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Use of Project Management in the Ready Made Garments Sector

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Use of Project Management in the Ready Made Garments Sector

Abstract

The export-oriented apparel industry of Bangladesh, popularly known as RMG or the garment industry occupies a dominant position in the economy of Bangladesh. The export-oriented industry sector has experienced a phenomenal growth during the last three decades. The nature of the relationship between the international buyers and the local RMG manufacturers is transactional and ad-hoc. The international buyers manage each order with traditional operations processes such as merchandizing, procurement, quality management, shipment and transportation etc. This research using an illustrative case based on a case study argues that performance and overall competitive advantage of all the stakeholders can be improved if individual orders are taken up as project and existing project management knowledge, skills and tools are used. The benefits can be in terms of overall cost minimization, reduction in lead-time, improved efficiency and productivity among others.

Keywords: Project Management, Ready Made Garments, Supply chain Management, International Clothing Industry, Project Planning, Action Research.

1. Introduction

RMG manufacturers in Bangladesh are facing many problems that can potentially be reduced if customer orders are conducted as projects. The paper investigated the use of project management tools, techniques and methods in the RMG industry sector. An order from an international customer which is a well-known international retailer is used as an illustrative case to prove the concept.

The clothing industry is considered as one of the oldest global industries in the world. It is highly labor intensive which allows most nations, including developing ones, to participate. The clothing product includes sewn garments (e.g. shirts, pants) and knitwear (e.g. sweaters). It is also referred to as the apparel industry. Bangladesh is an important sourcing hub for the international clothing companies. Bangladeshi RMG industry sector is encountering many problems including low rate of productivity and efficiency, high lead time, high cost of quality, low rate of “Right First Time”. All these problems induces risks and uncertainties to international customers including unacceptable quality level, bottleneck, coordination failure and cost variance. Some of these problems can be managed, if the individual orders received by RMG manufacturers are completed as projects and relevant tools, methods prescribed by the Project management Institute (PMI) are used.

2. Methodology

Bangladesh are facing many problems that can potentially be reduced if customer orders are conducted as projects. The investigated manufacturer is referred to in this paper as the focal company. This study adopted action research to achieve the objectives. Action research methodology has evolved over the years and can be defined as “orientation to knowledge creation that arises in a context of practice and requires researchers to work with practitioners” (Bradbury-Huang, 2010). One of the authors was attached for the entirety of the project with the organization under investigation. During this period, the researcher observed and executed various business processes and practices of the RMG manufacturer. In this regard, the researcher attended meetings, interacted with external

stakeholders, conducted routine activities and analyzed documents. The data and information gathered were later qualitatively analyzed.

The main products of the focal company are woven tops (e.g. shirts) and bottoms (e.g., trousers and shorts). At present the company concentrates more on bottoms. The company was established in 1984 and has a single factory located in Dhaka, Bangladesh, with a space of 36,000 square feet. It has a production capacity of 8,500 dozen unit of clothing per month. The company has approximately 965 staff.

3. Results and Discussion

The investigated company in this research conducts its activities using traditional operations processes such as merchandising, production, purchasing and procurement etc. The company mainly exports its products to Europe and United States. In addition, it exports to Korea, Japan and Australia. The company's major clients include world leading clothing brands and retail outlets. The focal company also has its own suppliers and sub-contracting companies. In addition, the company needs suppliers for Trims- button, pocketing, interlining, zippers etc. The company usually manages customer orders on ad-hoc basis.

Once a customer communicates regarding a potential order, the dialog is taken over by the merchandising team of the focal company and the team would analyze trims related information such as button, pocketing, interlining, zipper etc. This team would then communicate with its own supply partners regarding sourcing of fabrics, trims sub-contacting etc. They will also communicate internally with the production unit regarding current capacity and existing orders.

In the case of some contracts, the customer may impose a restriction on where the focal company can source the required fabrics. The specification or the design of the product is in most cases sent by customers in the form of a technical pack which includes fabrics, color, sewing, details like positioning of buttons etc. The technical pack generally also includes a CAD (Computer Aided Design) file and even a sample physical product at instances. Once the order is confirmed the production process starts.

Quality management is ensured by the customer and the focal company using in process and before delivery inspections. However, the focal company with its existing methods faces many challenges including difficulties in quality management leading to high rate of rejection; issues with lead time resulting in fines and dissatisfied customers; communication breakdowns; productivity and efficiency problems. The focal company as a test case decided to use project management approach to process an order from a large international customer. Following discussion, provided an accurate estimate of the benefits of using project management techniques.

Work Break-Down Structure (WBS) was developed by the project team in consultation with the customer. WBS is the process of subdividing project deliverables and project work into smaller, more manageable components. The project is divided into six Work Packages (WP) which included Project Initiation (WP1/ M01); Planning (WP2/ M02); Materials and Trims Sourcing (WP3/ M03); Product Manufacturing (WP4/ M04); Inspection and Shipment (WP5/ M05); and Project Closing (WP6/ M06). Under the level 1 activities/ WP there are sub-activities (Level 2). For example, the Planning (M02) activity includes sub-activity such as sample planning (2.1); material procurement planning (2.2); production planning (2.3); and shipment (planning). Level 1 activities, Materials and Trims Sourcing (M03) and Product Manufacturing (M04) are estimated to last the longest duration which is 30 days. The entire project duration is 84 days. One should also note that activities within the project often have dependencies. In this project level 1 activity Project Initiation (M01) is a predecessor to activities Planning (M02) and Materials and Trims Sourcing (M03); whereas the activity Product Manufacturing (M04) has predecessor Planning (M02) and Materials and Trims Sourcing (M03). It should be mentioned that an activity with dependency can only be started once the predecessor activity is finished.

As per project management principle, the charter was created which is a document that formally authorizes the project and provides the project manager with the authority to apply organizational resources to project activities. It further outlines the scope, objectives and participants in a project. The scope of the projects agreed are as follows:

- the product should be based as per the customer's advised quality;
- the materials and trims should be from sustainable sources prescribed by the customer

- the factory and mill which will produce the supplies should be approved by the customer
- shipment should be on time
- the price cannot be increased until or unless buyer makes any change to the product
- product quality inspection should be passed by designated quality controllers
- all required test parameters should be passed before shipment
- packing and mode of transport should be executed as per customer's requirement.

The project scope statement and the charter developed is illustrated in Figure 1 and 2 respectively.

PROJECT SCOPE STATEMENT	
Project Title:	"A project on total life cycle of a RMG product"
Product Characteristics and Requirements:	
<p>The product Beckham Trouser will be produced and shipped under below conditions:</p> <ol style="list-style-type: none"> The product should be based on H&M required quality The materials and trims should be from sustainable source prescribed by H&M The factory and mill which will produce the goods should be approved by H&M Shipment should be on time The price cannot be increased until or unless buyer makes any change in product Product quality inspection should be passed by designated quality controllers All required test parameters should be passed before shipment Packing and mode of transport should be followed as per buyer's requirement. 	
Summary of Project Deliverables:	
<p>This product shipment should be delivered with all pre requisite within the desired time and make sure the projected profit and business is earned by the manufacturing garment factory.</p>	
Project management-related deliverables:	
<p>Project charter, scope statement, work breakdown structure, milestone list, schedule, network diagram, cost estimate, cost baseline, quality checklist, organizational chart, status report, final report and any other documents required to manage the project.</p>	
Product-related deliverables:	
<p>Beckham trouser is a product with an order quantity 1M with a FOB \$8.25/pc. Factory "BPL group" is estimated to make a profit overall \$1.20 per pc which means a total of \$12, 00,000 (twelve lacks) after all product expenditure and overhead cost.</p>	
Project Success Criteria:	
<ol style="list-style-type: none"> Profit margin – Well achieved Quality – Ensured On-time – Within schedule Buyer satisfaction – Ensured Creating new order opportunity 	

Figure 1: Project Scope Statement

1. PROJECT CHARTER			
Project Title:	"A project on total life cycle of a RMG product"		
Project Manager:	Fazle Rabbi		
Project Sponsor:	Hennes & Mauritz (H&M)		
Start Date:	16/03/18	Finish Date:	06/06/18
Budget Information:	The cost will be sponsored by H&M. The FOB is \$8.25 for the product style named Beckham Trouser.		
Project Objectives:			
<ol style="list-style-type: none"> 1. Analyze all relevant factors 2. Manufacture target product 3. Optimum Use of 3M 4. Shipment goods on-time to customer 5. Ensure Customer requirement & Quality 6. Maximize Profitability 			
Approach:			
<ol style="list-style-type: none"> 1. Follow Standard Manufacturing Process 2. Focus on Quality Standard 3. Focus on Customer expectation 4. Environmental sustainability 			

Project Team		
Name	Role	Phone
A. Fazle Rabbi	Product Buyer/Manager (Strategy, Price and Sourcing)	01712676763
B. Shafikul Islam	Production Manager (Planning and Production)	01707301919
C. Khandoker Maruf Momin	Quality Manager (Quality and Inspection)	01847132905
D. Fahim Yusuf	Logistic Manager (Finishing, Packing and shipping)	01726140549

Figure 1: Project Charter

Project cost management techniques such as estimation, budgeting and control were diligently applied. The creation of WBS allowed the project team to develop accurate approximation of the costs of the resources needed to complete the project activities and aggregation of cost for work packages. Project control tools such as periodic project reports helped to influence the factors that create cost variances and control changes to the project budget.

Table 1 articulates the activity (level 1) wise cost break down of the project. Periodic progress reports were create indicating the completion rate and resource consumption; hence any variance was quickly identified, and the problem mitigated.

Table 1: Budget of the Beckham Trouser Project

Cost Center	Cost Area	Total Cost @USD	Total Cost @%
M01	Project Initiating Cost	\$ 282,000	4.00%
M02	Planning Cost	\$ 141,000	2.00%
M03	Materials and Trims Cost	\$ 4,230,000	60.00%
M04	Product Manufacturing Cost	\$ 2,115,000	30.00%
M05	Inspection & Shipment Cost	\$ 197,400	2.80%
M06	Project Closing Cost	\$ 84,600	1.20%
Total Cost of the Project		\$ 7,050,000	100%

The project utilized a project planning tool named the Critical Path Method (CPM). It is a network diagramming technique used to predict total project duration. A critical path is the series of activities that determine the earliest time by which the project can be completed. The longest path or the path containing the critical tasks determines the completion date for the project.

4. Conclusion

The use of project management methodology, knowledge and tools in managing a customer order. Such practices have shown significant benefits over regular operations methods traditionally employed. The benefits includes 1) improved performance; 2) reduction in cost and 3) improved customer relation.

The use of project management planning technique such as CPM has led to higher accuracy in activity wise time estimation and greater visibility on real-time resource consumption. The management clearly understood the number of days an activity can be delayed without impacting the project. This has resulted in a situation, where lead time of the entire project has decreased by 10%. The number of rejection due to quality has reduced by

3%. Consumption of less resources and better control have resulted in an increase in productivity and efficiency.

As part of the initiative to use project management techniques and methods, WBS was created for the illustrative case. Use of WBS and subsequent cost levelling meant that the management had clear idea regarding the completion rate of the activities and ongoing cost incurred. Hence, any deviation in actual cost from the estimate were addressed quickly. As a result, total cost of the project was reduced by approximately 4% from usual.

The use of project management by the focal company had a positive impression on the customer. As mentioned earlier, the international customers are large brands and retailers. For RMG manufacturers such as the focal company, the supply chain relationship is usually continuous one with customers; hence it is important for the former to gain trust of the latter. The use of project management to manage customer orders enabled the focal company to deliver the products in reduced time which helped the customer to reduce it's own time-to-market. In addition, the focal company could present itself as more professional to the customer, thus enhancing the market reputation and trust of the RMG firm and increasing the prospect of future orders.

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