Intra-functional coordination: the case of purchasing during innovation in the agri-food sector
Laurence Viale

To cite this version:

HAL Id: hal-03695516
https://hal.science/hal-03695516
Submitted on 14 Jun 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L’archive ouverte pluridisciplinaire HAL, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.
Intra-functional coordination: the case of purchasing during innovation in the agri-food sector

Laurence Viale
EM Strasbourg Business School
Université de Strasbourg HuManiS (EA 7308)
laurence.viale@em-strasbourg.eu
Abstract
As the pace of change has accelerated rapidly in the agri-food sector, coupled with an ever-increasing level of competitiveness, firms are seeking processes which are likely to strengthen their capacity for innovation. In this context, this paper explores factors that foster the intra-organisational coordination between purchasing, marketing and, R&D/innovation. In addition, we shed light on the involvement of Purchasing early in the innovation process. Five in-depth case studies were selected based on significant innovations on agri-food industry and the involvement of the purchasing department. The results suggest that intra-functional coordination plays an important role in innovation process and confirm the relevance of some known factors, such as Early Purchasing Involvement (EPI), the quality of intra-organisational relations and intra-organisational alignment. On the other side, intra-functional factors emerged from our case studies, such as “purchaser’s internal attractiveness,” a willingness attitude and managing anticipation of demand. The results provide empirical evidence on intra-organisational drivers and underline the core role of EPI in agri-food firms, thus complement earlier studies from other industries.

Key words: Early Purchasing Involvement (EPI), innovation, intra-functional coordination, agri-food industry.
Introduction

The agri-food sector innovative behavior has been less affected by the economic downturn than the rest of the economic sectors (Zouaghi et al., 2016). Furthermore, the agri-food sector is faced with an unprecedented acceleration of new products and offers (Tripoli et al., 2018). The same authors emphasize that the agri-food industry must meet the food demands of a growing population, and adjust to changing consumer preferences with a growing demand for high-end products offering superior quality and nutritional value. In addition, there is a need to promote more environmentally sustainable practices and decrease environmental footprints, reduce supply chain costs and maintain a high-quality sanitary environment. Furthermore, it is essential to account for the importance of factors such as quality, traceability, safety and the impact of uncertain meteorological conditions (Ahumada and Villalobos, 2009).

More than 69% of agri-food firms in France are constantly innovating (in terms of products, processes or organisation), a rate which is far superior to other sectors. The ability of agri-food firms to innovate is considered to be one of the most important levers to compete with national and international competitors (Capitanio et al., 2009). Finally, Evidence from the food industry finds that R&D intensity is lower and that there are less technology based innovations, which are mainly of an incremental type, as radical innovation is very hard to achieve, competition is very high and the market is very demanding (Zairi, 1995). Critical success factors tend to be based on quality, reputation and tradition (Lazzarotti and Manzini, 2013).

Innovation is now happening at such a rapid pace that companies can no longer do everything in-house. Businesses have little choice but to outsource (Chick and Handfield, 2015). Purchasing in the agri-food sector is a particularly complex issue. This is partly due to the variety and fragility of the raw materials, the variability of demand and pressure on prices and, on the other hand, the increased demand for transparency and the nutritional quality of products.

Looking forward, Handfield et al., (2011) see the future role of purchasing expanding to include designing and operating multiple supply networks, leveraging technology enablers, collaborating internally and externally, attracting and retaining supply management talent (Pham 2014). As underlined by Gualandris et al., (2015), for the purchasing function, gathering unmet needs starts with its involvement in multi-functional teams and strategy development processes. From this, it can gain a seat in the development of roadmaps, collaborations with lead users and innovation teams. A literature review conducted by Hüttinger et al., (2012) showed that the purchasing and R&D functions contribute towards supplier satisfaction. The authors suggest that a cross-functional research approach may be useful in terms of putting the contribution that each function makes into perspective and analysing the interactions between these functions. Research into the subject of intra-functional coordination implicating purchasing during innovation inside firms is still in its infancy. Research on EPI is limited to projects conducted in large companies, such as the automotive and electronics industries, and is more rarely
conducted in other sectors (Wynstra, Weggeman and Van Weele, 2003), (Pham, 2014) or on smaller organizations.

In an uncertainty context and intensive innovation in agri-food sector, this paper explores factors that foster the intra-organisational coordination between purchasing, marketing and R&D/innovation. In addition, we shed light on the involvement of purchasing upfront in the innovation process. The outcome of this study will help fill the current gap in the literature on Purchasing and Supply Management (PSM) in the agri-food sector while providing practical guidance for managers involved in the innovation process.

To achieve this goal, we first focus on the relational dimension of the purchasing department. Then, we explore the latest developments in EPI during the innovation process, and look at the role of purchasing during innovation. We explain the chosen methodology and present the business examples in Section 2, our main findings in Section 3 and we continue by discussing key findings, contribution in Section 4. The conclusions, limitations and perspectives for future research are reported in Section 5.

1. Theoretical background

Purchasing: the relational perspective

The successful integration of the purchasing department is vital both on the company side and on the supplier side as purchasers represent the link between the internal and external part of the company, and these relationships become increasingly important for the firm’s success. Contribution and input from the purchasing department has become increasingly sought after, spurring its rapid evolution (Bals, Hartmann and Ritter 2009; Melander and Lakemond 2014).

The relational dimension of the purchasing function is not limited to purchaser-supplier relationships. Indeed, from an intra-organisational point of view, the purchasing department plays a liaison role with internal clients. The internal client, at the origin of the need, is a key player regarding general and financial management, technical and operational departments, and cross-cutting departments. Calvi (2000) underlines the importance of intra-organisational quality and the fact that the purchasing department must pay close attention to other actors and the processes in which they participate. Moreover, the management of intra-organisational coordination has been shown to be a prerequisite for the effective management of inter-organisational coordination (Colin, 1981).

In addition, Wynstra et al. (2000) show that many of the problems can be traced to a lack of enabling factors: functionally oriented, fragmented internal organisations; lack of (access to) information; insufficient competencies and differences in personal attitudes between departments.

The collaboration of departments such as marketing and R&D (Research & Development) with purchasing, and planning functions has brought new knowledge, reduced time to market products and better control costs (Dik and Kambil, 2002). This new approach places the supply chain at a more strategic level and allows the integration of new players that influence the company's decisions.
Gonzales-Benito (2007) confirms earlier work in his research on the contribution of the purchasing department to organisational performance (including sales growth, reputation, customer satisfaction and innovation success). He defines the following prerequisites for a successful contribution:

- the need for integration,
- recognition of Purchasing by other functions,
- the efficiency of the purchasing function.

These pre-requisites are also highlighted by the work of Suchman (1995) who defines legitimacy as: “the perception by main stakeholders that the actions of an entity are desirable, proper and appropriate, within some social constructed system of norms, values and beliefs”. Thus, the components of this legitimacy are even higher when its activities are perceived both internally and externally, as desirable and appropriate.

In projects with high stakes (particularly innovation) and when internal clients are convinced of the added value of the purchasing function, they more readily and more frequently involve the purchasing department. The result is that purchasing departments become more reliable which leads to greater efficiency within the innovation process through better mutual understanding (Castaldi, Ten Kate and Den Braber, 2011).

Ultimately, successful integration is necessary as the more time the purchasing department spends working with other departments, the more they gain the attention of the company’s internal clients, establishing rapport and building trust, and this can lead to achieving overall business and departmental goals (Bals, Hartmann and Ritter 2009).

During the innovation process, the purchasing department liaisons between suppliers and internal departments, which is why we investigated the involvement of purchasing in this specific context.

**Toward Early Purchasing Involvement**

Businesses are going through rapid external and internal organisational changes due to an increased focus on sustainability and corporate responsibility, technological advances and macro-economic change, as well as demographic shifts. If purchasing managers are to embrace these challenges they must develop new ways of thinking about supply structures and processes as well as new skills and competencies (Chick and Handfield, 2015).

Depending on the size and maturity of the organisation, the purchasing department may be a mere point of contact for goods and services without any real power or influence over internal clients. As maturity increases, purchasing departments become prominent and critical components with clearly-defined objectives which are communicated upstream to the other company departments for whom they really play the role of intermediary between internal customers, such as R&D, product development, and suppliers (Bals, Hartman and Ritter, 2009). Mikkelsen and Johnsen (2018) propose that early purchasing involvement in technologically uncertain NPD (New Product Development) projects requires a mature purchasing organization that possesses competences to interact effectively with R&D.
Recent changes in the role of purchasing shift the function from being transaction-oriented to collaboration-oriented, establishing connections between purchasing, operations and other parts of the supply chain (Kersten, 2012). Its mission has become how to “obtain, from external resources, the goods, services, knowledge, and innovation necessary to create and maintain the company’s competitive advantages” (Van Weele, 2000).

Academics have theorised about the importance of involving purchasing at an early stage of the innovation process; practices referred to as early purchasing involvement (EPI). EPI can add knowledge and increase understanding regarding product design, choice of materials and suppliers, and may also lead to the introduction of supplier knowledge at an early stage (Van Weele, 2002, 2010).

Early purchasing involvement has also been considered a facilitator of early supplier involvement (Calvi, Johnsen and Phillips 2011), a link that helps the connection between the company and the suppliers.

**Role of purchasing during innovation**

From an innovation point of view, the role of purchasing professional has been largely ignored by the literature for a long time (Schiele, 2006). Innovation is now happening at such a rapid pace that companies can no longer do everything in-house. Businesses have little choice but to outsource, because the most critical resources are intangible and knowledge-based (Chick and Handfield, 2015). As scholars argue purchasing professionals’ roles are likely to emerge as critical to the future (Chick et al., 2015). They emphasize in their work how purchasing can facilitate product development and innovation through the involvement of suppliers (Chick and Handfield, 2015).

Academics observe the importance of involving both purchasing and suppliers early in the innovation process and define concepts of early purchasing involvement (EPI) and early supplier involvement (ESI) (Johnsen 2009). ESI adds a particular focus on the timing of supplier involvement (Bidault et al., 1998; Swink, 1999), which usually refers to involvement of key suppliers at the concept stage or during early feasibility studies. Schiele (2006) considered early purchasing involvement as important as early supplier involvement.

Homfeldt et al. (2017) examine the role of the purchasing department in the innovation process in the automotive industry, as well as the methods and practices used to benefit from the innovation capacity of key suppliers. According to these authors, the purchasing department contributes to the innovation process in three ways: 1.Identification of innovative ideas in the supply market and promotion of these ideas internally; 2.Management of economic activities; 3.Supplier database management.

Firstly, identification of innovative ideas in the supply market and promotion of these ideas internally: The purchasing department is particularly well positioned to identify market ideas (Servajean-Hilst and Calvi, 2018) through their frequent interactions with the supplier base and also through their strategic viewpoint. When the relationship of trust is established between purchasing departments and suppliers, the latter present their ideas more easily (Homfeldt et al., 2017). In a second step, the purchasing department can share these ideas internally and finally help to integrate them into innovation process (Hartmann et al., 2012).
Secondly, management of economic activities: For an idea to become an innovation, it must meet a market, so the innovation must be financially viable. The financial axis is therefore important, which is why the Purchasing department, whose primary missions includes to optimize costs, has its place in this role of "managing economic activities". The involvement of purchasing professionals early in the innovation process helps to save some innovation cost (Schiele, 2006). This is particularly important in some industries where cost pressure is essential.

Lastly, supplier base management: The Purchasing function has long been recognized by researchers as the most relevant for selecting and integrating innovative and available suppliers into the innovation process (Schiele, 2006; Van Echtelt et al., 2008). In addition, Servajean-Hilst and Calvi (2018) show that purchasing departments also motivate, in addition to "new" suppliers, their own supplier panels to contribute to innovation and to develop specific knowledge.

In the product development process, the purchasing department may play several roles including: cataloguing suppliers’ technical and design expertise, fostering a committed environment making suppliers more creative and likely to take risks, developing stronger relationships leading to suppliers investing in product development capabilities, contributing to early supplier involvement, and facilitating better and more consistent communication (Birou and Fawcett, 1994).

In this way, the purchasing department is able to act as a coordinator between the marketing department and production with regards to external suppliers when new products are being specified (Mol, 2003). It has also been suggested that purchasing has a key role to play in managing suppliers and supporting the R&D function (Wynstra et al., 2003).

Purchasing agents are responsible for managing the work of suppliers by initiating regular innovation meetings with suppliers and internal stakeholders and developing technology roadmaps linking business strategy, innovation strategy and supply strategy (Schiele, 2006). However, less is known about the relationships between purchasing departments and internal clients and the factors that foster the intra-organisational coordination between purchasing, marketing and R&D during innovation process.

2. Methodology and research design
Our research tries to explain in a plausible way a relatively new complex phenomenon which has been observed. An inductive analysis helps at identifying themes from within the embedded cases and comparing these findings across cases. The inductive approach is useful “to condense extensive and varied raw text data into a brief, summary format; to establish clear links between the research objectives and the summary findings derived from the raw data.” (Thomas, 2006).

The aim of this paper is to explore the practical implications of this in an intra-organisational context and thus to improve the conceptual understanding of this phenomenon. Case studies have been adopted as the most appropriate approach for conducting exploratory qualitative research (Yin, 2009).
Five agri-food firms were selected based on significant innovations and the involvement of the purchasing department in strategic decisions. These companies intensively involve purchasing professionals in their innovation process. From this perspective, the innovation process starts with an idea and ends with its commercialization. These activities can be synthesized into three subsequent phases (Koen et al., 2002): The fuzzy front-end (FFE) of innovation; The New Product Development (NPD) and the commercialization phase. In our cases, purchasing professionals are involved in the upstream phase of the process. The type of innovation that the companies conducted is mainly incremental.

Moreover, we chose to adopt multiple case-studies to enable broader exploration of theoretical elaboration (Eisenhardt and Graebner, 2007). In the end, this methodology can make a useful contribution to both management practices and theory building in a relatively new research field (Seuring, 2005).

*Figure 1. Presentation of agri-food firms*

<table>
<thead>
<tr>
<th>Firm Alpha: Vegetable raw materials, flavouring, colouring and technological ingredients</th>
<th>Firm Beta: Fruit drinks manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha has been an independent family-run business since the 1960s. This SME has managed to industrialise the dehydration of local products (parsley, leeks and spinach). Alpha produces and markets ingredients for culinary preparations for restaurants, as well as raw vegetable materials and technological ingredients for the food industry, sporadically and newly for the B2C industry (own-brand products).</td>
<td>Beta is a company with strong expertise in the fruit juice market. In line with consumer expectations, the consumption of organic juices and nectars has increased by more than 62% in five years. This is an underlying trend, while the format of fresh fruit juice has become increasingly popular.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Firm Gamma: Premium chocolate</th>
<th>Firm Delta: National firm specialised in the processing, preparation and distribution of meat products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gamma is a company that makes seasonal chocolate, mainly for Christmas and Easter. The liqueur chocolates feature in a niche market, in which Gamma is the clear leader in France.</td>
<td>Delta is a company specialising in cutting, processing and preparing fresh and cooked meat, as well as prepared products.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Firm Epsilon: A multinational firm specialising in chocolate confectionery and food for human consumption</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>This company is guided by strong values referred to as the “five principles”: Quality, Responsibility, Mutuality, Efficiency and Freedom. Indeed, the founder strove to adopt an economic model inspired by the “mutuality of benefits” for all stakeholders: employees, customers, and suppliers.</td>
<td></td>
</tr>
</tbody>
</table>

After checking who the main actors in the innovation process were, participants in each
function involved in the process were asked about their needs and the nature of their relationship with other functions, the role of purchasing in innovation process, and critical success factors for intra-functional coordination (if any).

Data was gathered from primary and secondary sources. Our approach thus enables us to obtain a triadic view (marketing, purchasing, R&D/innovation). This should also provide more objective responses to the questions and allows us to compare answers from different points of view. Secondary data consists of publicly available materials (company websites, documents provided by the interviewees). These are mainly annual reviews of projects and success stories, as well as insights into main areas for development in the future. These various documents allowed us to gather historical and background information about the firms. The data covers also field observations from the production lines and offices of the companies we visited.

The combination of data collected enables us to triangulate several sources and assumes internal validity.

<table>
<thead>
<tr>
<th>Purchasing department</th>
<th>Internal client departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents’ positions</td>
<td>Duration</td>
</tr>
<tr>
<td><strong>Firm Alpha:</strong> Purchasing Director</td>
<td>1h20</td>
</tr>
<tr>
<td>Purchasing manager (raw material)</td>
<td>1h45</td>
</tr>
<tr>
<td><strong>Firm Beta:</strong> Purchasing Director</td>
<td>1h45</td>
</tr>
<tr>
<td>Purchaser (indirect commodity)</td>
<td>35 mins</td>
</tr>
<tr>
<td>Packaging purchaser</td>
<td>50 mins</td>
</tr>
<tr>
<td><strong>Firm Gamma:</strong> Purchasing Director</td>
<td>1h15</td>
</tr>
<tr>
<td>Raw material purchaser</td>
<td>1h</td>
</tr>
<tr>
<td><strong>Firm Delta:</strong> Purchasing Manager</td>
<td>1h15</td>
</tr>
<tr>
<td>Purchasing manager (raw material)</td>
<td>45 mins</td>
</tr>
<tr>
<td>Purchasing manager</td>
<td>1h30</td>
</tr>
<tr>
<td>Lead Purchaser (packaging)</td>
<td>55 mins</td>
</tr>
<tr>
<td>Lead Purchaser (indirect commodity)</td>
<td>45 mins</td>
</tr>
</tbody>
</table>

*Figure 2. Respondents’ positions*

To strengthen the research reliability, we conducted face-to-face interviews and tape-recorded 23 semi-structured interviews with the main actors involved in innovation process. Each interview lasted an average of one hour. All of the interviews were recorded, transcribed, and sent to the industrial participants for their comments and approval. We relied on the Nvivo software for coding process assigning codes to the primary and secondary data. Coding was completed when data saturation occurred according to Miles and Huberman (2003).

### 3. Main findings

In keeping with the key elements of the interview guide, two aspects of our findings are presented here:

- A greater understanding of internal liaisons and the role of the purchasing function in innovation process,
A description of major factors impacting on internal coordination

**Internal coordination during innovation**

To innovate, it is important to know how to take risks and make decisions. They are due to the particular involvement of people in organisations that "fight" to pass their ideas and launch the industrialization of inventions. In this sense, an innovation product manager of the firm Delta explains "innovation is an alliance between research, marketing, purchasing, instinct, imagination and industrial courage".

Some strategic commodities, such as raw materials originally purchased by R&D, are managed by the Purchasing Manager with a view to developing the purchasing strategy. The development of a panel and the sourcing of key suppliers are priorities alongside the work of researching novelties in a collaborative way involving the R&D department and purchasing. In this context, purchasing is considered to be key to the company image, according to marketing.

“Purchasing? It's vital for the company. Compared to raw materials, the whole range, spices, herbs... it is such an important part of our business that it is obvious that it is one of the pillars of the company. I am not even talking about income or savings, I'm talking about the image of the company!” Marketing Director, Firm Alpha.

The purchasing function is often involved from the early stages of an innovation process. Strategic directions are shared and aligned with internal stakeholders during executive committee meetings.

“The executive committee, which the purchasing department is a part of, took the decision to move forward on this strategic project. The main decisions are made collegially.” Lead Purchasing, Firm Epsilon.

Purchasing agents share the reality of the supplier market (technical expertise) with internal clients. They can organise training with R&D and innovative suppliers of raw materials. They may also sometimes stop a process if there is a risk in terms of quality or supplier capacity.

“We systematically study the feasibility of the product to see if we can sell it at a set price, so of course the purchasing department has a role to play in this regard. They also position themselves by giving the go ahead or not.” Purchasing Manager (raw material), Firm Epsilon.

Purchasing activities are increasingly and surprisingly similar to marketing activities in most of the cases (Alpha, Beta, Gamma and Delta).

“They identify key conferences to actively engage in and create a network of industry counterparts to perform regular benchmarking for best practice sharing to continually improve our process. They even share information concerning competitors' activities.” Marketing director (talking about purchasing role), Firm Delta.

**Involvement of purchasing during innovation process**

“Sometimes innovation may go through the purchasing department, and when it does it takes many forms: it may be an innovation that will bring savings, i.e., doing better with less, an innovation that comes from suppliers, or an innovation which comes from inside, the management category, when we know that something is missing from our offer...” Innovation Lab Director, Firm Alpha.

The influence of purchasing on innovation was recognised by all respondents. When new products are developed, for example, purchasing (through EPI) can bring new ideas to
respond to tenders from the organisation’s customers. This work is conducted with R&D for recipes and raw materials, and marketing with regards to packaging. However, its purchasing agents may also be proactive and propose new suppliers and new ideas.

“With regards to packaging, the purchasing department works specifically with marketing. They influence the evolution of the project because either they will find the technicality to be able to implement it or they are restricted to staying with their own suppliers.” Innovation Lab Director, Firm Alpha.

Interviewees mention strong links between the three functions. For example, once a new recipe has been developed with R&D, the purchasing department works closely with marketing and R&D on packaging, with the expertise of each actor being complementary and considered to be strategic.

- **Demand management anticipation**

The majority of respondents consider that need is increasingly co-constructed by internal clients and purchasing. In our case, the purchasing function was involved upfront in the innovation effort in close collaboration with marketing and R&D. In addition, the purchasing department involved has a strong understanding of the expectations of the end consumer.

By going further in managing demand, our cases show the capacity of the purchasing function to anticipate and suggest new ideas through interactions with internal stakeholders and suppliers.

“As my way of working is to adapt to the business market: the consumer is my priority. By working upstream, through sourcing and taking a commercial approach to internal clients, I always express needs through specifications constructed with the internal client. Simultaneously, I ask my suppliers about what I call implicit needs, i.e., products and processes that I will need in the future. They know that our motto is innovation.” Purchasing Director, Firm Beta.

As the purchasing interviewees emphasize, this established a common basis for further work, reflecting the set-up of a collaborative relationship.

Finally, we observe in all the studied cases that the purchasing activities include participating in understanding customer needs, analyse market trends and provides an opportunity to act ahead of time and anticipate future innovations.

“Procurement is integrated upstream of the process and works with R&D, and marketing teams every day. The more purchasers are far from the realities, the sale and, the customer, the less there will be innovation.” Purchasing Manager, Firm Delta.

**Main factors impacting upon the internal coordination**

- **Quality of intra-organisational relations**

The majority of our cases converge and illustrate the key role played by the quality of internal relationships on the success of innovation.

“We have regular open and honest discussions with the packaging purchaser about our shared needs, expectations and ideas.” Product innovation marketer, Firm Epsilon.

We consider this factor to be related to business in general, rather than to a particular purchasing strategy, because many departments are involved in the innovation process.
“It is a trust-based relationship with transparency and consideration for everyone's constraints. We have the same objective and a common goal, which is the satisfaction of the end consumer.” — Marketing director, Firm Beta.

All the respondents stressed the importance of trust, team spirit and the quality of internal relations in order for innovation to succeed. They acknowledged a need to federate teams from the various functions over the innovation process without blocking innovation for personal reasons. It was also noted that in the context of innovation, the quality of the relationship and its sustainability should be prerequisite.

“If we want this to work, we do not need an entity from the company to put a dampener on it, no matter where the idea comes from, egos have to be put aside. So, for example, if an idea does not come from me, and I don’t do everything to make it successful, we can be sure that the idea is dead ... The goal is that the company wins, so we get results which we can share.” — Purchasing Director, Firm Gamma.

- **Intra-organisational alignment**

The main decisions are made collectively in project management mode. According to the respondents, the silo operating company mode does not allow for a dynamic exchange between internal departments. The managers of the departments involved in the innovation process regularly bring together their respective management teams and address their difficulties to carry out the projects in an optimal way. Following these debriefings, the management committee decided to create a steering committee for new projects, which allowed for better coordination and intra-organisational cooperation.

“Delta did not have a project management culture at all, so innovation briefs came from the marketing department and were then passed on to R&D and purchasing departments, who would each pull them back to their own level. It's true that in terms of operationalisation, it was rather archaic and not at all profitable since we did not feed from one another’s expertise.” — Marketing manager, Firm Delta.

Sharing purchasing, marketing and R&D information fosters decision alignment, although other mechanisms could reinforce this link. Motives congruence of the internal partners is a necessary condition of success in innovation process.

In the Delta firm, the introduction of a new online tool (through a workflow) for innovation management helps in intra-organisational alignment.

- **Willingness**

Relational issues such as strong cooperative ties and mutual trust between parties stimulate willingness between them. From our results, we can confirm that internal clients are more willing to include purchasing agents from the onset of an innovative project even if the results are not clear in the short term. This willingness is closely related to the purchasing department’s willingness to share their knowledge.

“We regularly shared our key knowledge from the suppliers’ market in order to help in the project; we played a supporting role.” — Purchasing Manager, Firm Beta.

Willingness from internal stakeholders could also be related to the interdependence between functions, as explained above. Moreover, corporate values facilitate this willingness to help.
“The desire to go even further” Curiosity, enthusiasm and the permanent desire to improve skills and knowledge are the main drivers for business development”. It encourages staff to enrich and share their culinary experiences and to be constantly looking out for new trends in the agri-food sector. This value is even more crucial given that a strong capacity for innovation is key in the markets”. Secondary data Firm Alpha.

- Purchaser’s internal attractiveness

On the individual level, an “purchaser’s internal attractiveness” construct emerges from our cases. We consider that for the early purchasing involvement, the purchasing department must exercise a natural power of attractiveness.

“Our purchasing professionals are atypical in our firm, I think, they are involved in even more business intelligence than us in R&D. Purchases can be really strong in terms of proactivity, so I cannot imagine working alone in my corner.”. R&D Manager, Firm Delta.

We characterise this “purchaser’s internal attractiveness” construct as being the ability of the purchasing department to convince and influence the internal client (any internal actor participating in the innovation process) to collaborate. This allows the purchasing department to have the chance to hand over his ideas and to trigger discussion about them to the various colleagues during innovation process. These ideas may come from the purchasing department, the supplier and could be a proposal for a product innovation, technical, process, change of recipes or packaging, or an innovation of practices…

“I later realised there were other possibilities, other interesting suppliers in this market. So, I pushed R&D to develop recipes with these other suppliers. It was not easy at first, but we have now gone from three to five referenced chocolate suppliers.” Purchasing Director, Firm Gamma.

In order to overcome difficulties relating to a single source, in this case the Purchasing Director set up a project to create a strategic supplier panel on raw chocolate, to avoid a number of risks (lack of stock and quality issues, essential factors with regards to this raw material). It was necessary for the Purchasing Director to help R&D monitor the project and carry out sufficient tests to reference up to five “real” alternative suppliers.

“I need to sell my department, to persuade them that we should be included in the project and at as early a stage as possible, to make smarter purchases, in terms of value for money, but also to motivate them to come up with ideas or support us in high value-added projects. I sell this ability that we have to challenge ourselves, to renew in our purchasing practices to my colleagues.” Purchasing Director, Firm Alpha.

Purchasing agents must convince internal customers and make themselves “a colleague of choice” to work with them on the innovation projects.

“In the case of Pork Tomahawk, a particularly innovative project, the genesis of the project was our meat purchaser who, based on his knowledge of beef, was inspired by the “tomahawk beef” cut to transpose it to pork. This idea served as a basis for working with our suppliers.” Purchasing Manager, Firm Delta.

In this case, marketing and R&D were convinced by the purchasing departments’ idea. Technical feasibility is also managed by purchasing, with suppliers. The market knowledge and the particular technical skills of the purchasing department can bring value at a very early stage of the creative process. Downstream, the supplier must be able to develop the product
under the control of purchasing and R&D. Thus, the purchasing department is also involved in the innovation process that will lead to the new product.

4. Discussion

Through this cross-functional research, we emphasise the importance of key factors that stimulate the management of intra-organisational coordination during innovation process and EPI quality: the quality of intra-organisational relationships, intra-organisational alignment. On the other side, intra-functional factors emerged from our case studies, such as a willingness attitude, managing anticipation of demand and “purchaser’s internal attractiveness”.

The majority of our cases converge and illustrate the key role played by the quality of internal relationships on the success of innovation. Quality of purchasers’ intra-organisational relationships has a strong leverage effect on the impact of their actions (Bichon and Merminod, 2008). Yet companies cannot force individuals to share their expertise and knowledge, and there can be individual resistance (Connelly et al., 2012). We consider this factor to be related to business’ strategy in general, rather than to a particular purchasing strategy, because many departments are involved in the innovation process.

As Gonzales-Benito (2007) mentioned in order for the purchasing department to create value, it must be integrated and recognized by other functions. We believe like Horn et al., (2014) that internal integration is a precondition for external integration and therefore, it has a strong positive influence on sourcing success in the innovation context. Furthermore, we support the proposal that a shared working environment enables team development because nonverbal behaviour is essential in tacit knowledge transfer (Merminod and Paché, 2016).

In this research and in a context of uncertainty, we confirm also that a mature purchasing organization possesses competences to interact effectively with R&D (Mikkelsen and Johnsen, 2018), but also more specifically with marketing (due to the importance of their role and impact in B2C agri-food sector).

Servajean-Hilst and Calvi (2018) underline the importance of aligning strategic management of Purchasing department and of R&D department during innovation process. The concept of “alignment” is referring “to coherence among all the patterns of activities in the business unit; they are working together around the same goals.” Gibson et Birkinshaw (2004, p.209). From previous studies, "the current misunderstandings between the departments can be avoided by providing a clear communication of tasks and responsibilities" (Bals et al., 2009). Within our research, regular and intensive sharing insights between purchasing department, marketing department and R&D department fosters decision alignment, and therefore facilitate innovation process.

The willingness to share information inside a company requires trust between the individuals (Stefanou, 1999). We remind that many of the problems during innovation process can be traced to a lack of enabling factors: “lack of (access to) information; and insufficient competencies and differences in personal attitudes between departments” (Wynstra et al., 2003). Our findings support that willingness (disposition to act and share insight) from purchasing department could also be related to the interdependence between functions, also the mutual appreciation among departments involved in the innovation process. Moreover,
some corporate values (extracted from secondary data) facilitate the willingness to help and engagement in doing so.

The analysis shows that purchasing capabilities are especially important in case of collaborative development. Purchasing departments can add value during innovation in the agri-food sector but can also anticipate internal clients’ needs on a continuous basis through intra-organisational coordination. This echoes the prospective work of Tréhan (2014) which showed that the purchasing departments of the future will need to be more “business oriented”. This enables the purchasing department to have a 360° vision and requires, according to Tréhan (2014), the development of new skills.

Our results are also closely related to recent innovative work on essential innovation sourcing capabilities needed to excel in purchasing (Legenvre and Gualandris, 2018): purchasers must explore unmet needs and anticipate future competitive advantages by working in close collaboration with other functions and customers.

The Marketing’s role, according to Jüttner et al., (2007) “lies in obtaining market and customer knowledge, finding out the differing needs of customer groups, translating them into product and service offers to meet those differing needs and marketing the packages through customer value propositions”.

In our research, the purchasing department appears to have a strong link with marketing department and R&D department within the firms studied. Some purchasers develop business intelligence skills in order to anticipate clients’ needs. From this perspective, we found that for innovative firms, purchasing activities are increasingly similar to marketing activities (screening new ideas, generating some ideas of product, raw material or packaging, providing information on market/suppliers’ strategies and even providing information on competitors’ strategies). This is particularly true when intensive innovation is needed, also because innovation in agri-food sector impact packaging and the product itself, and, therefore consumer directly.

We support the fact that the purchasing department within the firm with a high maturity, and high hierarchical position can deploy some of the marketing activities, and therefore add more value to the business. From an individual level, purchasing agents interviewed were looking for activities that satisfy both curiosity, the appetite for novelty and they were eager to share their knowledge. One of the explanation of this "marketing" activities, could be the strong integration and the recognition of the purchasing department (Gonzales-Benito, 2007), and also the alignment between both functions during strategic innovation process. Another explanation is the importance of “purchaser’s internal attractiveness” that we present thereafter.

For the most part, previous studies on purchaser’ attractiveness have been managed mainly on inter-organisational context (Hüttinger et al., 2012), and shed light on the dyadic aspect of attraction and relationship success (Tanskanen et al., 2015).

In our research, we characterise the “purchaser’s internal attractiveness” construct as being the ability of the purchasing department to influence and convince the internal client (any internal actor participating in the innovation process) to collaborate. Purchaser's internal attractiveness is also envisioned benefits that an internal client sees in working closely with
the purchasing agent. Therefore, we argue the relevance of purchaser’s internal attractiveness as an enabler of intra-organisational collaboration in the innovation context.

5. Conclusion, limitations and perspectives

Research into the subject of intra-functional coordination involving purchasing during innovation is still in its infancy. Moreover, studies on EPI are limited to projects conducted in large companies, such as the automotive and electronics industries, and is more rarely conducted in other sectors (Wynstra et al., 2003), (Pham, 2014). Our main objective, therefore, is to help to fill the above gaps by providing an empirical analysis of the purchasing-marketing-R&D link, influential factors and purchasing activities in the innovation process of the agri-food sector. The study makes several contributions: It provides empirical evidence of the benefits of purchasing-marketing-R&D integration and confirms the relevance of some known factors, such as Early Purchasing Involvement (EPI), the quality of intra-organisational relations and intra-organisational alignment. On the other side, intra-functional factors emerged from our case studies, such as “purchaser’s internal attractiveness,” willingness attitude and managing anticipation of demand.

This paper contributes to research in early purchasing involvement (EPI). Our results show the importance of the influence and even some leadership of purchasing on innovation, but also the capacity of purchasing to add value in the idea generation phase of the innovation process. Indeed, in some cases marketing and R&D were convinced by the purchasing departments’ idea.

For practitioners, knowing that barriers exist inside the firm, this study reminds that strategic recognition of the purchasing function can help align objectives between departments. EPI is key to value creation by the purchasing department, and therefore, purchasing directors should define their missions around this. They should initially be aware that when initiating any innovation process, quality of the relationship between the main actors involved is very important. Cooperative practices and intra-organisational alignment are needed. A lack of awareness concerning these by purchasing professionals limits their ability to behave in a way that will create competitive advantage during innovation process. Managers involved in the innovation process must ensure that the nature of the relationships is based on trust and transparency between the actors. They must build strong cooperation and share on a regular basis, strategic insights with other functions. Furthermore, congruence of actions and words among organisational members is helping to generate trust. The results presented can help the decision-making process of purchasing managers regarding their priorities and activities early the innovation process.

Some limitations need to be considered in this explorative work. The focus mainly on B2C cases within agri-food sector is a limiting factor, as the business-to-consumer (B2C) markets have strong incentives to renew their products, due to both institutional, stakeholder pressure and consumers. Food and beverage innovation is often driven by the consumer (Lundhal, 2011). These limitations serving as stimulus for future research, it may be appropriate to
work in a near or emerging multi-sectoral mode to confirm our findings. Moreover, a detailed analysis of the similarities between purchasing and marketing activities, the reasons and benefits of these activities, as well as a specific focus on marketing-purchasing interface could help to understand the impact of this inter-functional relationship on the innovation success.

References


Pham, L. L. N. (2014). The role of early purchasing involvement in innovative projects at public research institutes (Bachelor's thesis, University of Twente).
Schiele (2006), How to distinguish innovative suppliers? Identifying innovative suppliers as new task for purchasing. Industrial Marketing Management 35, 925–935


Laurence Viale
EM Strasbourg Business School
Université de Strasbourg HuManiS (EA 7308)
laurence.viale@em-strasbourg.eu

Assistant Professor at Ecole de Management de Strasbourg (University of Strasbourg), she is heading a Master degree in Business Management and the major in Supply Chain Management / International Purchasing of Programme Grande Ecole.
Her research interests include roles of Purchasing agents in the innovation process, purchasing skills and intra-organizational relationships in the context of innovation. She has twenty years of practical experience in Strategical Buying (corporate sourcing, team leading and European category buying) and as an IT engineer. She is also a member of the IPSERA association.