

Appendix B: Pilot Study and Protocol

This appendix is divided into two main sections. The first section is labelled as Appendix B.1. It introduces the pilot study conducted before starting the focal data collection of the case study research. The second section is labelled as Appendix B.2 and it presents the pilot study protocol that was used to guide the data collection process of this pilot study.

1.0 Appendix B.1

The purpose of the pilot case study was to ensure the validity of the developed case study protocol and increase reliability during the data collection stage. Furthermore, carrying out this pilot study was important to obtain a better understanding of the subject of supply chain integration. The lessons learnt from conducting the pilot case study are reflected in the design and contents of the protocol. The pilot study was conducted with a Jordanian garment manufacturer, being the focal company, and one of its major customers. The focal company will be referred to hereafter as the Pilot Study Company (PS Company) while the customer will be referred to as the Pilot Study Customer (PS Customer). Data sources included collecting evidence through interviews and direct observation. From the PS Company, 3 face-to-face interviews were conducted with the General Manager, Purchasing Manager and Production Supervisor. From the PS Customer, a face-to-face interview was conducted with the Managing Director. Observations were made during 2 field visits to conduct the interviews; this included visiting the managers' offices and production facility of the PS Company and the two branches of the PS Customer. The data collected from the pilot case study were empirically analysed by relating these data to the theoretical framework main and lower level constructs and discussing the developed themes. The data collected from the pilot study will not be considered for drawing findings from the actual case study research of this thesis as the purpose of this pilot study was to refine the protocol and provide clarifications for the research design.

1.1 Pilot Case Study Background

The PS Company is a family owned manufacturer and supplier of Islamic fashion garments based in Amman, Jordan. The company was established in 1927 and in 2012 employed 150 employees. There was no formal management structure and the duties were distributed between the General Manager and the Purchasing Manager who belonged to the owner's family. The General Manager was responsible for sourcing of raw materials from overseas suppliers, making deals with customers and the office administration. The Purchasing Manager helped the General Manager by travelling to visit raw materials suppliers, communicating with these suppliers and taking limited responsibility for office administration. The PS Company sources its raw materials and components from overseas suppliers located mainly in South Korea, China, Indonesia and Turkey. The company sells its products through several channels including wholesalers, retailers and direct sales to end-customers. However, the major customers of the company are the retailers of women fashion garments and Islamic fashion garments. These customers are basically located in the Middle East including Iraq, Palestine, Saudi Arabia, the United Arab Emirates but also the United States of America and South Africa. The majority of production at the PS Company was make-to-order with customers placing their orders based on the sample designs offered on a daily basis by the company. The in-house design and manufacturing offered the company the flexibility in satisfying customers' demand.

The PS Customer is a family-owned wholesaler and retailer of women's fashion garments located in the North of Jordan. This company was established in 1996 and in 2012 had 9 employees working in the two retail and wholesale branches. This company has been a customer of the PS Company since 2003 and became its sole agent in the Northern Region in 2008. The PS Company makes around 90% of the PS Customer's purchases of Islamic garments, this makes around 8% of the PS Company sales to this customer.

Having provided general background information about the pilot case study, the data collected from interviews and direct observations are now presented and analysed.

1.2 Internal Company Integration

1.2.1 Internal Actors Integration

The company did not appear to have cross-functional teams among its internal departments. Rather, all internal business issues were centralised by the General Manager who had hands in every single function within the company. The General Manager explained that:

"... Everyone gets back to me when they need to take any decision. All accounting, shipping, and purchasing and sales employees get back to me. But among them there is a daily relationship... There is centralisation in our work. Whoever has anything to tell will get back to me and then I decide what to do."

Instead of working through cross-functional teams, the General Manager and the Production Supervisor worked as connection points where all ideas, information and business issues were captured. The Purchasing Manager explained:

"There is an old thing going on but we should change it now. The thing that the sales, purchasing, customer service and production departments are closely related. However, the reason is that all these departments are managed by one person (The General Manager)."

Similarly the Production Supervisor stated that:

"They are usually informal meetings but again we need to ask the General Manager as he is the one who takes the decision about such issues."

The PS Company did not employ cross-functional teams to achieve linkages amongst its internal operations. However, the involvement of the Production Manager and the General Manager in all internal business aspects and daily follow up with the different operations appeared to facilitate linking and working these departments towards meeting customer's requirements.

The PS Company did not have identified goals either at the organisational level or at the departmental level. Although internal operations were performed through different employees who were specialists in what they did, these employees were not authorised to identify goals and take decisions. Decisions were always centralised by the General Manager who had been in the business for 30 years and who was part of the family who owned the business. This was justified by the General Manager due to the low level of education and knowledge of employees which meant that they could not be decisions makers. He stated that:

"You should know something about our sector and specially us. We are a local company and local companies have expanded in a way that was not planned for or organised. More importantly, almost all workers in these companies are not qualified. These guys usually had failed at school, went to the street, and found a company to work for and then developed themselves. They might have reached managerial positions but the most educated person did not complete primary school or.... That's the main problem I am talking about. So you cannot leave these guys to be decision makers".

The Purchasing Manager stated that there are no identified goals for the company, not even for single divisions:

"...but as a formal goal for the company, no, there is no. There is nothing called the company goals or vision or such things".

Overall, although the company had been in business for a long time and its employees are considered experts in their specialities, there was a lack of linkages among them. All business issues were centralised by senior management who had a hand in every single function within the company. The integration of these departments and getting them working them as one unit was achieved through the General Manager and the Production Supervisor.

1.2.2 Internal Information Integration

At the company internal level information is captured through the Production Manager and the General Manager. There is no information shared across the different functions within the company. The Production Supervisor explained:

"The thing that the General Manager is the only one who knows what is going on and transfers information and takes information from us".

Therefore, information about production schedules and status, stock levels and orders were coordinated through the General Manager who then took decisions based on his own experiences. The General Manager explained that the low level of education of the company's employees made him not to get them involved in decision making:

"... I have done a master's degree and I'm involved in science and knowledge so my education helped me. But these guys cannot do forecasting and assessment to reality as you need it."

There is internal transfer of sales information from the company's local shops and senior management. However, there is no regular exchange of information between the production and supporting functions.

1.2.3 Internal Material Integration

At the company internal level, issues related to inventory were managed by the General Manager. The make-to-order production strategy that the company adopted has long affected the way inventory is managed within the company. Raw materials including fabric and trim were imported from overseas suppliers based on historical forecasting techniques. Received materials were then stored in the warehouse and samples are produced in order to offer them for customers.

The General Manager referred the company structure of dealing with inventory management through himself to that forecasting is a multidimensional process that he cannot be carried out by other employees in the company. He explained:

"... I confirm that you cannot teach these to others. I mean it is something that needs long experiences and knowledge and keeping up to date with the trends and the region around you and the world fashion shows to know where we are going or heading".

The management of material flow within the company was mainly through coordination efforts by the General Manager. The production and supporting functions did not appear to be involved in achieving internal material integration.

1.2.4 Internal Technological Integration

The company used mainly email communication for information transfer amongst internal production and supporting functions. The company employed an internal information sharing system represented by a point-of-sale (POS) system to transfer information from the local sales branches to senior management. However, the other functions in the company were not linked by information technology. All interviewees suggested this reflected the entrepreneurial culture in the company where information is captured and decisions are taken through senior management as the owners of the business.

1.3 External Integration

1.3.1 External Actors Integration

The company appeared to have long-term relationships only with its customers and did not have long-term relationships with suppliers. The reason for not having long-term

and close relationships with suppliers was justified by the General Manager, Production Manager and Purchasing Manager due to the business relationships style in the Far Eastern countries as well as the low purchase volume. The General Manager stated that:

"Business is business, they (Suppliers) care about money, and they do not care about anything else. My relationships in the Far East have been for the last 23 years and what I learned from this that they care about what is going on now, on the spot only. For them it is about the current deal and that's it".

Similarly, the Production Supervisor explained that building relationships with raw material suppliers was difficult to achieve:

"We tried to build relationships with them but you need to keep in mind that our suppliers are in China and South Korea...from my experience in this company, suppliers care more about business transactions rather than building friendships or relationships."

However, the relationship with the company customers seems to be close and on-going. The General Manager stressed that there are long-term relationships with the customers:

"Yes there is a relationship. You sit with them (customers), you eat with them, and then the relationship develops and becomes a friendship".

This has been supported by the Purchasing Manager who believed that the close and long-term relationship with customers are an important competitive advantage for their company's success. Similarly the Production Supervisor explained that they enjoy close and long-term relationships with customers:

"From my previous experience in sales at this company, yes we always have close relationships with our customers."

Mutual Understanding appeared to be an important factor in the PS Company relationship with its customers. Interviewees referred this to the fact that the company has been in the market for tens of years now. Therefore, the company has been able to build relationships that are based on mutual understanding with a number of its customers. The General Manager insisted that mutual understanding and trust are important factors in the company business successes. The Purchasing Manager explained that trust has always existed between the company and its customers. He stated that:

"We have been in the market for long, and people trust the company and the persons in the company and the manager of the company personally".

However, he insisted that trust can be different from one customer to another and usually exists to a specific extent. This view has been put forward by the Production

Supervisor who, similarly, confirmed that the company enjoyed mutual trust with its customers. The Managing Director of the PS Customer explained that the relationship with a [customer] company is to a large extent built on mutual trust although this trust cannot be absolute. He asserted that:

“There is trust but it is relative not 100%”

However, the company differentiates between its relationships with customers and suppliers. Trust did not have high mutual understanding with its suppliers. The General Manager described his relationships with the suppliers in the Far East as follows:

"Business is business, they care about money, and they do not care about anything else... they are not those people whom you can invest in a relationship with them".

Commitment appears to be an important factor in the PS Company relationships with its customers. The three interviewees within the company insisted that they are committed to their relationships with their customers. The Managing Director of the PS Customer showed commitment and willingness to maintain the relationship with this company.

The Production Supervisor stated that their relationships with customers are committed:

“...since this relationship is an important part of our business then we are always interested in maintaining this relationship.”

The Managing Director of the PS Customer explained that both parties are happy with the relationship with each other and he is interested to maintain the relationship and he feels that they have the same willingness towards his company.

"They (PS Company) are interested in continuing with working with me and happy with me and I exchange with them the same feelings"

1.3.2 External Information Integration

At external the company level information sharing is more obvious with the downstream side more than the upstream side. There did not appear to be collaboration in sharing information on a regular basis between the company and its suppliers. The information that the company shared with its suppliers was limited to order specifications, details and status. When the General Manager was asked if he gives information to suppliers regularly:

"Not this way. I do not give information in this way. I tell them only what I need".

The company also shared information with its suppliers related to feedback about the products and market. However, this type of information was not shared regularly. The General Manager explained:

"... I call the supplier and tell them what product was selling well in summer and...I ask them to focus on it".

However, the case to a large extent is different with customers although it is not considered a high level of information integration. Information sharing includes order specifications as well as some market feedback information which is shared irregularly through phone calls or when they are business meetings with customers. The Managing Director of the PS Customer explained:

"Every time we talk or meet we tell them about the products that sell well and those which do not sell well... At the beginning of the season for example we discuss with them what I need roughly for the shop and the Northern Region as their agent in this region".

However, this information transfer did not happen in a formal way so that the manufacturer could work on it officially.

1.3.3 External Material Integration

The company adopts forecasting approaches for ordering and make-to-order production strategy for dealing with customer orders, but cooperation in inventory management amongst the company and its partners did not appear to be adopted by the company. However, the General Manager admitted that forecasting is not a perfect approach to adopt:

"It is never perfect in terms of being out-of-stock or overstocked. So you know it is based on methods that are not scientific and in our region you know the situation is unstable. This thing prevents you from doing long-term forecast."

The Purchasing Manager explained that there are other aspects of collaborating with customers in terms of reallocation of products. The company tends to collaborate with its customers in reallocating products that do not sell well in their countries.

The company did not appear to coordinate logistics activities closely with its suppliers and customers. The cooperation in logistics activities between the company and its suppliers and customers is related to arranging order shipping. The General Manager commented on the way they cooperate with their partners in shipping

"... It is in terms of selecting the airlines only. It could take up to 48 hours less"

The Managing Director of the PS Customer explained that shipping was closely coordinated with the PS Company in terms of arranging documents and follow up. However, he explained that due to the almost fixed nature of carriers prices, they show more interest in dealing with a good performing carrier:

"Since the shipping costs do not vary very much from a carrier to another, we are rather interested in the performance of the shipping company".

1.3.4 External Technological Integration

The company did not use any sharing systems with its external suppliers or customers. Information was shared through meetings, phone calls and emails. Both the General Manager and Purchasing Manager confirmed that the lack of understanding of their customers is the main reason for not employing information sharing systems. The General Manager explained:

"I do not remember that any of our customers has a university certificate...in order to use the computer properly."

The issue of the high investment in information sharing systems was also raised by the Purchasing Manager:

"In Europe, the person we dealt with in the UK is 70-year old and he does not very much deal with computer. Moreover, he would need to pay a huge amount of money for a system."

The Production Supervisor stated that:

"We find it easier using the phone and when we visit them to be close from them and build better relationships"

The Managing Director of the PS Customer explained that there was no information sharing system that connected his company with the PS Company. Instead, meetings and phone calls were used to discuss business issues and share available information. He stated that:

"We keep in touch through phone. We almost have daily calls and also visits. I visit them every week to see what products they have and tell them about our needs"

The PS Company did not have any dedicated technological resources for integrating with their suppliers or customers. The communication tools of email and phone were only used for sharing information.

Having introduced the pilot case study and conducted analysis of the data collected from the PS Company and the PS Customer, the next section will identify the lessons learnt from conducting and analysing this pilot test.

1.4 Lessons Learnt from Conducting the Pilot Case Study

Conducting this pilot case study was important to refine data collection plans in terms of the contents of data to be collected and procedures to be followed and increase the conceptual understanding of the research design. The Lessons learnt are listed below.

- It was difficult to understand internal company integration in the selected focal company as there were not separate departments. Hence, having separate departments within the focal company was found to be an important criterion to add to the case study selection criteria.
- The quality of information shared in terms of its frequency and accuracy was not understood. Therefore, there was a need to add separate questions about the quality of information shared internally but also externally with suppliers and customers.
- There was a difficulty in making a clear flow and consistency of questions during the interviews as the interviewees' answers about external supplier integration were different from external customer integration. This was also found to be a problem when analysing the data as it was not easy to codify the data collected about this construct. Therefore, the questions related to external supplier and external customer integration need to be listed separately in the case study protocol.
- There was difficulty in managing some questions as the interviewees were asked about internal company integration between the internal departments without specifying what departments. Therefore, the focus of the questions of internal company integration needs to be about the production and supporting functions (value adding functions) rather than asking about integration amongst the departments in general.

- Data reduction and analysis based on categorising the data according to the theoretical framework was found to be appropriate. However, external supplier and external customer integration need to be shown in two separate categories in order to better present the data.
- Using the mobile phone for recording the data was found to be unreliable. For example, the memory ran out of space quickly, the voices were not very clear during transcribing the interviews and the phone battery was low after recording only two interviews. Therefore, it was decided that a voice recorder should be used during the actual data collection stage.
- The researcher gained some experience on how to deal with the interviewees who go off-track and talk about things unrelated to the subject during the interviews.
- Conducting a pilot study proved to be a valuable instrument for increasing the reliability and validity of research.

1.5 Summary

This appendix chapter reported on the pilot case study conducted prior to starting the actual data collection process. The pilot case study was useful in that it helped the researcher gain some experience on approaching companies, conducting data collection and analysis. The lessons learnt were explicitly stated and reflected on the design and contents of the case study protocol and the way data analysis process was carried out. The next stage was to conduct the actual data collection process. Chapter 5 of this thesis introduces the companies involved in the case study research and gives a background about their internal operations and supply chains.

2.0 Appendix B.2

The section second of this appendix chapter presents the pilot study protocol that was developed before carrying out the data collection process of the pilot study.

2.1 Pilot Study Selection Criteria

The selection of the garment manufacturer will be based on the following criteria:

- The selected business needs to be a garment manufacturer located in Jordan and has a trading history of more than five years;
- The selected manufacturer needs to be a supplier of garments to international markets and involved in supply chain activities;
- The selected business must have the willingness to participate in the case study research and provide a full access to the researcher;
- The selected business must have the willingness to provide access to their key customers and involve them in the case study research.

The selection of customer will be based on the following criteria:

- The selected customer needs to be a major trading partner and had a relationship with the focal company for more than three years;
- The selected business needs to be involved in wholesaling, retailing or sourcing of ready garments;
- The selected customer must have the willingness to participate in the case study research and provide the needed access to the researcher.

2.2 Interview Procedures and Questions

1. Greeting the interviewee and thanking them for their time
2. Research background

This research will make use of supply chain integration literature to support the garment manufacturing industry in Jordan. This research aims at investigating the role of supply chain integration in improving the competitive advantage of Jordanian garment manufactures serving international customers. Thus, the main motivation lies in the author's desire to make a contribution to the growth of the garment manufacturing industry in Jordan where business opportunities are believed to continue.

3. Stating that the data to be collected will remain confidential
4. Taking permission to record the interview
5. Taking notes on Microsoft Word
6. Supply Chain Integration Questions

Manufacturer Questions

❖ Internal Actors' Integration

- Do you have internal organisational structure in your company? What are the functions? Are there cross-functional teams between these functions?
- Do you use cross-functional teams within your company? Why and how they work?
- How do you describe collaboration across the functional departments within your company?
- Do you have identified goals? Are these goals shared across the different departments? Do you have planning in your department? How this planning relates to the organisation?

❖ External Actors' Integration

- Do you have relationships with your suppliers and customers? How do you describe this relationship?
- What are the elements of your relationships?
- Do you maintain cooperative relationships with your suppliers? Do you maintain cooperative relationships with your customers? Explain please.
- Do you have identified objectives for your supply chain? Is there a similar understanding about the objectives of the supply chain between your company and your trading partners?
- Do you trust your trading partners? Do they trust you? To what extent you and your partners have mutual trust?
- To what extent you and your partners have commitment in your relationship and willingness to continue this relationship?

❖ Internal Material Integration

- What type of material do you acquire from your suppliers? What happens to these materials once purchased?
- How do you manage inventory within your company?
- Do the functional departments within your company collaborate to enhance the flow of material internally? Give examples?
- Is there collaboration among the different functional departments to reduce the level of inventory and reduce the inventory holding costs and expedite the flow of raw material, work-in-progress and finished goods?

❖ External Material Integration

- How do you manage your logistics activities with your partners?
- To what extent your logistics activities are closely coordinated with your partners?
- Do you collaborate with your partners to manage inventory? Do you work based on VMI? Do you take responsibility of a customer stock?
- Do you collaborate with your partners to enhance the flow of material across the supply chain? Give examples?
- To what extent your company and your partners use common and standardised logistics procedures? Explain.

❖ Internal Information Integration

- Is the information available at your departments accessible by or available to other departments?
- What information do you share among the functional departments? When? How?
- What are the benefits of shared information?
- How do you ensure the information shared is timely, trustworthy and accurate?

❖ External Information Integration

- What information is shared across the supply chain? With whom? When?
- What material information across the supply chain? What capacity information you share across the supply chain?
- What information do you transfer to the upstream players?

- What information do you transfer to the downstream players?
- What are the benefits of sharing information?
- What are the barriers to information sharing? What are the barriers to use the shared information?

❖ Internal Technological Integration

- What technologies do you use in your company? Is information technology important in linking the different functional departments in your firm? Explain?
- Do you have common information sharing systems used across the functional departments?
- How do you ensure the accuracy of information transferred?

❖ External Technological Integration

- Do you use technology in connecting with your partners?
- Do you have an idea about the systems and technologies used by partners?
- How does that affect the technologies that you employ in your company?
- Is collaboration achieved through technology?
- What technologies are intentionally mutual throughout the whole supply chain network? (i.e. mutual between the downstream and upstream players)
- How do you ensure the accuracy of information transferred?

Customer Questions

❖ External Actors' Integration

- Do you have a relationship with (PS Company)? How do you describe this relationship?
- What are the elements of this relationship?
- Do you maintain cooperative relationships with (PS Company)? Explain please.
- Do you have identified objectives for your supply chain? Is there a similar understanding about the objectives of the supply chain between your company and (PS Company)?
- Do you trust (PS Company)? Do they trust you? To what extent you and (PS Company) have mutual trust?

- To what extent you and (PS Company) have commitment in your relationship and willingness to continue this relationship?

❖ External Material Integration

- How do you manage your logistics activities with (PS Company)?
- To what extent your logistics activities are closely coordinated with (PS Company)?
- Do you collaborate with (PS Company) to manage inventory? Do you work based on VMI? Do they take responsibility of your stock?
- Do you collaborate with (PS Company) to enhance the flow of material across the supply chain? Give examples?
- To what extent your company and (PS Company) use common and standardised logistics procedures? Explain.

❖ External Information Integration

- What information is shared across the supply chain? With whom? When?
- What material information across the supply chain? What capacity information you share across the supply chain?
- What information do you transfer to the (PS Company)?
- What are the benefits of sharing information?
- What are the barriers to information sharing? What are the barriers to use the shared information?

❖ External Technological Integration

- Do you use technology in connecting with (PS Company)?
- Do you have an idea about the systems and technologies used by (PS Company)?
- How does that affect the technologies that you employ in your company?
- Is collaboration achieved through technology?
- What technologies are intentionally mutual throughout the whole supply chain network? (i.e. mutual between the downstream and upstream players)
- How do you ensure the accuracy of information transferred?

7. Are there any other data sources such as records, documents, or observations that I can benefit from in order to gain a better understanding of the subject? Explain please.
8. Are there any other areas you think that I should have covered in the interview in order to gain a better understanding of the internal and external integration? Explain please.
9. Would you like to add any comments about how the interview has been carried out?
How can I improve this?
10. Thanking the interviewee for their participation and time.