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**Relationship between ethics and Fair Trade supply chain
organisation and performance: the case of Italian
Alternative Trade Organisations (ATO's)**

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Relationship between ethics and Fair Trade supply chain organisation and performance: the case of Italian Alternative Trade Organisations (ATO's)¹

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Summary

Fair Trade related import from developing countries is quickly growing although it still represents a small share of the total import. Its influence on the development of rural areas in developing countries is related to both quantitative growth and the respect of its ethical code. Large food multi-national companies are increasingly interested in Fair Trade; part of the Fair Trade movement considers the risk of a related loss in the products' identity; others consider the refusal of a more "professional" approach to Fair Trade management as a constraint to its growth. This debate is particularly felt in Italy. The goal of this paper is to evaluate how the most important Italian Fair Trade importers (ATO's) business models influenced their growth strategies; transaction costs analysis and logistics performance indicators were adopted to measure the supply chain coordination efficiency and performance. The results showed that the ATO's growth strategies, and logistics performances, seemed more influenced by their value propositions, than the lack of managerial skill.

KEYWORDS: Fair Trade, Logistics, Alternative Trade Organisations

1. Introduction

The introduction of Fair Trade in the agricultural products international trade can positively influence the developing countries socio-economic conditions. Fair Trade increases the level of welfare and reduces economic and social inequalities (Becchetti L. Costantino M., 2006), (Becchetti L., Paganetto L., 2003), (Ronchi L., 2002), (Castro J.E., 2001). The negative impact for the less competitive countries (e.g. sub-saharian Africa) and producers (small producers in remote rural areas) due to the reduction in agricultural international trade barriers (Conforti P., Velazquez B.E., 2004), (Robbins P., 1999) can also be reduced. Fair trade contributes in fact to the products' differentiation, positively affecting their demand. Promoting a Fair Trade related international agricultural trade is also a way to increase the consumers awareness of their role in defining a more sustainable model of development under many aspects: social, environmental and economic.

2. Background

The consumption of Fair Trade products is quickly growing in the industrialised countries (Krier J-M., 2005 p. 7). The size of this market, and its impact on the rural communities in developing countries, is still quite small. The total Fair Trade sales in 2005, amounted to approximately US\$ 1.4 billion worldwide, a 37 % year-to-year increase over 2004 (FLO, 2006), but a mere 0.01% of the total world trade (US\$ 10,511 billions (WTO, 2006).

¹ The authors jointly prepared this paper; Lorenzo Paluan particularly contributed to paragraphs 2 and 6, Cesare Zanasi particularly contributed to paragraphs 1, 3, 4 and 5.

However, the interest in Fair Trade is growing in large national and trans-national food companies (supermarket chains, fast-food chains among others). It is not a case that the only countries where Fair Trade products (coffee and bananas), gain a significant market share are Switzerland and United Kingdom, where the supermarket chains play a key role in Fair Trade distribution (Krier J-M., 2005 pp. 30-31). As a consequence Fair Trade is facing a “growth crisis” which can be summarised by the debate between the “product certification” supported by FLO (Fairtrade Labelling Organizations International) and its FairTrade Mark, and “organisations certification” supported by IFAT, (International Fair Trade Organizations) and its Fair Trade Organisation Mark. IFAT is critical on the inclusion of supermarket chains and other non specifically Fair Trade oriented organisations in the distribution, unlike FLO which stresses the importance of a relevant quantitative growth of the Fair Trade market size. This debate is particularly strong among the Italian Alternative Trade Organisations (ATO’s) (Liberomondo, 2004), (Commercio Alternativo, 2005). Fair Trade products are “credence goods” and also “merit goods” which heavily rely upon an effective communication, and certification, of the benefits that their consumption generates for the whole of the society. The demand for these products can consequently be affected if a conflict among Fair Trade organisations arises, reducing the consumer trust in the positive externalities for the society related to the Fair Trade. The interaction between market growth and ethics has therefore become a major concern for the Fair Trade movement. This problem is particularly felt in Italy where the size of the World Shops’ distribution channel, strictly connected to IFAT, is still bigger than the Fair Trade distribution through the supermarket chains.

A study from Barbetta G.P. (Barbetta G.P., 2006 p.p13÷19) provides an insight on the main problems the Italian World Shops and Fair Trade importers are facing:

- small economic size;
- relative scarcity of financial and human resources with respect to the range of professional skills required and variety of products sold;
- little transparency in the price formation mechanism and in the supply chain economic and technical relationship;
- need to increase external economies of scale and collaboration between Fair Trade companies, both vertically and horizontally.

The ATO’s (and World Shops) business model deserves a closer examination in order to evaluate the consequences on their economic and ethical sustainability.

Different business solutions have been experimented or discussed in order to guarantee a growth respectful of the Fair Trade principles:

- differentiation in the products’ distribution and marketing strategies between world Shops and supermarket chains. Supermarket chains will be mostly oriented on the quantitative growth, selling Fair Trade food and non food products on a large scale. World Shops should be more involved in the Fair Trade values communication and promotion.
- World Shop specialisation in a selection of few products (e.g. clothes, cosmetics and/or high quality artisan or food) following the traditional retailing specialising path of the last decades.

The respect of the principles of Fair Trade should in any case include, collaboration, transparency, and the promotion of the marginalised rural communities in the developing countries. A good starting point to encourage collaboration and transparency should be the reduction of barriers to the different agents communication. To this end logistics are of paramount importance thanks to their influence on the development of an efficient management of the physical goods and information flows along the supply chain (Pinna, R., 2005: 75). This will positively affect the competitiveness of the supply chain not only in cost reduction terms but also by increasing the product value for the consumer through, among others, an efficient communication of the values differentiating Fair Trade products. A more efficient information flow reduces information asymmetry and the risk of

opportunistic behaviour, supporting the reduction of inequalities in the income distribution along the supply chain, mainly for rural communities. In order to assess the influences of the growth strategies on the development of both the Fair Trade market size and the implementation of its ethical goals, the analysis should then involve an integration of a logistics and supply chain management approach with the transaction cost theory.

3. Objectives

The goal of this paper is to determine how the influence of the ATO's business models on the supply chain management performance (in particular logistics), influenced the growth strategies and potential support to agricultural Fair Trade flows.

4. Data and methodology

The most important Italian ATO's, almost exclusively operating in the Fair Trade market, are analysed. The variables have been collected through the ATO's websites², and by interviewing the ATO's management. The interviews were finalised to collect quantitative and qualitative information on the companies structure, performance, and to an in depth analysis of their strategies, organisation and management. The analysis was carried out in three different steps. In a first part the different degrees of vertical coordination needed by the ATO's, for an efficient supply chain management was assessed. The Hobbs e Young approach to the analysis of the relationship between transaction cost and vertical coordination was considered (Hobbs J. E., Young L.M., 2000).

²<http://www.altromercato.it/> ; <http://www.commercioalternativo.it/> ; <http://www.liberomondo.org/> ; <http://www.equomercato.it/> .

The authors consider that transaction costs are influenced by the level of uncertainty related to the relationship between the characteristics of the products traded and the type of transaction (see scheme 2).

Scheme 2) Relationship between product characteristics and type of transaction

	Transaction characteristics						
	Uncertainty for buyer: quality	Uncertainty for buyer: reliable supply timeliness and quantity	Uncertainty for buyer and seller: price	Uncertainty for seller: finding a buyer	Frequency of transaction	Relationship specific investment	Complexity of transaction (variety of outcomes)
Product Characteristics							
Perishability	V	V		V	V		V
Product differentiation	V	V	V	V		V	V
Quality variable and visible		V	V	V			V
Quality variable and invisible	V	V	V				V
New characteristics of importance to consumers	V	sometimes	V	V		V	V
Regulatory drivers							
Liability	V			V		sometimes	V
Traceability				V		V	V
Technology drivers							
Company -specific technology						V	sometimes

Source (Hobbs J. E., Young L.M., 2000)

Higher uncertainty leads to higher transaction costs and, consequently, to the need of a stronger vertical coordination within the supply chain. This approach can be summarised as follows:

Uncertainty associated to the type of transaction: it is linked to product quality and accessibility in terms of timing, quantity available and price level; level of specialisation of the investments needed to produce and distribute the product, (the higher the specialisation the higher the risk associated to the transaction) frequency of the transaction and its administrative and technical complexity

The uncertainty associated to the transaction is in turn influenced by the products characteristics: perishability, product differentiation, quality variability and visibility, need to trace the product, specific production technologies associated to the product.

Apart from ubiquitous Fair Trade products characteristics, affecting mostly the regulatory drivers, other ATO's structural variables were examined, in order to assess their different levels of vertical coordination need:

- the share of products sold by perishability: fresh food, other food, no-food;
- the turnover by type of distribution channel;
- the number of transactions.

In a second part the ATO's supply chain relationships were analysed in order to evaluate how they correspond to the supply chain coordination level required. The theoretical vertical coordination need was then compared to the actual level of coordination for each ATO. To attain this result the partnership relations along the supply chain were examined by interviewing the ATO's management and from the websites company's presentations.

The results of these first two steps were combined with the ATO's strategic goals analysis and supply chain performance indicators; this allowed appreciating how the ATO's managed to harmonize the consideration of the Fair Trade values with the necessity to compete, and grow, in a market economy. The logistics indicators reported by Vignati (Vignati G., 2002) were considered.

In particular the capacity of the ATO's to efficiently implement an adequate level of coordination was evaluated analysing their customer relationship:

- n. of clients, destinations and deliveries
- orders management in particular the communication technologies adopted for the orders transmission.
- logistics performance indicators; the performance indicators are considered relevant as efficient logistics reduces the risks and costs related to transactions; they increase a company (or supply chain) competitiveness by reducing the costs and increasing the market access. It also affects non monetary aspects like the communication of the company values (e.g. respect for the producers and consumer needs for safety, reliability, punctuality).

The logistics indicators reported in this paper are consequently mainly oriented towards the reliability, efficiency, timeliness and productivity of the internal and external logistics of the ATO's.

1) Delivery Reliability

- A1 stock breaking index: it indicates the frequency with which the demand cannot be satisfied from the stock.
- A2 % of orders fulfilled/ total orders
- A3 % of orders unfulfilled/total orders
- A4 % orders fulfilled with multiple deliveries
- A5: % of orders fulfilled within the customer's requested date (delivery performance to request date)

2) Inventory management performance

- E1 Inventory Turnover by product category : is the ratio of the cost of annual sales to the average inventory level. The higher the inventory turns, the better the firm uses its inventory assets. Measuring the index by products categories allows a better evaluation of the different products supply chain management performances (Cost of Sales / Average Inventory Level)
- E2 Days of supply by products category: n.of days the demand for the different products categories can be satisfied by the existing inventory (Average inventory / cost of a day's sales).
- E3 Use of available warehouses areas and volumes: (e.g. % pallet racks area/ total warehouse area). Indicates the warehouse operative efficiency. E.g. pallet racks can be used from 45-50% up to 90% of the warehouse area and volume. The higher the area covered the higher the space utilisation efficiency (Vignati G., 2002 pp. 232 -233).

3) Order fulfilment timeliness

- T1 Delivery Lead Time: The total time that elapses between an order's placement and the products delivery.
- T2 actual delivery date/ agreed delivery date ratio

4) Warehouse operational efficiency

- P1 Reception operational time (e.g.: handling units³ received/time)
- P2 Placement operational time (e.g.: handling unit placed/time)
- P3 Picking operational time (e.g. n° of daily deliveries; n° of pallets picked and delivered ;)
- P4 Wrapping and Packing operational time
- P5 Vehicle uploading operational time

The Business models structure (business model building blocks) as defined by Osterwalder (Osterwalder A., 2004 p.43) provided a useful tool for organically collect and describe the variables influencing the analysis.

5. Results

First of all the ATO's *value propositions* and *target consumers segments* were examined to provide information on their ethical principles and business strategies.

Value propositions

Fair Trade objectives defined by FINE⁴ are a common value proposition for the ATO's: "Fair Trade is a trading partnership based on dialogue, transparency and respect that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers - especially in the South. Fair Trade organizations (backed by consumers) are engaged actively in supporting producers, awareness raising and in campaigning for changes in the rules and practice of conventional international trade."

The objectives of Fair Trade imply, among others, a progressive reduction of the role of raw material agricultural export as an engine of growth, encouraging local communities' social, environmental and economic development. The products characteristics and services should therefore be designed to meet the expectations of an ethical consumer. Fair Trade "incorporates values in their products" (Becchetti L., 2006)

The ATO's examined include some level of differentiation regarding their approach towards the consumers, affecting the value of the product, in particular

- CTM Altromercato and Commercio Alternativo stress the importance of integrating the ethical principles of solidarity, social and economic justice with a sound management and organisational capacity making Fair Trade companies competitive (Commercio Alternativo, 2007). The growth in the market size, obtained through collaboration with non Fair Trade companies (e.g. supermarket chains) also represents an important strategic difference with the other ATO's.
- Liberomondo and Equomercato are more oriented towards the social and political consequences related to Fair Trade. Equomercato stresses the importance of building a political alternative to the market economy supporting cooperation as opposed to competition and promoting the Fair Trade values through the education of consumers and producers (Equomercato, 2007). Liberomondo, a social cooperative, is more oriented towards the social impact of Fair Trade as a tool to enter the labour market for socially marginalised people both in developing and developed countries and to create an integrated "ethical supply chain". (Liberomondo, 2007). It links the international circuits of Fair Trade to the Italian social economy.

Target customer segments

All sectors of society are represented: students (17%), office workers (16%), housewives (14%) and blue-collar workers (14%); the remaining are managers, professionals, farmers,

³ Handling units: pallet, cartons etc.

⁴ FINE is an informal network that involves the Fair Trade Labelling Organizations International (FLO), the International Federation for Alternative Trade (IFAT), the Network of European Shops (NEWS!) and the European Fair Trade Association (EFTA)

teachers and intellectuals (Musso D. 2004). The profile of the typical Fair Trade consumer is the “ethical” consumer, often engaged in volunteer associations and generally interested in alternative model of consumption; this attitude influences the level of awareness of the social contents of Fair Trade and significantly affects consumption (Becchetti, 2006).

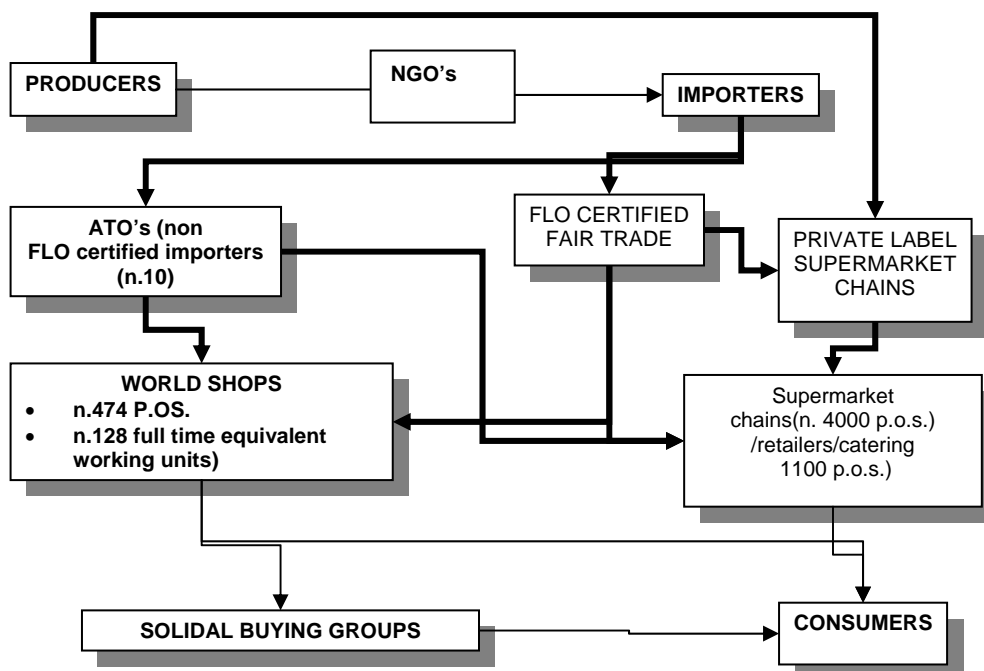
The analysis of the needs for and effectiveness of, vertical coordination along the ATO’s supply chain gave the following results.

Vertical coordination need

Distribution channels

The Italian Fair Trade distribution structure (Scheme 1) is basically defined by two main channels, partially overlapping, mirroring the two different strategic approaches to Fair Trade above examined. At the producers level these differences are not relevant: the producers start up phase is nearly always supported by NGO’s or other international cooperation organisations; their role is important as Fair Trade involves not only production and distribution, but also social and environmental projects for the local community development, funded by the premium granted by the Fair Trade labelling system managed by FLO. Once the producers become FLO registered they can directly sell to traders. The distribution involves a complex relationship between importers and retailers. A network of 474 World Shops operates in Italy, sometimes related with solidal buying groups; these shops are managed by 347 different organisations representing non profit-associations or social cooperatives; food represents 40-50% of their total turnover (Musso D., Perna T., 2005, p. 17).

Scheme 1) Structure of Fair trade distribution channels in Italy



Source: The Fair Trade Advocacy Office, our survey

Fair Trade products are also sold by the traditional retailing sector (shops and supermarkets); they buy their products either from FLO licensed importers and in few occasions from the ATO's, not necessarily FLO certified, or directly from the producers (acting as importers). The ATO's are mostly supplying the World Shops network. They buy raw material from FLO registered producers and sell their products sometimes as private labels for supermarket chains; part of the World Shops (about 50) sell also FairTraded Mark products following the FLO standards.

The large agro-food companies involvement in the Fair Trade market is growing while the most important Alternative Trade organisations (ATO's) and World Shops growth is slowing down (tab.1).

The data on the ATO's turnover from 2001/02 2005/06 showed that CTM Altromercato is by far the main player; in the year 2004/2005 CTM concentrated 76% of the total turnover of the companies considered; the remaining three ATO's have a much smaller economic size. The turnover growth was negative for CTM from 2002/03 to 2005/06 while the other small ATO's grew at a very quick pace (table 1). The importance of the still relative small size of Fair Trade should not be underestimated when studying the variables influencing its development. These trends were in fact strongly influenced by conjunctural aspects. The main cause of CTM negative performance was in fact due to a reduction in CTM's main client orders of bananas. The behaviour of one client (a supermarket chain) influenced the trend of the entire Italian Fair Trade market growth.

Tab 1) Main Italian Fair Trade Importers Turn over (€current)

	2002/03	%	2003/04	%	2004/05	%	2005/06	Var. 2002/03- 2005/06 %
CTM Altromercato *	31.820.000	82	34.240.000	79	31.253.000	76	30.309.301	-4,7%
Commercio Alternativo **	4.275.488	11	4.962.215	11	5.221.088	13	5.200.000	21,6%
Liberomondo **	1.698.181	4	2.711.909	6	3.053.166	7	3.480.305	104,9%
Equomercato **	1.135.458	3	1.394.936	3	1.415.188	3	1.393.610	22,7%
TOTAL	38.929.127	100	43.309.060	100	40.942.442	100	40.383.216	3,7%

* For CTM ALTROMERCATO, Commercio Alternativo and Equomercato the fiscal year ends on June the 30th, for Liberomondo fiscal year and solar year coincides.

** Liberomondo balance sheet includes around 200.000 € due to the direct participation in the management of two World Shops.

Source: our survey

Moreover, Fair Trade is growing thanks mainly to volunteers operating in a relatively large numbers of small ATO's and World Shops which still represent the most important clients for the main ATO's, including those linked to the supermarket chains.

The ATO's turnover by distribution channels (see tab. 2) confirmed the role played by the World Shops as the most important retailing channel of Fair Trade products. Following the different values proposition CTM Altromercato and Commercio Alternativo showed a higher share of products sold to the supermarket chains (21% and 30% respectively). Commercio Alternativo is developing new distribution channels like coffee shops, small restaurants and Fair Trade dedicated supermarkets, while CTM is distributing its products through catering companies (5%).

Liberomondo and Equomercato sell their products nearly exclusively to the World Shops (90%) and other small retailers.

Tab.2) Turnover by distribution channels (%) year 2004/2005 (2005/2006)

	World Shops	Supermarket chains	Retailers	Catering	export	other
CTM Altromercato	56 (60)	21 (13)	7 (6)	5 (6)	(11)	(4)
Commercio Alternativo	70	30				
Liberomondo	90		10			
Equomercato	90		10			

Source: our survey

The products sold are mainly food; at Commercio Alternativo and Liberomondo 70% of the references are non perishable food and 30% fresh food. Similarly 59% of CTM' references are non perishable food, and 21% fresh (food is mainly sold to the supermarket chain) while 16% are non-food references. CTM entered the Fair Trade cosmetics market, as a strategy to find new markets for the developing countries non food agricultural products (agave oil, essential oils and herbal remedies)

Liberomondo represents the only exception: 90% of the references sold are in fact non-food (handicrafts) and 10% (non fresh) food.

Tab. 3: Turnover by products categories - % (n° references) year 2004/05

	Food	Fresh food	Non – food
CTM Altromercato	59 (230)	21	16
Commercio Alternativo	70 (300)	30	
Liberomondo	70	30	
Equomercato	10		90

Source: our survey.

Theoretical vs. actual supply chain vertical coordination

The business model analysis showed a general need for strong vertical coordination for the whole of the companies involved in Fair Trade; the factors affecting to the same extent the level of transaction costs are related to the Traceability and partially to the New characteristics of importance to consumers (see scheme 2). The influence of the New

characteristics of importance to consumer (that is the Fair Trade values) is related to the share of product traded under the Fair Trade Organisation Mark; this Mark involves all the supply chain agents, and no official external certification body, encouraging a stronger vertical coordination when compared to FLO certified products.

Other factors influencing at different levels the need for coordination among the ATO's examined are perishability, product differentiation, quality variable and visible, quality variable and invisible, associated mainly to fresh products (e.g. fruits) but also to preserved or processed food (e.g. tea, coffee) whose quality can be affected by the presence of microorganisms. Higher transaction costs seem to apply to CTM Altromercato and Commercio Alternativo.

According to the Hobbs approach these higher costs are related to these ATO's:

- larger share of fresh (perishable) products traded; this also positively affects the share of quality variability, both visible and invisible and the traceability costs associated to food trade.
- larger share of business to business relationships involving more demanding trading relationship (supermarket chains, coffee shops, restaurants etc...); the risks related to the right timing, quantity and quality in the orders management are consequently higher;

The same conditions partially apply to Liberomondo; this ATO is oriented towards fresh food trading and is related to a very high number of small clients (World Shops and small traditional retailers. The need for coordination is however less demanding in terms of management, including the monitoring, when compared to more "conventional" clients like supermarket chains or catering.

Equomercato has a relatively lower need for coordination, given the prevailing trade in non food products; these products are generally non perishable. Liberomondo and Equomercato trade involve only the IFAT Fair Trade organisation Mark; a strong vertical coordination, in terms of transparency and information sharing, is thus necessary to reduce the uncertainty related to the respect of the Fair Trade principles along the different supply chain stages. However this is less influent on the necessity to grant an efficient flow of physical goods through better logistics management.

The supply chain partnership analysis showed that all the ATO's manage cooperation development projects with local producers from developing countries, directly or through NGO's; the contractual relationship is therefore a long term one; they provide technical, managerial and financial support. The creation of cooperatives among local producers is encouraged not only to increase the economic efficiency but also to promote social welfare and ethic values (workers rights, justice, and equality). Equomercato is strictly related to working children organisations around the world; it supports their activity by importing their products, realized under working conditions respectful of their dignity and educational needs, and information campaigns on the children organisation activity. Very often processing companies are related to the ATO's through strategic alliances and the ATO's are directly involved with the management and/or property of the retailers (World Shops). CTM Altromercato is a consortium of 130 associations and social cooperatives; they manage more than 350 World Shops.

Commercio Alternativo is a cooperative among 50 different organisations including World Shops(which in turn directly import and distribute Fair Trade products, like Equoland and Ravinala) and NGO's involved in cooperation projects in developing countries .

A certain amount of networking among ATO's procurement also exists; in case they cannot meet the demand with their stock they buy product from other ATO's.

A high level of coordination between the ATO's and the other supply chain agents resulted.

The ATO's seem to play a central role in the supply chain management.

Efficient management of the supply chain relations

The business model analysis showed a correspondence between the coordination needs and the client/supplier relationship structure, along the different ATO's supply chains, and

between ATO's. Some specific features in the supply chain relationship (Customer and suppliers relationship) were examined to assess how effectively the coordination is managed.

Customer and suppliers relationship

The complexity of the ATO's customer trading relationships is confirmed by the analysis of the number of their clients, destinations and deliveries in the year 2004/2005 (tab.4). The data relate to Commercio Alternativo and Equomercato. The ATO's managers interviewed confirmed they are representative of the entire ATO's performances. The fragmentation is very high, Commercio Alternativo shows an average 10 shipments/year/client; the average shipment value is 673€. The number of shipment for each destination is 5. The yearly Commercio Alternativo turnover/n.of clients is 6600€, even lower the Equomercato figure: 2500€

Tab.4) Clients, destinations, shipments

	Clients (n.)	Destinations (n.)	Shipments (n.)	Turnover/Clients (€)	Turnover/Shipments (€)	Shipments/ Destinations (n.)	Shipments/Clients (n.)
CTM Altromercato							
Commercio Alternativo*	786	1580	7760	6643	673	5	10
Liberomondo*							
Equomercato*	571			2478			

Source: our survey

It was not possible to calculate the distribution of the clients/destination/shipments by size. According to Christopher (Christopher M. 1998) it is reasonable to assume that the Pareto distribution apply to these cases (80% of the sales comes from 20% of clients/destinations/shipments and vice versa). Therefore many of the shipments involve very small volumes and/or values.

Another relevant indicator of the customer relationship management efficiency is the orders transmission/management mode (tab.5). The on-line mode is largely adopted by the ATO's; only Liberomondo relies (at least up to the year 2004/2005) upon e-mail and other off-line modes.

Tab.5) Order preparation/transmission mode (%) year 2004/2005

	On line	e-mail	other
CTM Altromercato	99		1
Commercio Alternativo	35	45	20
Liberomondo		50	50
Equomercato	50		50

Source: our survey

CTM Altromercato uses CRM software and practically the entire Customer relationship management is on-line. The on-line order transmission mode regards 50% and 35% of the orders of Equomercato of Commercio Alternativo respectively. The amount of Commercio Alternativo orders on line has lately improved thanks to the introduction of new CRM software. The use of CRM software encourages a better and more transparent logistic management both internal and external (outbound in this case). The off-line orders reaching Equomercato (50% of total orders) are generally fulfilled by an on-site (warehouse) order transmission and/or consignment.

The analysis showed an extensive use of ICT's (Information and Communication technologies); this reduces the technological constraints to an efficient supply chain management, influencing the efficiency of the client customer interface.

On the negative side the large share of food traded, the high number of references, clients, deliveries, orders and shipments involved, and the differentiation in their activity, increase the complexity and costs related to the logistics and administration. On the supply side the product flows from farmers in developing countries and the international carriers' availability were taken as exogenous variables.

An efficient logistics management could reduce not only the costs but also improve the access to a growing market by reducing the constraints to the products flow along the supply chains. To this end an analysis of the ATO's logistics has been carried out.

Tab. 6a) Warehouse management, indicators adopted

	A1	A2	A3	A4	A5	E1	E2	E3	T1	T2
CTM Altromercato	X				X	X		X	X	X
Commercio Alternativo	X							X	X	X
Liberomondo								X	X	X
Equomercato								X	X	X

Sources: our survey

The data refer only to the usage of reliability, timeliness, flexibility and productivity indicators (see tabb. 6a e 6b). The actual values were not available. The amount and type of indicators adopted by the different ATO's can be considered as a proxy of their logistic management efficiency. This information was integrated by interviewing the ATO's managers who provided insights on the reasons leading to their choice of monitoring level and on the logistics performance.

The number of indicators adopted seems positively related to the ATO economic size and transaction costs level. In particular CTM shows a much higher number of logistics indicators adopted, when compared to the other ATO's.

Focusing our attention on each indicator the following results emerged:

indicator A1 (the stock breaking index) and A2-A3 (orders fulfilled and unfulfilled/total orders) are adopted by CTM Altromercato and Commercio Alternativo. They are very useful in order to measure the ATO's efficiency with respect to the adjustment of the inventory level to the demand flow and the order fulfillment reliability.

In particular CTM has a special contractual agreement with its customer concerning the food trade. A constant stock availability for the 50 more demanded references is granted; this should prevent these products from stock breaking. The risk of supply shortage is in fact generally high when dealing with developing countries, particularly with those countries facing instability due to human or natural causes.

The need to grant a reduction in the stock breaking led Commercio Alternativo to build a new warehouse specifically dedicated to the most important references. At the moment the increase in warehouses spaces specifically dedicated to increase the food stock, represents the most important investment in order to grant a better logistic service to their clients. Index A4 (orders fulfilled with multiple deliveries) is not measured by any of the ATO's examined.

CTM Altromercato is the only ATO measuring the % of orders fulfilled within the customer's requested date (indicator A5).

To better appreciate the influence of the monitoring of these indicators on the ATO's performances it must be remembered that CTM and Equomercato clients directly manage the orders on line, on the base of the stock availability; the orders from the clients are directly printed for the picking, the order form information are automatically sent to the invoice and accompanying documents. The chance of stock breaking or of problems related to the order fulfilment is consequently close to zero. Commercio Alternativo and

Liberomondo, do not measure the amount of orders partially fulfilled, in any case they do not fulfil orders with multiple deliveries.

The inventory management performance indicator E1 (inventory turnover by product category) is only measured by CTM Altromercato.

No ATO's measure indicator E2 (days of supply by products category); CTM used to measure it but is now considered not relevant. So far Commercio Alternativo did not calculate inventory management performance indexes. As a consequence of the recent investments in a new warehouse and implementation of a customer relationship management and logistics software, these indicators will be adopted.

Index E3 (% of available warehouse areas and volumes used) is measured by all the ATO's examined.

The order fulfilment timeliness T1 and T2 (delivery lead time and actual delivery date/agreed delivery date) is taken into consideration by the ATO's, but not on a regular basis.

tab. 6b) Warehouse productivity, indicators adopted

	P1	P2	P3	P4	P5
CTM Altromercato	X	X	X	X	X
Commercio Alternativo					
Liberomondo					
Equomercato					

Source: our survey

The warehouse productivity (Tab.6b) was only measured by CTM Altromercato in the year 2002/2003, to verify the opportunity to externalise the picking. The result was that the internal management of picking was considered more efficient. Other ATO's considered that the measurement of the warehouse productivity as an excess of control over the workers.

6. Final remarks

The ATO's business model analysis provided information on the different companies' strategies and capacity of managing a sustainable ethical and economic growth. The relationship between their strategic goals, supply chain organisation and management, in particular the logistics performance indicators, were useful to this end.

The ATO's examined showed a level of vertical coordination compatible with their coordination needs, values assumptions and economic size.

When considering the strategies of growth the analysis showed two different types of ATO's. One is more oriented towards increasing the volume of goods traded not only by promoting the consumers awareness towards the ethical content of Fair Trade products, but also competing on the more traditional ground of quality and managerial efficiency. This implies the adoption of more sophisticated supply chain and logistics management tools

and procedures, a closer relationship with more traditional distribution channels also emerged. These type of ATO's partially match the definition of "imprese sociali del Cees" (Fair Trade social enterprises), as proposed by Barbetta when analysing different types of World Shop (Barbetta G.P., 2006 p. 38). These ATO's are oriented to increase their investments in logistics.

On the other hand the smaller ATO's maintain a business model based on a small size, little interest in competing within the traditional market as a strategy to increase their turnover. The focus of their strategy is in fact the definition of an alternative way of dealing with economic activity by promoting the ethical awareness of the consumers and the social development of the whole of the agents in the Fair Trade supply chain.

This led to an exclusive relationship with the World Shop circuit, whose structural characteristics are less efficient in granting access to a large number of consumers, when compared to conventional trading and retailing channels; it also implied a marketing policy "producer oriented"; the support to the marginal farmers in the developing world is in fact considered a priority with respect to the consumers need for reliability, timeliness and affordable prices. This influenced the logistic integration that does not seem to be encouraged to the same extent in the smaller ATO's.

The risk associated to this strategy, whose goals are projected in a relatively distant future, is that more traditional trading and retailing big companies meanwhile can greatly increase their market dominance, also taking advantage of the Fair Trade values promotion coming from the ATO's and World Shops.

The ATO's growth strategies seem more influenced by their value propositions than the lack of managerial skill or unfavourable market conditions, at least in the smaller ATO's.

The analysis confirmed that the supply chain organisation is not "neutral" but is influenced by the company values and in turn influences the company economic as well as "ethic" sustainability.

The conflict between an organisation necessity of growth (or survival) to grant its economic sustainability in the long run, and the respect of its ethical code is far from being solved.

A contribution to overcome this apparent contradiction could be related, in our opinion, to the consideration of the entire range of theoretical and operational tools available to business management, without prejudices. An efficient flow of goods and information along the Fair Trade supply chain is in fact necessary both to the more ethical and "market oriented" ATO; in this sense the Fair Trade values, oriented towards transparency and collaboration, represent a potential competitive advantage with respect to conventional supply chains. The importance of opportunistic behaviour, as an obstacle to the flows of information and to a collaborative management, should be in fact smaller.

Future research developments should therefore investigate the monetary and non-monetary variables affecting the efficiency and sustainability of Fair Trade inter firms' relationships (clusters, networks, supply chains etc...).

A more specific field of investigation should be oriented towards the analysis of the Fair Trade flows from developing countries both in terms of goods and information. A fair income distribution and in general economic and social justice need transparency and therefore a full, fast and clearly organised access to relevant information and knowledge.

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