

THE IMPORTANCE OF SUPPLIER SEGMENTATION TO THE MANUFACTURING SECTOR OF GHANA

G. Owusu-Bempah

Lecturer (Business Administration) All Nations University, Koforidua.

Dr. E. Bennet

Head of Department (Business Administration), All Nations University College, Koforidua.

Dennis Amoako

Head of Department (Purchasing and Supply) Koforidua Polytechnic, Koforidua.

Richmond. K. Frempong

Dean of the School of Business and Management Studies, Koforidua Polytechnic, Koforidua

ABSTRACT: *This study investigated the importance of Supplier Segmentation to the manufacturing sector of Ghana; using selected manufacturing companies in the Eastern and Volta regions of Ghana as case study. Managing relationships between a supplier and buyer can be a complex one. Each party seeks to maximize its time, resources, and cash investment; these may be competing priorities that can strain the relationship. While certain companies adopt a more collaborative approach in dealing with suppliers, others too adopt a take it or leave it approach. In the midst of this controversy, it became necessary to conduct a research to assess the importance of supplier segmentation which has been hailed as a key component of Supplier Relationship Management. The case studies for this study were the management of Volta Star Company Ltd, Akosombo Textiles and the Intravenous infusions Limited. Based on the simple random, purposive, and quota sampling techniques 60 managers from these companies were sampled. The study revealed that Supplier Segmentation is highly important to the Ghanaian manufacturing sector.*

KEYWORDS: Supplier Relationship Management, Supplier Segmentation

INTRODUCTION

In many manufacturing industries, competitive advantage is rapidly shifting to the management of suppliers, which can account for as much as 60 to 80 percent of manufacturing costs. Suppliers also exert a strong influence on throughput time and work-in-process inventory, and play an often critical role in new product development. Companies that integrate their supplier base effectively with their internal engineering, manufacturing, and purchasing operations benefit from reduced costs, shorter lead times, lower development risks, and compressed development cycles.

Many businesses have recognized the strategic importance of optimizing their supply management processes. Companies as diverse as Toyota, Honda, Ford, Harley-Davidson, Detroit Diesel, Black & Decker, Yamazaki Mazak, Motorola, Bose, and Xerox are developing effective new ways for their internal functions to work together with suppliers in optimizing product design, development, manufacture, and distribution. Supplier segmentation which is a process of categorizing suppliers in the order of importance to buyers has become a club which leading automobile companies hold a pass.

THEORETICAL BACKGROUND

Supplier segmentation

Martinson (2005) notes that, in order to develop or improve SRM, an organization needs to implement a supplier segmentation approach that considers the internal needs of the business, spend, and also accounts for all risk and business critical factors.

Gardener (2004) presents four categories of traditional segmentation:

- **Commodity:** Where little or no SRM activity is undertaken as the suppliers provide infrequent one off goods or services
- **Performance Management:** Where focus is placed upon cost and service levels as the supplier is providing off the shelf goods or short to mid term services that are not strategically important and are provided from a competitive market environment
- **Development:** Where focus is placed upon continuous improvement to service levels and cost as the arrangements are more mid to long term, with some strategic value
- **Partner:** Where strategic long term goods and / or service suppliers are managed to secure supply and drive collaborative engagement with shared benefits (Gardener, 2004)

Timmons (1999) observes that an additional part of Segmentation relates to assessing the 'Power Dependency' of a relationship where approach, strategy, engagement and messaging tactics can be identified for certain types of supplier.

Supplier Segmentation Models

In his book, Partnership through Supply Chain Logistics, Van Goor (1998), indicates that effective supplier relationship management requires an enterprise-wide analysis of what activities to engage in with each supplier. The common practice of implementing a “one size fits all” approach to managing suppliers can stretch resources and limit the potential value that can be derived from strategic supplier relationships. Supplier segmentation, in contrast, is about determining what kind of interactions to have with various suppliers, and how best to manage those interactions, not merely as a disconnected set of siloed transactions, but in a coordinated manner across the enterprise. Suppliers can be segmented, not just by spend, but by the total potential value (measured across multiple dimensions) that can be realized through interactions with them. Further, suppliers can be segmented by the degree of risk to which the realization of that value is subject. (Van Goor, 1998)

Segmentation Implementation Relationsp Category Implication	Routine Supplier	Bottleneck Supplier	Collaborative Supplier	Strategic Supplier
Driver	Price	Lower potential to Minimize cost	Maximize value; lowest total cost	Critical need
Negotiation Strategy	Maximize price leverage	Sole source	control number of suppliers and business volume awarded	“Win/Win” Maximize joint gain and good precedent
Presumed Duration	Short to medium term	Dependent on Market environment	Medium to long term	Long term
Governance	Commodity group portfolio manager	Dedicated relationship manager	relationship manager; internal customer coordination committee	supplier oversight board; dedicated relationship manager
Communication	Limited to transactional exchange of info	Regular, though limited in scope	Robust and frequent, with some executive contact	Robust and multilevel, with senior executive contact
Quality Management	Managed on exception basis; leverage penalties	Managed on exception basis; leverage incentives	Joint effort; customer investment driven by switching costs	Joint effort, equal investment
Planning	Annual; narrow in scope	Regular, but limited in scope	Joint and frequent; time horizon varies by context	Integrated, frequent, and long term focused
Supplier’s Viability	N/A	Safeguard when benefits outweigh costs	Understand and Monitor	Safeguard
Investment in Relationship	Low	Medium to low	Medium	High

Source: Goor (1998)

Dealing with strategic suppliers; a case study of Ford

Birgit Behrendt (2008) reveals that Ford is focusing its purchasing more closely on its 65 most important suppliers. According to him, Ford wanted to achieve better economies of scale for itself and for its suppliers, and also shorten development times. The policy has been developed over the last four years and is now being built up further alongside global vehicle platform developments, said Behrendt.

"We are trying to build up cooperation with our strategic suppliers to achieve even more scale effects," said the Ford manager. Suppliers that are not considered strategic partners can expect difficult times ahead. Behrends said: "We have established that we can work more easily and more efficiently with our strategic suppliers on the joint development of global platforms."

Behrendt said that this strategy was critical to the development of the new Fiesta platform, particularly in terms of reducing development times. Already Ford works with two thirds of its suppliers in two or more regions. (Behrendt, 2008)

According to Rogers & Tyler(2000) companies that have adopted SRM best practices are realizing a number of important benefits:

Improvements

- Streamlined supplier management processes to reduce internal costs
- Improved ability to concentrate spend with "strategic" partners resulting in further leverage and efficiency
- Accelerated development of supplier capabilities and improvement in value delivery
- Greater supplier accountability for business results reducing non-performance and improving recovery of non-performance costs
- Alignment of supplier agreements with business performance and cost objectives
- Performance visibility to allow for continuous improvement of supplier relationships. (Rogers & Tyler, 2000)

Suppliers effects on SRM

The point that one will be trying to examine when analyzing suppliers is whether they are holding a substantial bargaining power against a company and how it translates into lower or higher flexibility for the business. (Armstrong, 2003)

Charleston (2009), notes that, the consequences of very powerful suppliers can be multifold:

- Smaller discount on wholesale purchases.
- Smaller authorized payables, which will hurt your working capital (payables represent the amount of money that you still owe to your suppliers) etc ...

On the contrary, suppliers who enjoy a smaller bargaining power will stand at a disadvantage:

- They will have to offer deep discounts in order to keep customers
- They will need to grant very generous payment terms and thus will hurt their working capital while improving the buyer's. (Charleston, 2009)

METHODOLOGY

Respondents

The respondents for this study were the management of Volta Star Company Ltd, Akosombo Textiles and the Intravenous infusions Limited. Based on the simple random, purposive, and quota sampling techniques 60 managers from these companies were sampled. The study was conducted during the period between May and July 2012 through a structured questionnaire. The sample size covered 60 manufacturing experts in the Eastern Region of Ghana. This included all the 12 top managers of the companies, 24 Procurement managers, 12 accountants, 6 HR experts, and 6 marketing experts. The quota sampling technique ensured that the functional experts selected occurred in the ratio of 4:2:1:1 respectively. The ratio shows the level of involvement of these managers in managing supplier relationships.

Instrument

Participants were asked to evaluate the importance of variables relating to the benefits and challenges of supplier segmentation, identified from the literature and personal interviews, by making five choices for every one of the variables: “extremely important” for the variables which were considered to have the highest importance to the manufacturing sector and “not important” for the variables considered to having no influence on the manufacturing sector.

DATA ANALYSIS, RESULTS AND DISCUSSIONS

Empirical results

In order to achieve empirically verifiable results, the research was based on a sample size of 60 drawn from three manufacturing companies in the Eastern Region of Ghana. This included all the 12 top managers of the companies, 24 procurement managers, 12 accountants, 6 marketing managers and 6 HR experts.

The quota sampling technique ensured that the middle-level managers selected occurred in the ratio 4:2:1:1 respectively. The ratio indicated the level of involvement of these managers in Supplier Relationship Management. Those who were more involved in SRM and adequately knowledgeable had greater representation in the sample.

Results of analysis

The results from the analysis based on the objective are summed up in this section. Appropriate interpretations and explanations were given each result.

Table 4.1: The benefits associated with the supplier segmentation

	Benefits	Frequency	Percent
Valid	It builds up cooperation with strategic suppliers to achieve even more scale effects	18	30
	It works more easily and more efficiently with strategic suppliers on the joint development of global platforms	13	21.7
	It streamline costs of supplier interaction	15	25
	To manage supply risk	14	23.3
Total		60	100.0

Source: Field Survey (November, 2012)

Table 4.1 is a representation of responses on the benefits associated with supplier segmentation. Responses obtained included the ability to build up cooperation with strategic suppliers to achieve even more scale effects, the ability to work more easily and more efficiently with strategic suppliers on the joint development of global platforms, streamline costs of supplier interaction, and the ability to manage supply risks. The respective absolute percentages for these responses are 30, 21.7, 25, and 23.3

Table 4.2: The importance of supplier segmentation in the manufacturing sector of Ghana

	Level of importance	Frequency	Percent
Valid	Somewhat important	2	3.3
	Important	9	15
	Very important	24	40
	Extremely important	25	41.7
Total		60	100.0

Source: Field Survey (November, 2012)

Inferring from Table 4.2, out of the 60 respondents who answered the questions, 2 considered the importance of supplier segmentation in the Ghanaian manufacturing sector as somewhat important, 9 considered it as important, 24 considered it as very important and 25 considered it as extremely. The absolute respective percentages are 3.3, 15.0, 40.0 and 41.7.

Table 4.3: Level of management attention that should be given to supplier segmentation

Level	Frequency	Percent
Average	1	1.7
Above average	9	15
High	14	23.3
Highest	36	60
Total	60	100

Source: Field Survey (November, 2012)

Table 4.3 presents responses on the level of attention that should be given to supplier segmentation. Out of the 60 respondents who answered the questions, 1 considered the level of management attention that should be given to supplier segmentation as average, 9 considered it as above average, 14 considered it as high and 36 considered it as highest.

Table 4.4: The challenges with supplier segmentation

Challenges	Frequency	Percent
Valid Diminishing sourcing returns	13	21.7
Employees are not equipped with supplier management skills and knowledge	17	28.3
Difficulty in establishing basis for segmentation	20	33.3
Formal supplier development programs are lacking or ineffective	10	16.7
Total	60	100.0

Source: Field Survey (November, 2012)

From the Table 4.4 above, the challenges with supplier segmentation include Diminishing sourcing returns, employees not being equipped with supplier management skills and knowledge, difficulty in establishing basis for segmentation and the lack of formal supplier development programs are lacking or ineffective. The absolute valid percentages are 21.7, 28.3, 33.3, and 16.7.

Table 4.5 The severity of the challenges

Severity		Frequency	Percent
Valid	Not Severe	39	65
	Somewhat Severe	21	35
Total		60	100.0

Source: Field Survey (November, 2012)

On the question of the severity of the challenges, 39 respondents representing 65 percent of the total respondents, considered the challenges to be not severe. 21 respondents representing 35 percent of the total respondents considered the challenges of supplier segmentation to be somewhat severe.

Table 4.6: Rating the benefits of supplier segmentation and the associated challenging

		Benefits		challenges	
Ratings		Frequency	Percent	Frequency	Percent
Valid	Average	3	5	42	70
	Above average	5	8.3	9	15
	High	9	15	6	10
	Highest	43	71.7	3	5
Total		60	100.0	60	100

Source: Field Survey (November, 2012)

Table 4.6 presents the ratings of the benefits and challenges of supplier segmentation. Out of the 60 managers, 42 rated the challenges of supplier segmentation as average, 9 rated them above average, 6 high, and 3 highest. The absolute valid percentages are 70.0, 15.0, 10.0, and 5.0 respectively.

On the ratings of the benefits associated with supplier segmentation, 3 respondents rated it average, 5 rated it above average, rated it high, and 43 rated it highest. The absolute valid percentages are 5.0, 8.3, 15.0, and 71.7 respectively.

CONCLUSION

Supplier segmentation is highly important to the manufacturing sector of Ghana. The associated benefits of introducing Supplier Segmentation to manufacturing companies in Ghana, far out-weigh the associated challenges.

REFERENCES

- Armstrong, C.T. (2003). *Liberation Management*. 2nd ed., New York: John Wiley & Sons.
- Asmus & Griffin (1993). *Harnessing the power of your suppliers*. 2nd ed., New York: McGraw Hill.
- Atherton, L. (2010). *Industrial Marketing: an analytical Approach to Planning and Execution*, 2nd ed., London: Business Books Inc.
- Barnes, M.T (2009). *Corruption in Public Procurement*. 4th ed., New York: McGraw Hill.
- McBright, T. (2002). *Challenges of SRM*. 5th ed., Eindhoven University of Technology Press.
- Behrendt, O.P. (2008). *Technologies of Supplier Relationship Management*. 2nd ed., Heerlan Open University Inc.
- Bitner, K.Y. (2007) *Managing a Supplier Relationship*. 2nd ed., New York: Macmillan
- Charleston, N. (2009). *Suppliers Effect on Supply Relationship Management*. 4th ed., Oslo: Aventis Press.
- Dinker, K.T. (2001). *Logistics and Supply Chain Management*. 3rd ed., London: Pitman Inc.
- Erasmus, G.W. (2007). *Purchasing Handbook*. 2nd ed., New York: McGraw Hill.
- Ishakawa, D. (2008) ‘Development of Buyer-Seller Relationships in Industrial Markets’, *European Journal of Marketing*, 14, (5/6) pp.339-353.
- Gardener, M.R. (2004) ‘ Purchasing must become supply management’, *Havard Business Review*, September/October, p.p 109-117.
- Lancelot, N. (1999). *Benefits of Supplier Relationship Management*. 2nd ed., UK: T& J Press.
- Martinson, H (2005). *International Marketing and Purchasing of Industrial Goods* . 4th ed., New York: John Wiley & Sons.
- Miklovic, R. (2006) *Effective Negotiation*. 3rd ed., Veldhoven: Spon Press.
- Ohmae, K. (2002). *Competitive Advantage in the information age*. Northern Telecom, Annual Report. Aventis Inc.
- Oteng-Gyasi, (2010) ‘Exporting to Europe and to Germany - Ghana’s anufacturing Industry’ *European Journal of Purchasing and Supply*, 2, (4) pp.153-160.
- Pattillo and Söderbom (2000), ‘Managerial Risk Attitudes and Firm Performance in Ghanaian Manufacturing: an Empirical Analysis’ *European Journal of Purchasing and Supply*, 4, (3) pp.90-112.
- Rogers & Tyler (2000). *SRM Benefits*. 2nd ed., New York: Wiley & Sons.
- Saunders, K. (2007). *Purchasing in Practice*. 3rd ed., New York: John Wiley & Sons.
- Steplovic, T.M. (2007) *Balanced Sourcing: cooperation and competition in supplier relationships*. 4th ed., San Francisco: Jossey-Bass Publishers.
- Timmons S.K. (1999) *Strategic Supplier Partnering: an International Study*. 2nd ed., Phoenix, Arizona: Center for Advanced Purchasing Studies Inc.
- Tyler, C. (2008). *Purchasing and Supply*. 3rd ed., San Francisco: Jossey-Bass Publishers.
- Tyler, C. (2000). *Importance of SRM to The Manufacturing Sector*. 2nd ed., Oslo: Simmons & Timmons Inc.
- Van Goor, A. (1998) *Partnership through Supply Chain Logistics*, 2nd ed., Arnterдам: Samsom & Alphen Inc.
- Vollman, Th.E., Berry, W.E. and Whybark, D.C. (1984). *Manufacturing Planning and Control Systems*, 4th ed., Homewood, Illinois Dow Jones Irwin Publications.
- Weele, A.J. van and Rozemeijer, F.A. (1996). *Revolution in Purchasing: towards a purchasing development model*, 5th ed., London: Blackwell Science.

Winston et al (2008) ‘Characteristics of Supply Chain Management and the implications for purchasing and logistics strategy’, *The International Journal of Logistics Management*,4, (2) pp. 13-24.

Womack, J.P., Jones, D.T. and Roos, D. (1990). *The machine that changed the world*. 2nd ed., New York MacMillan.