Using Computer Simulation to Examine Financial Productivity of Merchandise Assortments

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1. Background of Sourcing Simulator

ARM. What a peculiar name for a computer simulation. Apparel Retail Model (ARM), was the first step in a plan to simulate the entire apparel manufacturing and retailing process created by a group of researchers at North Carolina State University. Their fundamental goal was to prove the financial effectiveness of quick response business systems (Nuttle, King, & Hunter, 1991). Based on a pull-through type demand concept, they started where the merchandise met the ultimate consumer, on the retail sales floor. The component of retailing they chose to simulate was merchandising(Fig. 1).

Operation of ARM began with input of a merchandise budget in the form of the planned number of units of a particular merchandise group to sell in a defined selling period. Assortment factor inputs included the number styles, sizes, and colors and the planned percentage distribution of sales across each assortment factor(Fig. 2). Pricing strategy inputs included merchandise cost, first price, and price changes including timing and percentages. Delivery strategy included number of deliveries, percentage of total planned units in each, and availability of resupply.

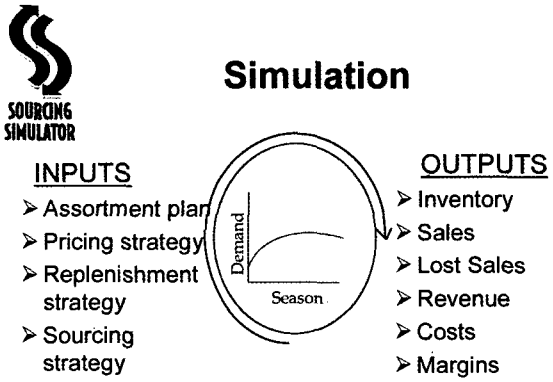

Fig. 1. Inputs and outputs of apparel retail model (ARM/sourcing simulator)

SOURCING SIMULATOR

Assortment Plan

Cotton Sweater - Plan 9600 units at $30

Style	%	Color	%	Size	%
1234	50	Black	25	S	10
1235	25	Navy	25	M	20
1236	15	Red	20	L	35
1237	5	Green	15	XL	25
1238	5	White	15	XXL	10
Total	100%		100%		100%

Fig. 2. Assortment plan that could be presented to ARM/sourcing simulator

ARM included a default data set that provided all necessary numbers that were not input for a particular simulation run. When the operator hit "run", the program simulated in-store shopping behavior and generated a financial analysis.

P1: Percentage of customers who have an item in mind on arrival.

P2: Percentage of customers who browse on arrival.

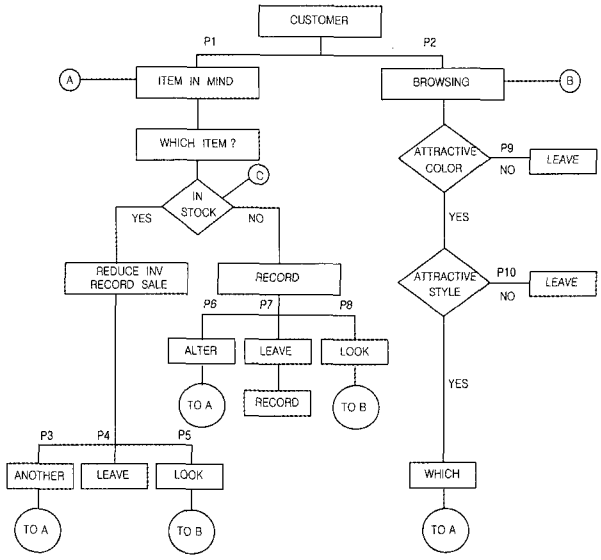

Fig. 3. ARM (Sourcing Simulator) in-store shopping behavior branching diagram(Poindexter, 1991, p. 5)

P3: Percentage of customers who look for another item after a purchase.

P4: Percentage of customers who leave after a purchase.

P5: Percentage of customers who browse after a purchase.

P6: Percentage of customers who alter their choice after a stockout.

P7: Percentage of customers who leave after a stockout.

P8: Percentage of customers who browse after a stockout.

P9: Percentage of customers who find a style when browsing.

P10: Percentage of customers who find a color when browsing.

As shown in [Fig. 3], the in-store shopping behavior model included distinguishing between purposive and browsing customers, reaction to identifying a product for purchase and discovering it was unavailable (stockout), activity after making a purchase, as well as non-purposive purchases resulting from browsing. Within the simulation, customers were assigned shopping behavior according to statistically generated probabilities called a Poisson process. Pricing influenced outcomes through application of the economic concept price elasticity of demand. Stockout and lost sales were determined based on the relationships among merchandise assortment plan, delivery strategy, and availability of resupply. Outputs included performance measures itemized in [Fig. 4]. Definitions of some of these terms are included in [Table 1].

ARM was originally written in DOS. The simulation went through a few minor revisions, was changed over to Windows, and later was adopted by [TC]2 (Textile/Clothing Technology Corporation, Cary, North Carolina) and became Sourcing Simulator. The on-going developer was Dr. Russell King, a professor at North Carolina State University.

2. Using ARM/Sourcing Simulator in Teaching

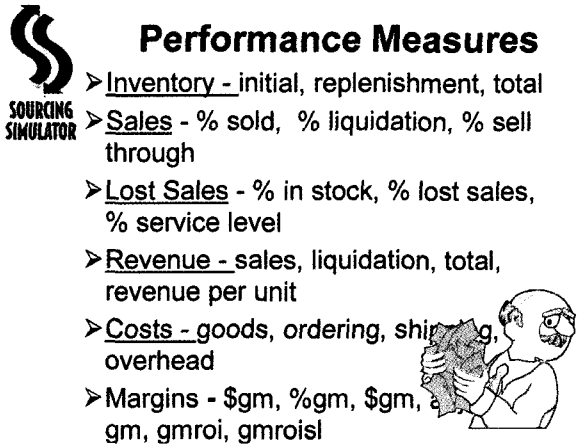

Fig. 4. Performance measures generated by Arm/Sourcing Simulator

I first became acquainted with ARM at a workshop related to Quick Response business systems presented by a panel including Dr. King at a seminar at the Bobbin Show in Atlanta, Ga. At that point in my teaching life, I was very frustrated with my effectiveness in teaching merchandise math. On a midterm exam I had asked: "What is the relationship between markup and gross margin?" Not a single student was able to answer the question! Students seemed to spend so much time figuring out how to do the calculations that they didn't have time to pay attention to the meaning of the results of the calculations. Thus, I was immediately fascinated with the potential for using ARM as a teaching tool for merchandise planning. I communicated with Dr. King and he agreed to allow me to introduce ARM into classroom use. He sent me a copy of the

Table 1. Examples of financial outcomes related to merchandise planning as presented by ARM

■ Gross Margin Related Measures
· gross margin - the dollar difference between cost of goods and total revenue
· percent gross margin - dollar gross margin divided by total revenue
· maximum gross margin or gross margin potential - dollar gross margin if all merchandise was sold at first price
· percent gross margin potential - gross margin divided by maximum gross margin average actual sales price
- sum of the number of unit sold at each price times the price divided by total inventory
■ Inventory Related Measures
· percent of orders sold - total units sold divided by total inventory
· percent jobbed off - total inventory minus total units sold divided by total inventory
· percent sell through - units sold at first or premium price divided by total units sold
· percent lost sales - total lost sales divided by total units sold
· service level - total first stockouts divided by total customers total revenue as related to planned sales
- did you make your sales plan?

simulation on a floppy disk.

I immediately started using ARM in my junior and graduate level merchandising classes. I set up a series of assignments that were similar in concept to the scientific method used for chemistry experiments. A similar set of assignments now make up Integrated Learning Activities at the end of each chapter of my textbook, Merchandising: Theory, Principles, and Practice, 2nd ed.(2005). Students develop one component of a merchandise plan based on each chapter of the textbook: For example, pricing plans, budgets, assortment plans, and delivery plans. Then they test each plan in Sourcing Simulator. Each component of the plan was optimized before moving on the next. Some students found it fascinating, others frustrating, but we all learned a lot, particularly me.

During the same time that ARM was being developed, Ruth Glock and I were in the final stages of developing the manuscript for a new textbook titled Apparel Manufacturing: Sewn Product Analysis(1990). Apparel Manufacturing(2005) is now in its 4th edition. Among other things, we developed a definition of merchandising that has proved to be endlessly useful ever since. "Merchandising is planning, development, and presentation of a product line for an identified target market with regard to prices, assortments, styling, and timing"(Glock & Kunz, 1990). This text described merchandising as it is practiced in the apparel industry, as a business function parallel with the marketing function rather than a subcomponent of the marketing function.

A related conceptual framework was also taking shape during this time. I had the opportunity to often lead textiles and clothing study tours where we visited and had presentations from apparel manufacturers, contractors, retailers, wholesale apparel market showrooms, and museums and met with Iowa State University Alums. During one such study tour, the relationships among the various responsibilities and activities related to merchandising began to take on structure in my mind. I spent an entire night drafting a merchandising taxonomy on the back of a placement in my hotel room. The taxonomy has been through dozens of modifications since then.

The version shown in [Fig. 5]. itemizes aspects of merchandise planning, development, and presentation. Items located vertically in the taxonomy are somewhat simultaneous; those located horizontally are more sequential. My colleague Sara Kadolph dubbed it the Silo Model since it is best viewed rolled in a tube so that the horizontal arrows meet each other. In the center of the tube are dozens of invisible linkages required to operate the endlessly evolving merchandising process. The Merchandising Taxonomy was recently tested by a graduate student who found it to be representative of the practice of merchandising in the California apparel business(Amos, 2002). A merchandising primer averbal description of the merchandising process, follows this article.

During the early 1990s, I was involved with a group of textile and apparel university faculty that met annually at the University of Nebraska, Lincoln with a goal of developing merchandising theory. When we began our discussions, some members of the group had not distinguished

Fig. 5. Merchandising taxonomy detailing planning, developing, and presenting a product line
(Based on Kunz, 1998)

Line Planning

Evaluate Merchandise Mix	Forecast Merchandise Offerings	Plan Merchandise Budgets	Plan Merchandise Assortments	Analyze and Update Merchandise Plans
Categories	Sales history	Sales	Model stocks	Update budgets
Classifications	Selling periods	Reductions	Basic stocks	Update assortments
Subclassifications	Product types	Required merchandise	Automated replenishment	Develop delivery plans
Groups	Size ranges	Prices		
	Price points	Initial markup		
		Allowable costs		

Line Development

Line Concept		Creative Design	Line Adoption	Technical Design
Synthesize current	Establish line direction	Develop designs	Determine styles in line	Perfect styling and fit
issues/trends	* color palette	* sketches	* wholesale finished	Engineer production patterns
* economic	* styling guidelines	* precosting	goods	Test materials
* social	Describe materials	* first patterns	* product development	Test assembly methods
* cultural	* fiber content	* design specifications	Establish list or first prices	Develop style samples
* technological	* yarn type	* fit standards	Assign styles/sizes	Develop style/quality
* demographic	* fabric structure	* materials descriptions	/colors to line plan	specifications
* lifestyle	* finishes	Create design prototypes	Balance assortments	* styling
Describe fashion	Identify group concepts	Review prototypes	* variety	* fit
trends	* separates	* styling	* volume	* materials
* line	* related separates	* fit	* diversity	* assembly methods
* detail	* coordinates	* fabric	* allocation	Detailed costing
* silhouette	Analyze current line	* assembly methods	Produce sales/photo/	Grade patterns
* color	* continued styles	Revise patterns	catalog samples	
* pattern	* modified styles	Create prototypes until		
* fit	* new designs	designs are perfected		

Line Presentation

	Internal	Wholesale		Retail	
	Review for adoption	Line preview	Line/style release	Types	Power of appeal
	* line concept	* line concept	* fashion shows	* specialty	* display space
	* image strategy	* image strategy	* wholesale markets	* department	* fixtures
	* groups and designs	* assortment strategy	* sales presentations	* discount	* lighting
	* applications to line plan	* style appeal	* trunk shows	* off price	* signage
	* design specs & costing	* marketing strategy	· Customer service	* manufacturer's	* labels
	* pricing strategy	* pricing strategy		outlet	* tickets
	* visual merchandising	* visual		* catalog	* pricing strategy
		merchandising		* television	* customer service
				* internet	* inventory management

in their minds a difference between merchandising and retailing. I was able to convince most of the group that merchandising was a business function parallel with marketing, operations, and finance and that all of these functions were essential to operate an apparel firm whether it was engaged in manufacturing, retailing, or both.

A primary outcome of my interaction with the Nebraska merchandising group was publication of Behavioral Theory of the Apparel Firm: A Beginning(Kunz, 1995). The model presented in the behavioral theory paper (BTAF) eventually evolved into the model in [Fig. 6]. It provides a context for the merchandising process as a foundation for merchandising theory. It represents interaction of functional areas of specialization within an apparel firm. Assumptions underlying BTAF include the following:

- A firm is a coalition of individuals with some common goals.
- The coalition is made up of sub-coalitions or constituencies that conform to the functional areas of specialization required to operate the firm.
- The focus of the coalition is on the customer and satisfying customers' needs within the limitations of the firm.
- Overall goals of the coalition are formulated by the executive constituency.
- The inter-relationships among constituencies form the internal decision-making matrix of the firm.
- Any of functions or parts of functions can be outsourced to other firms.
- An apparel firm can consist of any combination of manufacturing and/or distribution functions.

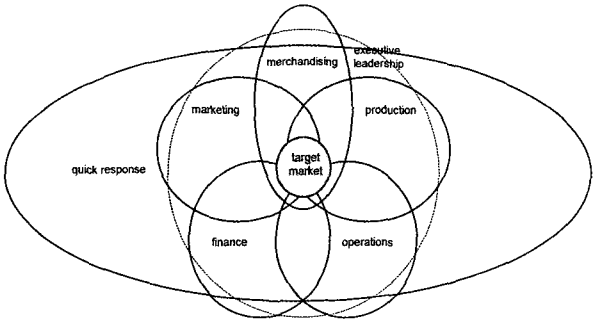

Fig. 6. Model representing the interaction of functional areas of an apparel firm according to Behavioral Theory of the Apparel Firm(BTAF)

3. Research Related To and Using ARM/Sourcing Simulator

Over a ten year period, under my direction, a team of graduate students conducted a series of research projects related to using ARM/Sourcing Simulator to satisfy requirements for their masters degrees. These studies were enabled in part by collaboration with a small, upscale apparel retail specialty chain based in Chicago, Il that we fondly referred to as "Ramal", a name created to protect the privacy of the retailer. The retailer supplied us with data related to their customers' shopping habits and access to their customers. In addition we received buying and sales records for merchandise classification systems and flow of inventory. The following includes some of the key findings of some of these projects.

4. Toward a Model of In-Store Shopping Behavior - Jeongwon Song

One of the issues related to the use of ARM/Sourcing Simulator was the fact that the in-store shopping behavior model was based on grocery store research since appropriate research was not available related to apparel stores. Jeongwon Song decided to examine apparel in-store shopping behavior. His purpose was to develop and test a model of in-store apparel shopping behavior in relation to stockouts and to propose implications for merchandising strategies. The role of stockouts related to financial productivity had become a particular interest of mine because of my observation of student projects using ARM/Sourcing Simulator.

Song examined the literature related to in-store shopping behavior and he proposed a model having four major constructs: situational factors, shopper's intentions, stock situations, and purchase decisions. A telephone survey was developed and used with 250 randomly selected Ramal credit card customers. Questions related to the four constructs in the proposed model. Ramal provided a $25 gift certificate to customers who participated in the survey. Data analysis included frequencies, chi-square, t-tests, factor analysis, and simple regression.

Song found that Ramal customers were much more likely to be purposive than browsers, a fact consistent with shopping center research at the time. When stockouts occurred:

- size was most frequently the cause;
- older customers were significantly less likely to change their preference for color, style, and size than younger customers;
- customers of casual shirts were significantly more likely to accept free three day delivery service than customers of business suits (an option included at Ramal's request);
- women were significantly more likely to accept free three day delivery for business suits than men;
- purposive customers with a specific item in mind were likely to go to another store for the same item than customers with a general item in mind.

Song modified his model based on the findings(Fig. 7). This model became a point of reference for the projects that followed but no changes were necessary for the ARM/Sourcing Simulator in-store shopping behavior branching diagram.

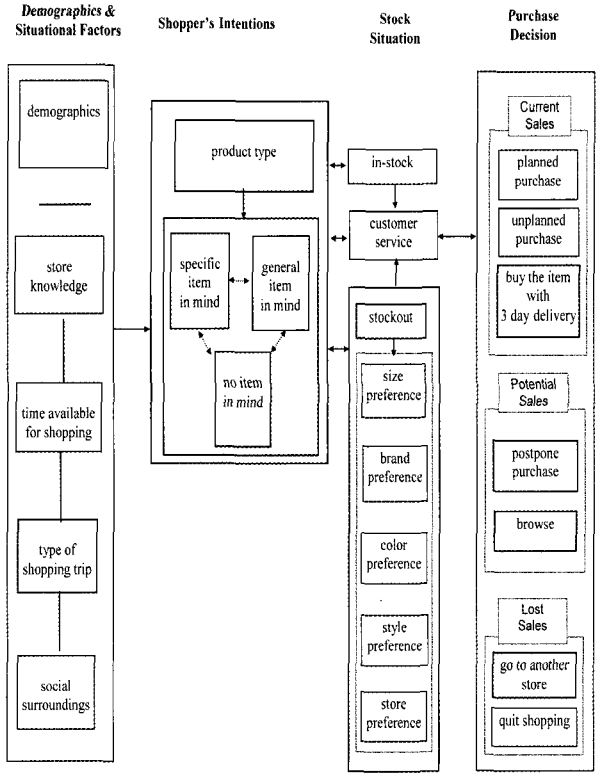

Fig. 7. A model of in-store apparel shopping behavior in relation to stockouts(Kunz & Song, 1996)

5. Merchandise Assortment Planning: Analysis through Computer Simulation - Dana Rupe

As a result of reading dozens of student papers reporting merchandise plans and results of Sourcing Simulator testing merchandise plans, I became preoccupied with was the relationship between the number stock-keeping units (SKUs) in an assortment and gross margin. I thought I observed that the more SKUs in an assortment the lower the gross margin assuming planned sales stayed the same. Now, any good merchandiser may already have a gut feel for that sort of thing but it cannot readily be tested using a retail data set. There are too many other uncontrollable things going on simultaneously that also influence the financial outcomes.

Dana Rupe, a very bright and brave graduate student, decided she would like to test my hypothesis related to the relationship of number of SKUs in an assortment and gross margin. Using BTAF for a conceptual framework and ARM to generate the data set, Rupe developed a research proposal to test my hypothesis. The following describes the research method.

We configured ARM to operate under the assumption that the merchandise was salable. We set up the simulation so there was one customer for each unit of merchandise. Consequently, it was possible to eliminate va-riables related to merchandise selection and customer shopping behavior and to focus on outcomes related to the nature of the assortment. In the input process, we used the default numbers in all categories with the exception of the number of customers expected during the period, planned number of units to sell during the period, the consumer demand profile, and the assortment plan.

To develop the data set, the assortment plan was manipulated to reflect the variety of SKU levels chosen. Manipulation re-quired altering the number of styles, sizes, and colors. Sixteen different SKU levels were run. To account for the random flow of customer shopping behavior generated by the Poisson process, five simulations were run for each SKU level, result-

ing in a total of 80 simulations. Five simulations per SKU level were used based on recommendations by the ARM simulation developers and previous research using ARM(Rupe & Kunz, 1998).

Rupe's search of the literature revealed that there were no quantifiable guidelines for assortment planning that related to financial outcomes. Vague descriptions of assortment breadth and depth had little quantitative meaning. However, it was clear according to Rupe's findings that more SKUs meant lower GM, other things being equal. To communicate Rupe's findings we developed a new/clarified language of merchandise assortments. However explaining this to reviewers was very difficult(Fig. 8).

Fig. 8. The language of merchandise assortments(Rupe & Kunz, 1998)

We published two papers based on Rupe's research, the first in Clothing and Textile Research Journal(CTRJ) and the second in Journal of Fashion Marketing and Management. The first paper was in review for two years. Of course, in the process our paper got much better and, more importantly, we clarified a language of merchandise assortments and the concept of assortment diversity as well as introducing volume per SKU of an assortment as a merchandise planning tool(Fig. 9).

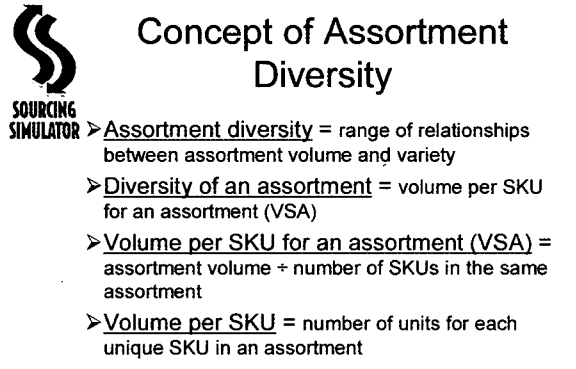

Fig. 9. Concept of assortment diversity(Kunz & Rupe, 1999)

One of the primary benefits of using ARM/Sourcing Simulator to generate a data set is to be able to associate cause and effect. A mathematically related language of merchandise assortments was essential for describing the quantified simulation results and understanding their meaning. Carrying these concepts one step further into describing the meaning and importance of assortment diversity in relation to financial outcomes was the biggest challenge. An Assortment Diversity Index was developed(Fig. 10). Assortment diversity became the focus of several additional graduate student projects.

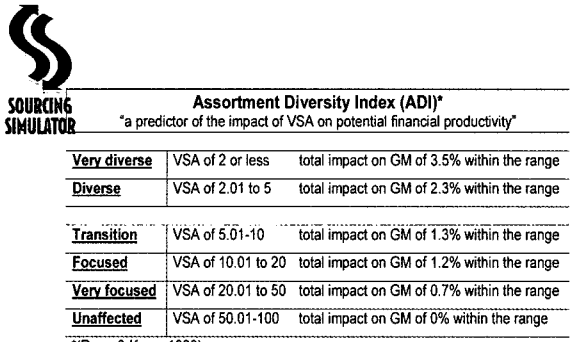

Fig. 10. Assortment Diversity Index(ADI)

6. An Analysis of Assortment Diversity in Relation to Merchandising Performance Measures and Markup - Seung-Eun Lee

Traditional performance measures for merchandising success are sales per square foot, inventory turns, gross margin, and gross margin return on inventory(Donnelly, 1998). A problem with these traditional performance measures is that they can measure only one aspect of performance, thus they reflect only one priority(Pearce, 1998). Appropriate use and comprehension of merchandising performance measures not only affect merchandising activities but also the firm's operation and profit. Using the data generated by Sourcing Simulator, the purpose of this study was to propose a model of how assortment diversity influ-

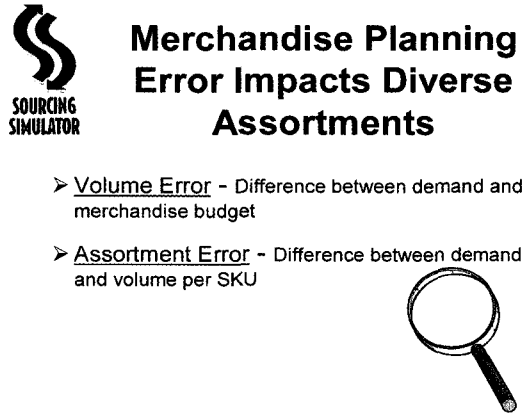

Fig. 11. Types of merchandise planning error

ences financial productivity considering multiple merhandising performance measures. Other things being equal, assortment diversity impacts on financial productivity are related to risk of assortment error(Fig. 11).

Lee's data show that as the diversity of an assortment increases, the probability of incomplete assortments and having the wrong stock-keeping units in-stock increase. Based on correlations between volume per stock-keeping unit(VSA) and 14 merchandising performance measures plus consideration of methods used for calculation of merchandising performance measures, a three stage model is proposed for interpretation of merchandising results. The merchandising performance measures represent three sequential aspects of financial productivity:

1) direct results of assortment error,
2) monetary results of assortment performance, and
3) cumulative results of assortment performance.

The direct results of assortment error include a decrease in percent in-stock, increase in percent lost sales, decrease in percent service level, decrease in percent offering sold, and increase in percent jobbed off. The direct results of assortment error create a paradox between the availability of products the customers want and the cost of excess inventory that has to be liquidated at the end of the selling period(Fig. 12).

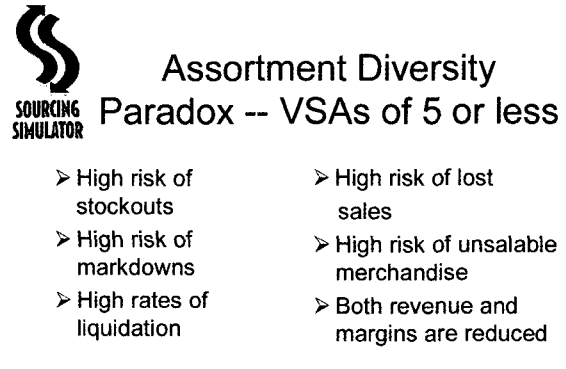

Fig. 12. Direct results of assortment error create an assortment diversity paradox

In the context of assortment diversity, the monetary results of assortment performance are impacted by the direct results of assortment error. Therefore, the monetary results of assortment performance improve when the direct results of assortment error improve. In the monetary results of assortment performance, total revenue, dollar gross margin, and adjusted dollar gross margin indicate the dollar amounts that apparel merchandisers achieve through merchandising performance during a selling period. Average inventory also is the dollar amount of average volume in stock during the selling period. The monetary results of assortment performance are often the primary focus of merchandising analysis with inadequate attention given to the sequential and interrelated nature of merchandising performance measures.

The combined effect of the direct results of assortment error and monetary results of assortment performance determines cumulative results of assortment performance. The cumulative results of assortment performance presented by Sourcing Simulator include percent gross margin, percent gross margin potential, inventory turns, gross margin return on inventory(GMROI), and gross margin return on inventory with service level(GMROISL). As assortment diversity increases, these performance measures decrease because of assortment error related to assortment diversity.

Regardless of how you measure it, diverse assortments cannot generate the same financial productivity as focused assortments. Yet, diverse assortments are often desirable, particularly for fashion goods. Customers want to select from a great variety of goods and do not want to see lots of other people wearing the same thing. However, to get the same financial productivity as focused assortments, markups on diverse assortments must be higher. How much?(Fig. 13).

This research suggests that merchandisers need to use

Additional Markup*

Additional markup required to achieve targeted financial productivity according to VSA.

Assortment Diversity according to VSA	Target financial productivity according to VSA	Required Additional Markup
VSA of 1	VSA of 5 to 10	33% to 46%
VSA of 2	VSA of 5 to 10	11% to 19%
VSA of 5	VSA of 10	5%

*Lee, 1999, p.65.

Fig. 13. Additional markup required to achieve targeted financial productivity

multiple performance measures and have a comprehensive understanding of their inter-relationships. A single performance measure such as percent gross margin, the traditional measure of merchandising success, can only give a partial picture of merchandising performance. Using multiple performance measures will help merchandisers acquire a comprehensive view of the means available for determining financial productivity of a product line and its relationship to overall performance of a firm.

7. Building a Financial Foundation for Mass Customized Merchandising - Ui-Jeen Yu

Merchandising strategies have evolved from traditional to mass merchandising to quick response merchandising and further to mass customized merchandising over the 20th century. The purpose of this project was to introduce financial productivity issues for mass customized merchandising by examining ability of Quick Response (QR) systems to compensate for merchandise plan errors when assortments are diverse. Mass customized merchandising has the potential to offer the ultimate of diverse assortments. Conceptually, mass customized merchandising can reduce problems that are inherent to assortment diversity and merchandise plan errors by offering exactly what customers order.

Three scenarios were created for three forms of merchandising including mass merchandising, quick response merchandising, and mass customized merchandising. Factors included in the definitions were target market, merchandise planning methods, pricing strategies, and replenishment practices. Sourcing Simulator inputs were created representing each scenario. However, the appropriate inputs for mass customization were inconsistent with the assumptions of the assumptions of the delivery strategies in sourcing simulator. Therefore the discussion related to mass customization was related to the outcomes of mass and quick response scenarios.

Sourcing Simulator was used to generate the data set including 4851 simulation runs.(A more sophisticated version of Sourcing Simulator 2.1 was used for this study. It facilitates simulation runs for research purposes). Data analysis included factor analysis, Pearson correlation, multiple regression, and covariance analysis. The main findings of the study relate to the relationships and interactions of levels of assortment diversity in with merchandising plan errors. This study found,

1) QR systems could not compensate for merchandise plan errors when assortments were diverse,
2) the negative financial impact of assortment diversity was attributed to increased lost sales and inventory, and
3) assortment diversity had a negative financial impact on quick response merchandising according to the levels of merchandise plan errors.

Mass customized merchandising could be a strategic application by combining it with quick response merchandising. Mass customized merchandising could be used to reduce merchandise plan errors and thus reduce lost sales and unsold inventory associated with quick response merchandising. From the perspective of financial productivity, this combination may achieve more balanced inventory with increased customer service.

8. Summary

Sourcing Simulator is specialized form of software capable of providing great insight into merchandising decision making. It is relatively easy to learn and operate by reading the help menus, experimenting with inputs, and

critically analyzing outputs. I see that it has great potential in a training program for new merchandisers to help them absorb the complexity of the numbers they must effectively use. The Sourcing Simulator, Version 1 that accompanies my textbook, Merchandising: Theory Principles, and Practice, 2nd ed. is the least complex version available. Two versions are available from [TC]2 - Retail version and The Retail/ Manufacturing version. The Retail Version is very similar to the Version 1. The Retail/ Manufacturing Version includes analysis of processes and costs in the manufacturing process as well as the merchandise planning component that we have discussed here. Sourcing Simulator is developed at North Carolina State University by Dr. Russ King, and available from Textile Clothing Technology Corporation [TC]^2, Cary, North Carolina.

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MERCHANDISING PRIMER

Grace I. Kunz

In its simplest form, four interrelated functions are required to operate a firm: merchandising, marketing, operations, and finance. These business functions operate in an environment created by executive leadership and the firm's business plan.

Firms that experience demand for frequent change in their product lines need well-defined and sophisticated merchandising processes. The more frequent the product change the more important the role of merchandising in the success of a firm. When a firm offers a few new products once a year while maintaining most of it product line relatively unchanged, merchandising activities may be dispersed to a few people in the firm as part-time responsibilities. When the majority of products offered by a firm are changed two to eight times a year, effective merchandising is essential to the firm's success. Merchandising is planning, developing, and presenting product lines for identified target markets with regard to pricing, assorting, styling, and timing.

Line planning has five dynamic components: evaluate merchandise mix, forecast merchandise offerings, develop merchandise budgets, develop merchandise assortments, and evaluate/update merchandise plans.

- Merchandise budgets include planned sales, pricing including reductions, and merchandise to receive-/sell.
- Merchandise assortments include model stocks, number of stock-keeping units (SKUs), and volume per SKU.

Line development is integrated with and based on the line plan. Line development occurs in two ways, through purchase of finished goods and through product development. Development of a line concept based on synthesis of current issues as well as cultural and fashion trends are the foundation for establishing line direction. The merchandise budget and assortment plan guide purchasing finished and/or engaging in product development. Merchandisers are usually included in product development teams. Product development involves creative design, line adoption, and technical design.

- Creative design includes visual images of design ideas and developing and evaluating prototypes.
- Line adoption determines what styles will be added, dropped, or modified; pricing; application of the new line to the budget and assortment plan.
- Technical design is preparation of new styles for production including perfecting style and fit, developing production patterns, testing materials, and developing style and quality specifications.

Line presentation is what makes a line visible and salable. It occurs internal to the firm, at wholesale, and at retail.

- Line adoption process involves extensive internal review of the proposed line by merchandisers and other executives.
- Presentation at wholesales markets and activities of sales representatives are based on line concepts and merchandise plans communicated in line previews and line/style release.
- Presentation at retail differs depending on story type and power of appeal. Considerations include space, fixtures, lighting, pricing, customer service, and inventory management.

People performing merchandising functions have many different job titles including product manager, merchandiser, and buyer. Designers and sales representatives are also engaged in merchandising. Good merchandisers are perceptive, creative, analytical, integrative, and not afraid of making mistakes. Merchandisers are always wrong, but good merchandisers find ways to be more right than wrong. In today's markets, good, integrated computer system support is required for merchandising success.