2% strongly disagreed. Majority of the respondent strongly agreed supply chain management system increases productivity. This shows that a fine tuned and flexible SCM system leads to greater productivity and reduces inventory. This is in agreement with (Webber, and Labaste, (2009) that efficient systems lead to greater productivity, lower cost and reduced inventory shorter planning times and maintaining delivery schedules. Also, Webber, and Labaste, (2009) say that supply chain management system like ERP system enhances efficiency and productivity of a firm.

Results in table 8 indicate that, 84% of the respondents agreed supply chain management contributed to the profitability of a company and 16% disagreed. Majority agreed SCM contributed to the profitability of a company. This means that a supply chain that consists of all parties involved in providing goods and services and meets the customers' requests aim to maximize the value generated and a more profitable outcome. Martin Christopher and Aiello, (2016) says that the focus of SCM is upon the management of relationships in order to achieve a more profitable outcome for all parties in the chain.

Results in table 9 show that there is a strong positive correlation between supply chain management and profitability since  $r = 0.914^*$  and significant level = 0.01. This shows that there is a positive relationship between supply chain management and profitability meaning that when supply chain management is effective profits will increase this was in support by the report by Tobias, *et al.*, (2013).



**Figure 3:** Figure showing the challenges faced by the company.



**Figure 4:** Supply Chain Management System Increasing Productivity

**Table 8:** Showing contribution of supply management to the profitability of the company

Response on the contribution	Frequency	Percent
Yes	42	84.0
No	8	16.0
Total	50	100.0

**Source:** Primary data

**Table 9:** Showing the relationship between supply chain management and profitability

			Supply management	chain	Profitability
Supply management	chain	Pearson Correlation	1		0.914
		Sig. (2-tailed)	50		0.000
		N			50
Profitability		Pearson Correlation	0.914		1
		Sig. (2-tailed)	0.0000		50
		N	50		

Correlation is significant at the 0.01 level (2-tailed).

## Summary of the Findings

### *To identify supply chain management systems used in Teuscher Investment Project*

The study found out that supply chain management system contributes on the profitability of the company. An effective realistic and flexible SCM system has significant benefit for any business maintains delivery schedules and increases productivity. That is ERP systems is used in Teuscher Investment and ensures that right materials are in the right place at the right time and in the correct amount. Supply chain management system ensures materials are available for production and products are available for delivery to customers and there are challenges faced when implementing supply chain management system.

### *To examine the challenges faced by Teuscher Investment Project in supply chain of coffee in Rwanda*

Results indicate that, 44% of the respondents selected maintenance and implementation costs, 32% selected training costs and 24% selected others. Majority of the respondents selected maintenance and implementation costs as a challenge faced when implementing SCM system. This means that maintenance and implementation costs hinder organization to implement SCM systems due to fear of incurring costs and some organizations cannot afford. This is in agreement with Li, L. (2007); Soosay, and Sloan, (2005) that Excessive rigidity, high implementation costs and inflexibility are challenges of implementing SCM systems. There are difficulties in maintaining SCM systems like ERP system especially when customization is involved (Sodhi, and Tang, (2011). The maintaining costs are high. According to Tsige, Z. (2013) an upgrade cost can amount to 25% to 33% of the initial ERP implementation. ERP has been criticized for being too expensive to implement as such

only large organizations with deep pockets are able to afford ERP systems with cloud computing.

### *To establish to what extent supply chain influence the profitability of Teuscher Investment Project in Rwanda*

On the relationship between Supply Chain Management and profitability it was seen that there is a positive relationship established between the variables under study using SPSS/Excel. This implies that higher the supply chain efficiency and successful the chain, the higher the profitability and value of stocks along the chain therefore the performance indicators of supply chain management affect the profitability of any organization.

## CONCLUSION

In view of the findings, the SCM system used in Teuscher Investment is ERP system. It is an effective realistic and flexible SCM system which has significant benefit for any business when implemented well. Supply chain management system ensures materials are available for production; products are available for delivery to customers. Supply chain management system maintains delivery schedule and increases productivity though there are challenges faced on implementing them. On the relationship between profitability and supply chain management these two variables, it is concluded that profitability of Teuscher Investment Project depends on supply chain management.

## RECOMMENDATIONS

### *Supply chain management systems*

Teuscher Investment should try and improve on supply chain management in order to meet its set vision,

mission and objectives. These can be done by using flexible and effective supply chain systems, respond quickly to changes in demand and determine accurate customer delivery dates, partnerships and reduction of long supply chains improving the quality of their products and putting suggestion boxes for the organization and for the clients which will help in making corrections where necessary and improvements where specified.

### **On profitability**

Teuscher Investment as a manufacturing company should do more networking and advertising of their products, boost their productivity, review their offers and manage their costs the costs will therefore reduce and the company will not charge highly this will attract customers hence increasing the profitability levels. Also, top management should be committed and have the right skills to recognize and implement supply chain management system; supplier development and improved customer service hence increase in profits.

### **Relationship between Supply Chain Management and profitability**

Teuscher Investment should improve on the weaker areas identified to be the major causes of ineffectiveness and poor performance in carrying out their activities in order to strengthen their relationship between supply chain management and profitability.

### **Compliance with ethical standards**

#### **Conflict of Interest**

We certify that there is no conflict of interest whatsoever in this publication. Open Access this article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

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### **REFERENCE**

- Aiello, L., Dulaskaia, I., and Menshikova, M. (2016). Supply chain management and the role of ICT: DART-SCM perspective. In *Information and Communication Technologies in Organizations and Society* (pp. 161-176). Springer, Cham.
- Barrett, C. B., Bachke, M. E., Bellemare, M. F., Michelson, H. C., Narayanan, S., and Walker, T. F. (2012). Smallholder participation in contract farming: comparative evidence from five countries. *World Development*, 40(4), 715-730.
- Boudreaux, K. (2007). State power, entrepreneurship, and coffee: the Rwandan experience.
- Castro, L. M., Calvas, B., Hildebrandt, P., and Knoke, T. (2013). Avoiding the loss of shade coffee plantations: how to derive conservation payments for risk-averse land-users. *Agroforestry systems*, 87(2), 331-347.
- Cavallari, M., Tornieri, F., and De Marco, M. (2017, May). Organizational Impact on Software Development of eServices Techniques. In *International Conference on Exploring Services Science* (pp. 64-75). Springer, Cham. chains. In *Gender in Agriculture* (pp. 315-341). Springer Netherlands.
- Chopra, S., and Meindl, P. (2007). Supply chain management. Strategy, planning and operation. *Das summa summarum des management*, 265-275.
- Donovan, J., and Poole, N. (2014). Changing asset endowments and smallholder participation in higher value markets: evidence from certified coffee producers in Nicaragua. *Food Policy*, 44, 113.
- Eskola, E. (2005). *Agricultural marketing and supply chain management in Tanzania: A case study* (Vol. 16). Dar es Salaam: Economic and Social Research Foundation. *Et. Al*, (2015)
- Goff S. (2006). International partnership for the development of specialty coffee sector in Rwanda, *Texas A and M University*, AIAEE 22nd Annual Conference Proceedings paper, Florida, USA
- Hill, R. V., and Vigneri, M. (2014). Mainstreaming gender sensitivity in cash crop market supply
- Jin, B., and Kang, J. H. (2013). Antecedents and outcomes of global sourcing and information technology in the US apparel supply chain. *Journal of the Textile Institute*, 104(1), 57-66.
- Johnson, M. E. 2005. Technology, globalization and policy at cross-roads. Retrieved March 14, 2006.
- Kagira, E. K., Kimani, S. W., and Githii, K. S. (2012). Sustainable methods of addressing challenges facing small holder tea sector in Kenya: A supply

- chain management approach. *Journal of Management and Sustainability*, 2(2), 75.
- Kaplan, M. (2007). Fijian water in Fiji and New York: Local politics and a global commodity. *Cultural Anthropology*, 22(4), 685-706.
- Kleindorfer, P. R., and Saad, G. H. (2005). Managing disruption risks in supply chains. *Production and operations management*, 14(1), 53-68.
- Lambert, D. M., Cooper, M. C., and Pagh, J. D. (1998). Supply chain management: implementation issues and research opportunities. *The international journal of logistics management*, 9(2), 1-20.
- Li, L. (2007). *Supply chain management: Concepts, techniques and practices: Enhancing value through collaboration*. World Scientific Publishing Co Inc.
- Lin, C. T., Chen, C. B., and Ting, Y. C. (2011). An ERP model for supplier selection in electronics industry. *Expert Systems with Applications*, 38(3), 1760-1765.
- Lysons, K., and Farrington, B. (2016). *Procurement and Supply Chain Management*. Pearson Higher Ed.
- MacDonald, K. (2007). Globalising justice within coffee supply chains? Fair Trade, Starbucks and the transformation of supply chain governance. *Third World Quarterly*, 28(4), 793-812.
- Meyr, H., Wagner, M., and Rohde, J. (2015). Structure of advanced planning systems. In *Supply chain management and advanced planning* (pp. 99-106). Springer Berlin Heidelberg.
- Morgan and Krejce, 1970 *EducPsycholMeas*, 30, 3, 607-10, Aut'70
- Murekezi, A. K. (2003). Profitability analysis and strategic planning of coffee processing and marketing in Rwanda: A case study of a coffee growers' association. *Unpublished M. Sc. thesis, Michigan State University*.
- Murekezi, A. K. (2009). *Essays on the effects of coffee market reforms, supply chains, and income improvement in Rwanda*. Michigan State University.
- Nunes, R., dos Santos Silva, V. L., Macchione Saes, M. S., de Sousa, R. L., Rübica, N., and de Castro Souza, R. (2013). Incentives to differentiation strategies for Brazilian coffee producers. *Revista de Economia e Administração*, 12(2).
- O'brien, J. (2015). *Category management in purchasing: a strategic approach to maximize business profitability*. Kogan Page Publishers.
- OCIR Café. New Policy for the Development of Coffee Sector in Rwanda. Ministry of Agriculture and Livestock. March 2015.
- Petit, N. (2007). Ethiopia's coffee sector: A bitter or better future?. *Journal of Agrarian Change*, 7(2), 225-263.
- Planning, A. (2013). Dis/articulating producers, markets, and regions: new directions in critical studies of commodity chains. *Environment and Planning A*, 45, 2544-2552.
- Raynolds, L. T., Murray, D., and Heller, A. (2007). Regulating sustainability in the coffee sector: A comparative analysis of third-party environmental and social certification initiatives. *Agriculture and human values*, 24(2), 147-163.
- Schluter, J.E., and A. Finney. "Rehabilitation of Coffee Sector, Rwanda. Development of Washed Processing Within a Framework of Private Investment." Common Fund for Commodities/International Coffee Organization. Mimeo. June 2001.
- Smith, S. L., and Xiao, H. (2008). Culinary tourism supply chains: A preliminary examination. *Journal of travel research*, 46(3), 289-299.
- Sodhi, M. S., and Tang, C. S. (2011). Social enterprises as supply-chain enablers for the poor. *Socio-Economic Planning Sciences*, 45(4), 146-153.
- Soosay, C. A., and Sloan, T. R. (2005). *Driving change: innovative management in distribution centres* (Doctoral dissertation, USA Info Incorporated).
- Tobias, J. M., Mair, J., and Barbosa-Leiker, C. (2013). Toward a theory of transformative entrepreneuring: Poverty reduction and conflict resolution in Rwanda's entrepreneurial coffee sector. *Journal of Business Venturing*, 28(6), 728-742.
- Tsige, Z. (2013). *Determinants of Non-Performing Loans: Empirical Study on Ethiopian Commercial Banks* (Doctoral dissertation, Addis Ababa University Addis Ababa, Ethiopia).
- Vurro, C., Russo, A., and Perrini, F. (2009). Shaping sustainable value chains: Network determinants of supply chain governance models. *Journal of business ethics*, 90, 607-621.
- Webber, C. M., and Labaste, P. (2009). *Building competitiveness in Africa's agriculture: a guide to value chain concepts and applications*. World Bank Publications.
- Weinberger, K., and Lumpkin, T. A. (2007). Diversification into horticulture and poverty reduction: a research agenda. *World Development*, 35(8), 1464-1480.