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Assessment of Operations Strategy Formulation Practices of Selected Textile Manufacturing Firms in Adama City, Oromiya Region, Ethiopia

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ABSTRACT

It is clear that business organizations are confronting challenges due to changes in customer preferences, scarcity of resources and globalized market orientation. Such situations forced them to formulate a strategy that fit to the circumstances where they operate. Thepurpose of this study was to assess the practice of operations strategy (OS) formulation in ETUR (EthioTurkish) textile and Adama Spinning factories located in Adama City. More specifically the objectives of the study were to describe the extent of operations strategy formulation processes followed; to assess the level of operations strategy contents addressed during formulation; and to determine the major internal and external factors that affect operations strategy formulation in the study factories. To achieve these objectives descriptive research design was applied. The data required for this study were collected from primary sources through questionnaire and interview. The questionnaire was initially distributed to 81 respondents' selected using stratified random sampling technique. Among the distributed questionnaires, 67 (82.72%) respondents had appropriately filled and returned. So, analysis and interpretation was done based on these responses. Furthermore, interview was administered with six individuals purposively selected from both firms. The quantitative data were organized and processed using SPSS (V-20). Then the analysis was made using descriptive statistics like frequency, percentage, mean, and standard deviation. Accordingly, the findings of the study shows that, the overall OS formulation practice comprised of frameworks and contents of performance objectives were within moderate level. But the rate of employees' participation in group and or individual base was not considered well. In addition, the capacity to view the capabilities of their operations resources or to develop OS that could respond to customer requirements and competitive criteria was below moderate level which needs the attention of the management to seriously view it in the future. Moreover, poor

customers' needs and demands analysis, lack of adequate professionals, and inadequate financial resources were identified as internal factors that adversely affected OS formulation. Poor supply work force from labor market, lack of getting appropriate technology with low cost, stiff global competition and inflation, and foreign currency shortage are cited as external factors that negatively affected firms' operations strategy formulation. Based on the findings: special emphasis has to be given for addressing all perspectives in the formulation process; improve and make trade-off in operations performance objectives; and create opportunities for more participation of employees and to involve customers' opinions; establish training and research institution by Textile firms and through their association; doing more critical environmental scanning; and on government side; to identify weaknesses of the textile industry through regular research and then to revise related policies that enhance their competitiveness were forwarded as recommendations.

***Key words**: Operations Strategy, Operations strategy formulation process, Performance objectives, Decision areas, Alignment, Ethiopia.*

1. INTRODUCTION

In this turbulent environment organizations need to have the ability to develop and implement new strategies quickly and effectively so that they are successful in achieving their goals. Especially, for organizations like in Ethiopia where there are much difficulties of survival, in such stiff global competitive business environment, well formulated strategies and their successful implementation have a paramount importance (Tefera, 2010; Serfontein, 2010). Global mega-trends are leading to increasing levels of complexity, dynamism and uncertainty in the corporate environment (Serfontein, 2010). This author further claimed that in an uncertain economy, organizations need effective strategies that will enable them to succeed.

It is clear, from the broad organizational strategies; one of the critical aspects of strategy is operations strategy that helps organization to realize the stated objectives by setting specific strategies to accomplish the process of converting inputs to outputs that fulfils the demand of customers. According to Laster (2015) an appropriate operations strategy is essential to an organization not only as this will determine the extent to which its business strategy can be implemented, but also as its operations can be a source of competitive advantage. He further summarizes the importance of operations for an organization success as follows;

An organization's operations are strategically important precisely because most organizational activity comprises the day-to-day activities within the operations function. It is the myriad of daily actions of operations, when considered in their totality that constitute the organization's long-term strategic direction. The relationship between an organization's strategy and its operations is a key determinant of its ability to achieve long-term success or even survival(Ibid).

A lot of literature and authors have discussed the concepts and importance of operations strategy. Operations strategy is the outline of decisions of operation functions that focus on long term capabilities of any type of organization. These operation functions have contribution to the overall strategy through reconciliation of market requirements with operations resources. Hence,

operations strategy is a central, ubiquitous, and vital to any organization's sustained success (Slack & Lewis, 2011). According to Laseter (2015), operations strategy should guide the structural decisions and the evolution of operational capabilities needed to achieve the desired competitive position of the company as a whole. An operations strategy concerns the pattern of strategic decisions and actions which set the role, objectives and activities of operations (Slack& Lewis, 2011).

Furthermore, operations management studies the process of transforming material, labor, energy, or ideas into goods or services. Operations strategy outlines how firms leverage their capabilities to achieve competitive advantage (Li, *et al.*, 2008) such capabilities may consist of manufacturing flexibility, operational slack, supply chain structure, production technology, Information technology infrastructure, organizational structure and incentives, or business processes and they must be successfully leveraged to yield competitive advantage. According to Slack and Lewis (2011) the content of operations strategy is the interaction between the operation's performance objectives, i.e. cost, quality, speed, dependability and flexibility; and the decisions areas i.e. capacity, supply network, process technology, development and organization.

However, operations strategy formulation in practice is described as complex, iterative and a messy reality (Rytter, *et al.*, 2007; Slack & Lewis, 2011). According to Maas (2014), fewer than 15 percent of organizations around the world are successful at strategy formulation. This magnificently shows that how the task of strategy formulation requires the capacity and skill of the business managers and their colleagues. Many organizations have fundamental problems in understanding formulation of strategy in general and operations strategy in particular (Li, *etal.,* 2008). As a result, despite heightened awareness and interest by both scholars and practitioners in the field of strategic issues, the subject will always be an emerging field of inquiry.

1.1. Statement of the Problem

Survey studies so far mainly focused on the relationship between how strategy formulated in a firm and firm performance and the relationship between the content of strategy and firm performance. However, the area of operations strategy formulation has not received much empirical interest (Maas, (2014)). Most of the studies are carried out in large Multinationals from developed countries and recommended to conduct research from small and developing countries organizations (Hrebiniak, 2006; Lofving, 2014).

Textile & Garment Industry has been recognized as a priority sector by the Government of Ethiopia in view of its economic potentials in terms of utilization of indigenous raw materials such as cotton, employment generation and foreign exchange earnings and the industry is one of the largest employers in Ethiopia, (GTP, 2011 cited in Negede, *et al*., 2011). However, the sector is still in its embryonic stage and the current production quality is rather poor, even when compared with other developing countries. Studies have shown that the Ethiopian textile and garment industry lacks international competitiveness (Lemma, 2008; Tefera, 2010; Negede, *et al*.,

2011). The main reasons behind the low performance of the Ethiopian textile and garment industry are lack of specialized and experienced manpower (Negede,*et al*., 2011).

Thus, these problems and challenges, observed in the Ethiopian textile industries, have impacts on organizational strategy development in general and specifically on their operations strategy formulation and execution which needs the attention of practitioner and researchers. However, due to its wide nature of the issue it is difficult to entertain both formulation and implementation of operations strategy in this research work. Moreover, to the best of the researchers' knowledge, there is no study conducted in Ethiopia on the topic of operations strategy formulation and related problems in formulation of operations strategy in general and on those textile firms selected for this study in particular.

2.OBJECTIVES OF THE STUDY

The general objective of this study was to assess operations strategy formulation practices of selected Textile manufacturing firms in Adama City. The study had the following specific objectives:

1. To describe the extent of operations strategy formulation processes has been followed in ETUR Textile and Adama Spinning Factory.
2. To assess the level of operations strategy contents addressed during formulation in the study factories.
3. To determine the major internal and external factors that affect operations strategy formulation.

3. ESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

Quantitative and qualitative approaches were employed to collect, analyze and interpret the data.Descriptive research method was found more appropriate and used to identify what exist at present by determining the nature and existing situations of the issue in the study area. The major purpose of descriptive research is describing the state of affairs as it exists. In this regards, as stated by Cohen *et al*. (2007), descriptive research is used to collect information through interview or administering a questionnaire or other data collection tools from a sample of individuals, and analyzed to describe the current situation of the topic under study. Descriptive research answers who, what, where, when and how questions.

Further, the study was designed to implement mixed approach using qualitative and quantitative data. As described by Kothari (2004), the design of a study using mixed approach involves the use of qualitative and quantitative approaches, and the mixing of both approaches in a study. It is more than simply collecting and analyzing both kinds of data; it also involves the use of both approaches in tandem so that the overall strength of a study is greater than either qualitative or quantitative research. Malotra (2007) and Creswell (2009), also argued that, mixed method helps to substantiate research and enable to get a robust data and information, both quantitative and

qualitative approaches were employed to collect, analyze and interpret the data. Therefore, with this approach the researchbases the inquiry on the assumption that collecting diverse types of data best provides an understanding of a research problem.

Besides, to collect relevant data from sample population cross-sectional design was applied. According to (Malotra, 2007), cross-sectional design provides a snapshot of the variables included in the study, at one particular point in time. It may reveal how those variables are represented in a cross-section of a population.

Thus, using survey strategy the quantitative study was described and assessed that dealt with operations strategy formulation processes, to the extent that content of operations strategy are formulated and alignment of operations strategy in selected firms. Moreover, a quantitative study, consistent with the quantitative paradigm, is an inquiry into a social problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true (Babbie & Mouton, 2003). Finally, the qualitative approach using interviews and discussion was applied to deal on exploring issues and concepts related to what and how key internal and external factors affect operations strategy formulation.

3.2 Sources of Data

In order to gather data for the study, basically, primary data was used. The primary data sources of the study were general managers of the factories, operation managers, planning department heads, and selected foremen and employees in operation functions. Furthermore, secondary data sources were also collected from official documents of the selected factories which were used as sources of human resources data.

3.3 Sample and Sampling Technique

3.3.1 Population of the Study

According to the data obtained from annual report (2015/16) of Human resource departments of both selected firms, there were 902 employees, of which 229Operation staff, 16 Middle level management, 14 Top Managers & Planning heads; a total of 259 individuals were considered as target population for this study.

Table 3.1: Target population and number of employees in the organizations

Textile factory	Total number of employees of each organization	Operation staff	Middle level management	Top Managers & Planning heads	Total
ETUR	459	115	7	6	128
Adama Spinning	443	114	9	8	131
Total	902	229	16	14	259

Source: Human resource departments' Annual report of both selected firms (2015/16)

3.3.2 Sample Size

To maintain the validity and reliability of the study, in number of sample population, having the right number of sample size is an important issue discussed by many scholars. Hence, the sample size was determined to be 81 based on suggestion made by Bartlet, *et al.* (2001). Based on these authors' recommendation, the alpha level a priori at 0.05 wasset by using a five point scale. And also put the level of acceptable error at 3%, and estimated the standard deviation of the scale 1.96. Again, the number of sample size among those involved was determined by Cochran's (cited in Bartlet, *et al.*, 2001) sample size formula.

$$\mathrm{n} = \frac{t^2 * s^2}{d^2}$$

Where:

- ✓ n=sample size0
- ✓ t=value for selected alpha level of .025 in each tail =1.96 (the alpha level of .05 indicates the level of risk to be accepted.)
- ✓ s=estimate of standard deviation in the population = 0.834. (Estimate of variance deviation for 5 point scale calculated by using 5 [inclusive range of scale] divided by 6 [number of standard deviations that include almost all (approximately 98%) of the possible values in the range]
- ✓ d = acceptable margin of error for mean being estimated =.21. (Number of points on primary scale* acceptable margin of error; points on primary scale =5; acceptable margin of error =.03 [error risk to be accepted].

Therefore, for a population of 259 the required sample size is 118. However, since this sample size exceeds 5% of the population (259*.05=30), Cochran's (1977) correction formula should be used to calculate the final sample size. These calculations are as follow;

$$\mathrm{n} = \frac{\mathrm{n_o}}{1 + \frac{\mathrm{n_o}}{\mathrm{Population}}}$$

Where: population size=259; n_0=required return sample size according to Cochran's formula=118; and n= the required return sample size because the sample is > 5% of population. Thus,

$$n = \frac{118}{1 + \frac{118}{259}} = 81$$

Accordingly, among 259 target population of the study found in the firms, 81 of them were identified as a sample size to respond to the questionnaire. Then 41 questionnaires were distributed to Adama spinning factory and the other 40 questionnaires to ETUR Textile Company based on their respective target population size.

3.3.3 Sampling Technique

The sample respondents' were selected using stratified sampling technique for quantitative aspects of the study and for qualitative aspects of the study; purposive sampling technique was used. This is because the populations were assumed having difference in their capability like in human resources and finance, experiences and even their stage of internationalization processes. In this regards, stratified random samplingtechnique is suggested to be used by different authors like Malotra (2007) and Creswell (2009) when the populations of the study are heterogeneous.

In addition, general managers, operation managers and planning heads, three respondents from each factory (six in general), were selected purposely for the aspects of the study that dealt about exploring internal and external factors affecting operations strategy formulation. This was because these people were assumed to have more information; since they deal with the big picture of the organizations and their relation with external environment as well as internally responsible for the strategy formulation within their respective firm.

3.4 Data collection instruments

To collect data required for this study both questionnaire and interview were used as instrument of data collection.

3.4.1 Questionnaire

The major data collection tool for this study was questionnaire. This was becausequestionnaire was found to be appropriate and effective tool to collect data for thestudy from the sample respondents. And also sample respondents were found having sufficient level of education to understand and respond the areas under the study by early communicating the organizations and as letter proved from respondents background information. Therefore, with Likert scale, closed ended questions were prepared based on the specific objectives of the study from extensive literature as well as discussions made with the research advisor and other professionals.

The questions in the questionnaire were organized according tothe objectives of the study and the research questions. Of course, questions related to the background information of the respondents were alsoincluded. The focuses of the questions were operations strategy formulation framework and perspectives as processes,and performance objectives and decision areasof the formulated operations strategies by the firms understudy as contents. The data were collected through the assistance of one individual from each organization as facilitator.

3.4.2 Interview

To collect data with regard to the key internal and external factors affecting operations strategy formulation, as well as to complement the data obtained through the questionnaires, interview was also prepared and administered. Accordingly,structured and semi-structured questions were used to collect the qualitative data. The interview was made with generalmanagers, production managers and planning division heads (three from each organization).The interview sessions were conducted on face-to-face and a one-to-one basis.

3.5 Method of Data Analysis

The data collected for this study were checked before they were ready for analysis and interpretation. First the data collected from different sources was checked and organized according to the research questions. Consequently, they were analyzed and interpreted both quantitatively and qualitatively.

The quantitative data was analyzed using Statistical Package for Social Sciences (SPSS) (V-20).This was preferred for this study, since it has the capacity and flexibility to process huge data within seconds and generates an ultimate range of simple and sophisticated statistical results.

Analysis of quantitative data was made using descriptive statistics like frequency, percentage, mean, standard deviation. This was applied for the research objectives with regard to operations strategy formulation processes, content of operations strategy formulations and alignment of operations strategy with the overall organizations strategies.

Qualitative data were presented in a narrative form and inferences drawn from it. Therefore qualitative analysis was made for the research objective that focused on exploring internal and external factors that adversely affected the organizations in the formulation of operations strategy and some aspects of the quantitative areas needed to be supported by qualitative information.

Finally, data analysis and discussion were made usingtables. Again the qualitative data was presented and narrated under the issues they were related with quantitative data collected regarding each research questions.

4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

In this chapter, the data collected from primary sources were organized and presented in seven tables. The data were analyzed and interpreted based on the basic research questions such as; To what extent operations strategy formulations processes has been followed to formulate strategy? What are the levels of operations strategy contents addressed during formulation in the study factories? and finally what are the key internal & external factors that affect operations strategy formulation in the firms under study?

To answer to the first two research questions of the study, data were collected through questionnaire, and to the third basic research question through interview. The questionnaires were initially distributed to a total of 81 sample respondents to those employees working in operations areas of both organizations. Among the distributed questionnaires, 37 from ETUR textile and 30

from Adama Spinning factory, a total of 67 (82.72%) of them were returned and filled correctly. The remaining 12 (14.5%) of them were not returned and the other 2 (2.5%) questionnaires were discarded because they were not properly filled. The results of an interview administered with two general managers, two production managers and two planning division heads one from each factory was also used in the analysis and interpretation of the data.

The analysis and interpretation of the data were divided in to four parts. In the first part issues related to operations strategy formulations processes were discussed. The second part of this chapter discussed operations strategy content. In the third part of the chapter, operations strategy alignment was presented and discussed. Finally content analysis of the major internal and external factors affecting operations strategy formulation was presented.

4.1. Process of Formulation

Table 4.1: Framework of operations strategy formulation

No.	Item	Count	Mean (M)	Std. Deviation (SD)

A	**Procedure**			
1	Use of steps for gathering and analyzing information about competitive priorities, competitors and customers	67	3.5075	0.89397
2	Use of simple tools and techniques as well as documentation in formulation process	67	3.6866	0.90803
3	Use of clear procedures for identifying improvement opportunities	67	3.4179	1.03205
	Overall items under procedure		3.5373	0.94468
B	**Project management**			
4	Assignment of skilled and knowledgeable human resources	67	3.5821	1.03205
5	Allocation of adequate material and finical resources	67	3.5522	0.98909
6	Agreed time table when manufacturing strategy formulation occurs	67	3.6418	0.99547
	Overall items under project management		3.5920	1.00554
C	**Participation**			
7	Individual employee participation for on manufacturing strategy formulation	67	3.2239	1.11220
8	Group participation in the form of workshop-style meetings	67	3.3134	1.13096
9	Multi-functional participation on manufacturing strategy formulation	67	3.4328	1.03315
	Overall items under participation		3.3234	1.09210
D	**Point of entry**			
10	Clearly defined expectations from manufacturing strategy formulation	67	3.4478	0.92579
11	Strong commitment by top level management on manufacturing strategy formulation	67	3.4925	1.17258
12	Strong commitment by middle level management including operation managers	67	3.3433	0.94632
	Overall items under point of entry		3.42787	1.01490
Overall items under process of formulation			3.47015	1.01431

Source: Survey data

Formulation of manufacturing strategy is often described in terms of a procedure (Hill, 2000), methodology (Platts, 1994) or framework (Miltenburg, 2005). Despite the vast amount of suggested frameworks, the common characteristics of strategies have been identified and grouped into procedure, project management, participation and point of entry (Platts, 1994).

Many of these characteristics focused on organizational aspects and less focus was linked to the actual framework aimed at developing the strategies. With a starting point in identified characteristics of successful formulation Lofving et al. (2014) suggested a set of assessment criteria

categorized into procedure (e.g. simple and easy to understand, specific steps, etc.), realization (e.g. participation, resourcing, etc.), and contextual issues (e.g. company size). Therefore, as indicated in table 4.1 respondents were asked about practices of the organization in following this strategy formulation process/framework during operations strategy formulation using twelve specific items with four major variables; which includes procedure, project management, participation and point of entry.

Accordingly, the extent of operations strategy formulation process followed using the four P's was found with a mean value of M (Mean): 3.47 and SD (Standard Deviation): 1.014305. This could be rated as a moderate level. To conclude the practice of operations strategy formulation in these selected firms, they followed all critical criteria as a framework as suggested by (Amoako *et al*. 2008). Even though they performed well in following them still they need to work more to bring it in to a very good position through providing opportunities to the participation of employees and other stakeholders. This help the firms understudy to acquire information from employees and thereby to build common understanding of the strategy.

4.2. Perspectives of Operations Strategy Formulation

Operations strategy might come about in a top-down or a bottom-up process with regard to business and corporate strategies. Similarly, an operations strategy might be developed in response to market requirements, i.e. market-led, or based on the capabilities of its operations resources i.e. operations-led (Slack and Lewis, 2011). Thus based on the responses attained, the view of these firms in formulating their operations strategy was illustrated against the four perspectives in the following table.

Table 4.2: Perspectives of operations strategy formulation

Perspectives	Count	Mean (M)	Std. Deviation (SD)
Based on Business strategy (top-down approach)	67	2.4328	1.06207
Based on operations resources unique capability	67	2.5970	1.10179
Production employees and managers experience	67	2.5970	1.10179
Customer requirements and competitive criteria	67	2.4776	1.25961
Overall	67	2.5261	1.13131

Source: Survey data

As illustrated in table 4.2,the overall performance that the organizations taking in to account all perspective in formulating their operations strategy was summarized with a mean score value of 2.53 & SD: 1.13131 which is below moderate level.

The perspectives of operations strategy formulation processes in the organizations, almost all perspectives were taken in to account during formulation. This means that operations strategy formulation processes in the organizations assumed to include input of the concerned parties that

is suggested by Slack and Lewis (2011) as critical perspectives to be taken in to account to formulate operations strategy.

As indicated in the table, these four perspectives have got almost equal attentions. The firms' level of performance in taking inputs form each perspective was below moderate level. Though they included all perspectives in the formulation process, their performance in applying extensively and fully each perspective was not satisfactory. So the firms need to work exhaustively in addressing all perspectives to have a complete and balanced operations strategy.

4.3. Contents of operations strategy

Table 4.3: Operations Performance Objectives

Content	Strategy	Count	Mean (M)	Std. Deviation (SD)
Cost	Reducing material costs	67	3.1940	1.03336
	Overhead costs	67	3.1940	1.03336
	Overall cost		3.1940	1.03336
Delivery	Meeting delivery promises	67	3.4328	1.18352
	Providing faster deliveries	67	3.5821	1.03205
	Overall delivery		3.5075	1.10779
Flexibility	Product mix flexibility	67	3.6418	1.05459
	Volume flexibility	67	3.5224	1.03511
	Overall flexibility		3.5821	1.04485
Quality	Conformance quality	67	3.6716	1.05008
	Product quality and reliability	67	3.8209	1.05780
	Overall quality		3.7463	1.05394
Overall performance objective			***3.5466***	***1.07078***

Source: Survey data

According to Lim, *et al.* (2010), most of the small as well as developing companies did not explicitly state business or manufacturing objectives, and none had formal processes for setting objectives and formulating plans for achieving them. Rather than setting production standards concerning quality and performance, they concentrated on activities related to survival. In order to survive, such companies strove to maximize their funding and minimize their running costs.

In order to check the status of the selected textile firms about the extent of operational performance objectives consideration in firms' operation strategy formulation, respondents were asked to rate the level of emphasis given by the firms. Accordingly, the performance of the organizations in giving emphasis for operations performance objectives in their operations strategy formulation was well identified. Unlikely, Lim *et al.* (2010) in his work stated that most small and developing countries companies did not have operations performance objectives in their strategies as well as their performances were below average level.

Though the firms understudy performance is well acceptable, there is a need to have trade off. Since these operations strategy contents are competitive strategy, the firms have to select and focus on

their competitive priorities rather than giving almost equal emphasis. This means almost all have been given equal emphasis which is not clearly indicating which one is their competitive priority. As stated in the literature organizations cannot compete in all areas so there is a need to make a trade off in formulating and giving emphasis for specific operations performance objectives. Therefore the focused textile firms and other similar organizations need to set clearly their competitive area, without neglecting others, because it is difficult to compete equally with all areas of competitive operation performance objectives simultaneously.

4.4. Operations Decisions Areas

Table 4.4: Structural Decisions

Item No.	Structural decision areas	N	Mean (M)	Std. Deviation (SD)
1	**Facility**			
	Renovation and organization plan of the manufacturing facility	67	3.4776	0.97481

	Reorganization of layout and productive factors	67	3.5224	0.89372
	Restructuring the manufacturing processes and layout to obtain process focus and streamlining (e.g. reorganize plant-within -a-plant; cellular layout, etc.)	67	3.7761	0.95061
	Overall facility		3.5920	0.93971
2	**Capacity**			
	The methods and programs of process automation	67	3.4925	0.91076
	When to update the process equipment to industry standard or better	67	3.6716	0.95961
	The need for expanding manufacturing capacity to respond to changes (e.g. buying new machines; hiring new people; building new facilities; etc.)	67	3.4925	0.80478
	Overall capacity		3.5522	0.95578
3	**Process technology**			
	When and how investment in IC Technologies to be made	67	3.6567	1.00833
	Use of e-commerce and/or e-business configurations	67	3.1642	1.09540
	Overall process technology		3.4104	1.05187
4	**Supply management**			
	Supply strategy, the organization and management of the suppliers portfolio	67	3.1940	1.01860
	Integration of information systems with suppliers and type of relationship with them	67	3.3881	1.04382
	Concentrating on core activities and outsourcing support processes and activities (e.g. maintenance, material handling, etc.)	67	3.7313	1.03839
	Overall supply management		3.4378	1.03360
Overall structural decisions			**3.5060**	**0.97262**

Source: Survey data

Strategic decision areas are often categorized in to structural and infrastructural. These two are the critical areas that make up a manufacturing strategy. Heys and Wheelwright (2005) assert that the collective pattern of decisions in these areas determines not just the structure but also the capabilities of a manufacturing company. Effective choices in the structural and infrastructural decisions often lead to manufacturing excellence.

As illustrated in table 4.4, structural issues such as facility, capacity, process technology and supply management were raised to respondents. Accordingly, the extent operations structural decisions addressed by the selected textile organizations were found to be M: 3.5 and SD: 0.97262 which is moderate level. So it can be inferred that their level of performance in addressing operations decisions areas is acceptable with a moderate level in areas of integrating information system with suppliers and use of e-commerce they need to work more in order to maximize their performance to the desired level.

4.5. Infrastructural Decisions

Infrastructural strategy areas influence the activities that take place within the operation's structure.According to Stevenson (2008), operations strategy is critical to achieve organizational objectives and to be competitive in the market because it is the key for converting input to output that customers want and they have to be performed close to perfection. Laster (2015) also states as operations infrastructure decisions are critical to achieve the objectives of the organizations and support the structural decisions of operations strategies but about 70% of manufacturing companies do not properly addresses them in their formulations.

Thus to assess the selected textile firms' status on addressing these infrastructural issues in their operations strategy, this study collected information using four major variables, quality improvement, management and organizations, product development and performance measurement. Hence, the information obtained from the respondents with regard to infrastructural issues with nine items were presented and analyzed in table 4.6.

Table 4.5: Infrastructural Decisions

Item No.	Infrastructural decision areas	Count	Mean (M)	Std. Deviation (SD)
1	**Quality improvement**			
	Quality improvement and control programs (e.g. TQM programs, projects, quality circles, etc.)	67	3.2090	1.10833
	Use of quality indicators metrics and measures	67	3.4627	1.06356
	Overall quality improvement		3.3358	1.08594
2	**Management and organization**			

	Actions and plans how to increase the level of knowledge of the workforce (e.g. training, improvement etc.)	67	3.2836	1.05609
	Employees reward and incentive systems, mechanisms and methods	67	2.9403	1.11302
	About the company's environmental compatibility and workplace safety and healthy	67	3.3881	1.18008
	Overall management and organization		3.204	1.11640
3	**Product development**			
	Use of new product development techniques (e.g. platform design, product modularization, components standardization, etc.	67	3.3582	1.04013
	Means and methods of customer participation in new product development	67	3.0161	1.05459
	Overall product development		3.1871	1.04736
4	**Performance measurement**			
	Financial performance measurement (like, ROI, Sales growth, etc.)	67	3.3582	1.11058
	Non financial performance measurement (like customer satisfaction, employee satisfaction etc.)	67	2.9403	1.11302
	Overall performance management		3.14925	1.11180
Overall infrastructural decisions			3.2554	1.09327

Source: Survey data

Table 4.5 reveals theresponses about infrastructural operations strategy decisions, the cumulative mean value was found to be 3.2554 and SD: 1.09327. The overall status of the firms in addressing and formulating operations infrastructural decisions shows moderate level. However compared to the findings of other studies, the firms understudy considered all important components of the infrastructural decisions during their OS formulation. While the firms performances in this regard were found acceptable, still they need to work more on management and organization issue particularly to improve employees reward and incentive system that can serve as means of creating competitive advantage.

Table 4.6: Level of Alignment

Item No.	Nature of Consistency	Count	Mean (M)	Std. Deviation (SD)
1	OS is consistent with business strategy	67	3.8507	0.90877
2	OS is consistent with other functional areas strategies	67	3.7015	0.87065
3	OS is consistent with operation resources	67	3.7761	0.95061

4	OS is in line with operations performance objectives	67	3.8507	0.90877
	Overall Result		3.7948	0.9097

Source: Survey data

Table 4.6 reveals the rate of consistency between the existed operations strategies with other areas of the organizations' strategies. Accordingly, the level of alignment with the firms' business strategy, other functional areas of the organizations, operation resources and operation performance objectives were rated as M: 3.85 & SD: 0.90877; M: 3.70 & SD: 0.87065, M: 3.78 & SD: 0.95061; and M: 3.85& SD: 0.87065 respectively. In general the overall level of alignment was found to be M: 3.79 and SD: 0.9097. Therefore, the level of alignment of the operations strategies of the firms with other areas of strategies was to the highest point of moderate level. Although the level of alignment seems acceptable, using clear, accurate and accessible information, the top management can develop a stronger competitive position by effectively adjusting their strategies and processes to respond to changing market conditions. But to accomplish this, their strategic priorities should be in line with their operational realities.

4.6. Presentation and Analysis of Interview Questions

In this part of the chapter, responses of the interviewees were analyzed and presented. The interview questions were raised for purposively selected respondents to discuss about the key internal and external factors that affect the firms in general and the process in formulating operations strategy in particular.

A face to face interview was employed to general managers, production managers and planning division heads of both firms. This was done due to the assumptions that these individuals have the big internal and external pictures of their organizations. The ideas obtained from the interview sessions were found almost similar and the summary of their response was presented as follows.

The respondents raised lack of well qualified and experienced expert in the area of strategy development from the management staff that limited the capacity of the strategy developing team. As the respondents said, ground should be facilitated to in-service training particularly related to strategic issues, to understand how the firms' operations strategy changes over time, how to identify the requirement of the markets, how to reconcile their operations resources with market needs and finally how to formulate a breakthrough operations strategy. Low level of commitment and concern to develop inclusive, workable and innovative operations strategy and lack of access to find out information from internet or website were explained as the most internal challenges of the firms.

The operations function lacks the ability to compete by responding to customers' needs and by developing the capabilities that will keep the firms ahead of their competitors in the future due to insufficient attention given to research and development function. As the interviewees responded, the firms have focused only how they increase sales volume and production quantity.

According to the respondents the organizations allocate most of the financial resources for machineries and spare parts where as budget for training operations personnel in operations strategy areas did not get attentions and not yet accustomed in the firms' culture.

Lack of well organized and practical oriented training organizations in the country discourages to realize specialization in the field of strategy development. Most of the management staff comprises members that are qualified either in business management or few in mechanical engineering. Since the cost of training is very expensive abroad, only few individuals have been sent for machine setup training. Well designed and performed training scheme make experts competent and innovative in the task of strategy formulation and for performing processes, according to the respondents.

The other major question raised to interviewees was to explain what difficulties they currently encountered for achieving manufacturing goals and their overall responses were:
The global competition from countries like Pakistan, India, Turk, Israel and Italy directly affect by quality and price of the product and indirectly affect the psychology of the firms' management as a looser. Textile firms in these nations have competitive advantage in the level of technology they possessed, the availability of raw materials, well infra structure in information technology and qualified and skilled experts in identifying company's major problems and thereby formulating an appropriate strategy that will satisfy their customers and beneficiaries.
Shortage of the major raw material, cotton, both in volume and required level of quality from domestic market and lengthy procedure to get foreign currency as per the needs of the firms was also raised as the challenge of the firms understudy.
Moreover due to inexistence of active central information resource center at a national level, availability of current data, genuine information or latest technological improvement is found to be a hard task. It is a fact that operations strategy formulation is a result of processing information and decisions.
Since the interviewees raised the above challenges as a problem one last question was added to them to rate the extent that the operations strategy formulation achieved by their respective firms. With this regard the interviewees replied that from time to time the capacity to develop both business and operations strategies is improving, the current level of performance was rated as 55% on average. In addition to this the interviewer saw physically the organizations strategy documents for the sake of just evidence but not allowed to examine them.

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