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SLOTING CONTRACTS AND CONSUMER WELFARE

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Abstract

Slotting contracts involve manufacturer payments for retail shelf space. Slotting payments are an increasingly important part of the competitive process in many product markets, and have been the subject of government investigations, antitrust litigation, and scholarly debate. However, very little is known about their competitive consequences. This paper uses a unique data set consisting of slotting contracts at military commissaries prior to an exogenously imposed slotting prohibition to identify the impact of slotting on consumer welfare. This natural experiment provides a unique opportunity to directly answer the crucial policy counterfactual: would a ban on slotting contracts increase consumer welfare? The analysis measures the impact of slotting, at both the product and category levels, on prices, output, and product variety. I find no evidence that slotting is anticompetitive. To the contrary, the results suggest that slotting contracts provide substantial net benefits to consumers once one accounts for the unmeasured pass-through of slotting payments.

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1 Introduction

Slotting allowances, payments by manufacturers to retailers for shelf space, have been the focus of government investigations,¹ litigation,² proposed legislation,³ and scholarly debate.⁴ Analytically similar payments such as payola and mutual fund revenue sharing fees have resulted in more high profile investigations, including Sony's recent settlement prohibiting all future payments for radio music spins as a result of New York Attorney General Eliot Spitzer's investigation.⁵ Despite these investigations and litigation, empirical knowledge regarding the competitive consequences of slotting and similar

¹ The Federal Trade Commission has also expressed a considerable amount of interest in slotting allowances, holding a workshop culminating in the issuance of a report and a subsequent study on the competitive concerns of the practice. See Federal Trade Commission, Report on the Commission Workshop on Slotting Allowances and Other Marketing Practices in the Grocery Industry (2001) (Hereafter *FTC Report*); A Federal Trade Commission Staff Study, "Slotting Allowances in the Retail Grocery Industry: Selected Case Studies in Five Product Categories," November 2003 (hereafter *FTC Study*) examined the use of grocery slotting allowances in five product categories (fresh bread, hot dogs, ice cream, shelf-stable pasta, and shelf-stable salad dressing).

² A variety of slotting allowance related issues have been raised in antitrust litigation. See *FTC v. McCormick* (FTC Dkt. No. C-3939 (2000)) (settling charges that McCormick's shelf space payments in the spice market violated the Robinson-Patman Act); *FTC v. H.J. Heinz Co.*, 116 F. Supp. 2d 190 (D.C.C. 2000), rev'd, 246 F.3d 708 (D.C. Cir. 2001) (analyzing whether a reduction in slotting fees might be an efficiency in the context of horizontal merger analysis); *R.J. Reynolds Tobacco Co. v. Philip Morris, Inc.*, 199 F. Supp. 2d 363 (M.D.N.C. 2002) (rejecting a claim that Philip Morris' shelf space payment program violated the Sherman Act); *Coca-Cola Co. v. Harmar Bottling Co.*, 111 S.W. 3d 287 (2003) (shelf space payments in violation of state antitrust laws); *Conwood Co. v. United States Tobacco Co.*, 290 F. 3d 768 (6th Cir. 2002) (holding firm liable for combination of exclusionary conduct including product destruction, misleading retailers, and payments for exclusive product display space). Slotting fees and other forms of shelf space payments were also central to Coca-Cola's recent settlement with the European Commission that limits the amount of shelf space that Coca-Cola can purchase from retailers, as well as Coca-Cola's ability to offer rebates conditioned on exclusivity or specified levels of sales. See Undertaking, Case Comp/39.116/B-2-Coca-Cola.

³ California Senate Bill 582 (Figueroa), amended text available at: http://www.leginfo.ca.gov/pub/bill/sen/sb_0551-0600/sb_582_bill_20050411_amended_sen.pdf.

⁴ Section II summarizes this literature.

⁵ See, e.g., Sony Settles Payola Investigation (Press Release from the Office of New York Attorney General Eliot Spitzer), available at: http://www.oag.state.ny.us/press/2005/jul/jul25a_05.html (announcing that Sony BMG has agreed to cease payments for airplay and also pay \$10 million to the Rockefeller Philanthropy Advisors as a result of allegations that its payments "were designed to manipulate record charts, generate consumer interest in records, and increase sales").

promotional payments is surprisingly scarce.⁶ This article is the first attempt to address that void by using actual shelf space contracts.

While little is known about how slotting contracts impact consumers, the antitrust doctrine governing these practices is notoriously unsettled, inconsistent, and controversial.⁷ A primary cause of the doctrinal uncertainty in this area has been the lack of empirical evidence⁸ to guide sensible antitrust policy.⁸ This paper seeks to fill that void by offering evidence relating to two related questions: (1) are slotting contracts anti-competitive in practice?; and (2) what explains the substantial variance observed in slotting contracts? The second question relates to the promotional services theory of slotting contracts recently set forth by Klein and Wright.⁹

The paper proceeds as follows. Section 2 summarizes the theoretical and empirical literature on slotting, focusing on the promotional services theory. Section 3 provides the background for the empirical analysis, presenting information concerning DECA commissaries, their product allocation decisions, regulatory framework, the 2001 slotting ban, and the data set. Section 4

⁶ Attempts to empirically document the competitive consequences of slotting contracts have not been fruitful. See, e.g., FTC Study, *supra* note 1, at 62 (“our ability to comment about the relevance of various theories of slotting based on our study is limited”); GAO Report, *Slotting Fees: Efforts to Study These Payments in the Grocery Industry* (Testimony of Lawrence J. Dyckman to the Small Business Committee, available at: <http://www.gao.gov/archive/2000/rc00295t.pdf>) (“in short, despite repeated attempts over the past 8 months, we have been unsuccessful in gaining the cooperation needed from the industry to conduct this study.”).

⁷ William A. Kovacic, *The Modern Evolution of U.S. Competition Policy Enforcement Norms*, 71 *Antitrust L.J.* 377 (2003) (noting that federal vertical restraints and monopolization policy have exhibited the greatest disparities in enforcement activity over the last three decades). See also Joshua D. Wright, *Antitrust Law and Competition for Distribution*, forthcoming in __ *Yale Journal on Regulation* __ (2006), draft available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=799384.

⁸ Two recent surveys echo this concern regarding the lack of empirical evidence, concluding that while the balance of evidence tips in favor of a presumption of legality, further research is critical to sound policy in this area. James C. Cooper, et al., *Vertical Antitrust Policy as a Problem of Inference* (Working paper, 2005); Francine Lafontaine and Margaret Slade, *Exclusive Contracts and Vertical Restraints: Empirical Evidence and Public Policy* (Working paper, 2005).

⁹ *Infra* Section II.C. Benjamin Klein and Joshua D. Wright, *The Economics of Slotting Contracts*, earlier draft available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=773464 (“Klein and Wright”).

examines the predictions of the promotional services model regarding the impact of slotting on prices, output, and product variety. Section 5 presents the empirical framework and results. Section 6 concludes by examining the implications for antitrust policy.

2 The Economics of Slotting Contracts

There have been a number of theoretical attempts to explain slotting contracts, but far fewer serious attempts to explain the observed variance in slotting payments or to evaluate their competitive consequences. This Section summarizes the theoretical and empirical attempts to explain and describe the slotting phenomenon.

2.1 Theoretical Literature

Economists have produced some models suggesting that slotting allowances may increase price, reduce output, or decrease product variety under some restrictive conditions. The conventional anticompetitive explanation for slotting contemplates manufacturer payments to retailers which disadvantage rivals by increasing their costs, thus increasing barriers to entry, and ultimately increasing prices and reducing product variety.¹⁰ This exclusionary theory of slotting has been the focus of the bulk of antitrust litigation involving promotional payments.¹¹ Other highly stylized theoretical models suggest that

¹⁰ See *FTC Report, supra* note __, at 34-41; *FTC Study, supra* note __ at 3-4 (citing Greg Shaffer, Slotting Allowances and Optimal Product Variety, 5(1)*Advances in Economic Analysis & Policy*: Article 3 (2005)). A second anticompetitive explanation suggests that slotting payments increase the cost of retail distribution, favoring incumbent firms who will be willing to pay more for the shelf space than competitors because they have substantial sunk investments. Essentially, a monopolist incumbent earning the monopoly rate of return will systematically bid more than a potential entrant seeking to earn a competitive rate of return. See Steven C. Salop, Strategic Entry Deterrence, 69 *Am. Econ. Rev.* 335 (1979); *FTC Study* at 3-4. These models depend on the presence of very large scale economies in manufacturing. An alternative possible concern is that a manufacturer may engage in predatory overpaying for shelf space. This is a condition that is difficult to identify and distinguish from the normal competitive process. See Benjamin Klein, Exclusive Dealing as Competition for Distribution On the Merits, 12 *Geo. Mason L. Rev.* 119 (2004).

¹¹ See, e.g., *El Aquila Food Products v. Gruma Corp.*, 301 F.Supp. 2d 612, 621 (S.D. Tex. 2003), *aff'd*, 131 Fed. Appx. 450 (5th Cir. 2005); *R.J. Reynolds Tobacco Co. v. Philip Morris Inc.*, 199 F. Supp. 2d 362 (M.D.N.C. 2002) (“RJR II”); *aff’d per curiam*, 67 Fed. Appx. 810 (4th Cir. 2003); *FTC v. McCormick*, FTC Dkt. No. C-3939 (2000); *Coca-Cola Bottling Co. v. Pepsi-Cola Metro Bottling Co.*, 94 F. Supp. 2d 804,

slotting allowances are a mechanism to shift rents between manufacturers and retailers to the exclusion of rivals.¹² The welfare effects of these models are generally ambiguous and incomplete. In particular, these models ignore the possibility that some fraction of payments to retailers are passed on to consumers.¹³

There are several other reasons to be skeptical of the explanatory power of these anti-competitive explanations. Two necessary conditions for competitive harm under the exclusionary theories are missing from most slotting arrangements: they are typically not of sufficient duration to create risk of competitive harm and frequently cover products that do not exhibit significant economies of scale. Without significant economies of scale, a competing manufacturer could profitably enter at a small scale in the presence of slotting contracts, thus thwarting any attempts to exclude his presence. Perhaps most importantly, the exclusionary theories fail to explain the dramatic increase in the incidence of slotting in the mid 1980s.

The pro-competitive explanations of slotting have been equally unconvincing. Mary Sullivan argues that slotting allowances might serve as a mechanism by which manufacturers compensate retailers for the risk associated with new products.¹⁴ The theory has some intuitive appeal, but is ultimately

816 (E.D. Ky 1999); *Beverage Mgmt., Inc. v. Coca-Cola Bottling Corp.*, 653 F. Supp. 1144, 1153-54 (S.D. Ohio 1986); *Bayou Bottling v. Dr. Pepper*, 725 F. 2d 300, 303 (5th Cir. 1985); *Conwood Co. v. United States Tobacco Co.*, 290 F.3d 768 (6th Cir. 2002).

¹² See, e.g., Leslie M. Marx and Greg Shaffer, *Upfront Payments and Exclusion in Downstream Markets*, unpublished paper, August 2005; Patrick Rey, Jeanine Thal, and Thibaud Vergé, *Slotting Allowances and Conditional Payments*, unpublished paper, March 2005. Both papers present models where retailers with bargaining power demand slotting fees to increase their profits because slotting has the anticompetitive effect of excluding other retailers.

¹³ The legal implications of this omission are discussed in Joshua D. Wright, *Antitrust Law and Competition for Distribution*, George Mason Law & Economics Research Paper No. 05-28, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=799384.

¹⁴ Mary Sullivan, *Slotting Allowances and the Market for New Products*, 40 *J. L. & Econ.* 461 (1997).

flawed and inconsistent with the evidence.¹⁵ Most importantly, slotting contracts are observed for incumbent, proven brand-name products not likely to impose any risk of failure on the retailer. One feature of the data set used in this paper is that all of the slotting contracts involve exclusively incumbent products.

Additionally, slotting contracts are not necessary to solve problems associated with the risk of product failure. For instance, manufacturers frequently agree to pay the retailer a specified “failure fee” if the product is unsuccessful.

2.2 Empirical Literature

There is very little evidence regarding the competitive effects of slotting contracts, and the existing evidence does not include a systematic analysis of actual slotting contracts. The empirical literature has been hampered because firms are rationally disinclined to share information in the present antitrust climate and because slotting fees involve payments that are difficult to disentangle from other trade promotion spending. For these reasons, most attempts to measure the impact of slotting have relied on aggregate and survey data.¹⁶ The literature does contain a few notable exceptions.

¹⁵ Klein and Wright, *The Economics of Slotting Contracts*, *supra* note __. Slotting is necessary in the Sullivan model because consumers are assumed unwilling to pay for the provision of increased product variety, including the increased cost of shelf space per dollar of sales, with an increased gap between retailer and manufacturer price. It does not make economic sense that retailers would be willing to incur the costs associated with increased product variety if it did not produce consumer benefits. Consumers should be willing to compensate retailers for supplying this benefit in the form of an increased margin and/or increased sales. On the other hand, if consumers do not demand increased variety, one would expect inter-retailer competition not to lead to an increased number of Stock Keeping Units (“SKUs”) and higher retailer costs in terms of lower sales per square foot. There would simply be no benefit to incurring these costs. If this were the case, one would expect at least some retailers to specialize in providing a limited number of products with large sales per square foot. This is dramatically inconsistent with observed supermarket competition.

¹⁶ See, e.g., Sullivan, *supra* note __ (using aggregate level data on the supply and demand for new products); Klein and Wright, *supra* note __ (showing that the growth in slotting contracts over the past twenty years is consistent with the aggregate increase in manufacturer margins and prevalence of branded products across product categories).

For example, Rennhoff estimates a structural model of manufacturer competition for retailer shelf space with slotting allowances.¹⁷ Though Rennhoff does not directly observe slotting contracts, he observes some information on the magnitude of the manufacturer's merchandising allowance. Rennhoff applies a discrete-choice, random coefficients framework to estimate consumer demand using individual firm data on promotional payments, showing that products enjoying placement in premium shelf space experience increased demand.¹⁸ By imposing assumptions about the strategic interactions of manufacturers and retailers, the model predicts that mean expected retail prices are *lower* with slotting allowances.

Sudhir and Rao analyze new product offers by manufacturers to a single large supermarket chain in the northeastern United States over a six month period from June 1986 to February 1987.¹⁹ They observe whether a slotting allowance was paid, but not its magnitude, and survey results from a questionnaire completed by the retail buyer assessing various manufacturer and product attributes. Sudhir and Rao reject the manufacturer exclusion and retailer market power theories, suggesting that slotting weakens retail competition but is on balance likely procompetitive. Bronsteen, Elzinga, and Mills test and reject the theory of competitive harm offered in the recent antitrust litigation against Philip Morris' "Retail Leaders" program, which involved payments to retailers for varying levels of display space and store signage, which predicted that the

¹⁷ Adam Rennhoff, *Paying for Shelf Space: An Investigation of Merchandising Allowances in the Grocery Industry* (July 2004), available at: <http://www.pages.drexel.edu/~adr24/rennhoffshelf.pdf>.

¹⁸ This is consistent with the marketing literature. See, e.g., Xavier Dreze, *et al.*, *Shelf Management and Space Elasticity*, 70 *J. Retailing* 301 (1994); Charles Areni, *et al.*, *Point-of-Purchase Displays, Product Organization, and Brand Purchase Likelihoods*, 27 *J. Academy Marketing Sci.* 248 (1999).

¹⁹ K. Sudhir and Vithala R. Rao, *Are Slotting Allowances Efficiency-Enhancing or Anticompetitive?* (October 2004 working paper, available at <http://www.mba.yale.edu/faculty/pdf/slottingallowances.pdf>).

retail prices of Philip Morris' brands would increase relative to rival brands' prices.²⁰

In sum, the state of empirical knowledge regarding both slotting contracts and their consequences is deficient. Existing empirical studies have creatively worked around the difficulties in obtaining slotting contracts with aggregate data, surveys, and by modeling unobserved behavior.

2.3 The Promotional Services Theory of Slotting Contracts²¹

The promotional services theory of slotting contracts recognizes that retail shelf space, especially premium shelf space, is a form of promotion in the sense that it increases some consumers' reservation values for a product. Premium shelf space creates "promotional sales" that would not occur without the promotion. These promotional sales are particularly profitable for manufacturers of products with relatively large margins of wholesale price over marginal cost. It is this empirical reality that sets the foundation for the fundamental economic question regarding slotting contracts: why do manufacturers and retailers find it necessary to enter into slotting contracts? In other words, why do manufacturers not simply sell products to retailers at wholesale prices and allow competitive retailers to determine independently which products to feature?

The key insight offered by the promotional services theory of slotting is that manufacturer and retailer incentives are not aligned with respect to the supply of the desired quantity and quality of promotional shelf space. The economic reason for this incentive incompatibility is the large manufacturer margin relative to the small retailer margin on the same product. Klein and

²⁰ Peter Bronsteen, et al., Price-Competition and Slotting Allowances, 50 Antitrust Bulletin 267 (2005); R.J. Reynolds Tobacco Co. v. Philip Morris Inc., 199 F.2d 362 (M.D.N.C. 2002); *aff'd per curiam*, 67 Fed. Appx. 810 (4th Cir. 2003). This case is discussed in Klein and Wright, *supra* note __, and Wright, *supra* note __.

²¹This section summarizes the theory set forth by Klein and Wright, *supra* note __.

Wright show that slotting contracts are a consequence of the normal competitive process when premium shelf space creates profitable incremental manufacturer sales but does not shift sales between retailers as much as retailer price competition. The theory therefore offers a business justification for slotting contracts which might otherwise appear to be overly restrictive.

The intuition is straightforward. The retailer's decision to allocate eye-level shelf space to Coke or Pepsi creates significant profits for the favored manufacturer, but does little to shift inter-retailer sales or increase retailer traffic. It is under these conditions that the manufacturer must compensate the retailer to ensure the joint profit-maximizing allocation of shelf space. A key economic insight of the promotional services theory is that the magnitude of this competitive distortion is correlated with the gap between the manufacturer's margin and the retailer's margin.²²

The promotional services theory also addresses a second important economic question: what determines the form of manufacturer payment? Sometimes we observe per unit time payments rather than wholesale price reductions or resale price maintenance. Klein and Wright demonstrate that shelf space contracts are more likely to include per unit time payments when promotional shelf space is particularly valuable and the manufacturer's product is subject to significant inter-retailer price competition. In product markets where inter-retailer competition is particularly intense, competition will dissipate the premium as the retail price is driven within a certain percentage of the wholesale price, therefore diminishing the increased shelf space value. The greater the value of promotional shelf space and the greater the required wholesale price reduction, the more likely it is that compensation will occur in

²² Klein and Wright show that grocery manufacturer margins increased significantly over the time period where slotting contracts became prevalent.

the form of a per unit time payment. This explains why slotting arrangements developed in the early 1980's as promotional shelf space value increased.

The promotional services theory also offers important insights for the consumer welfare analysis of slotting. Klein and Wright emphasize that shelf space payments will ultimately be completely dissipated regardless of their form. Supermarket retailers are not earning excess profits, therefore, slotting payments will ultimately be passed on to consumers. The promotional services theory implies that increases in slotting payments improve consumer welfare, *ceteris paribus*.²³

3 The Data

The primary data source is the 32 actual shelf space contracts in operation at DeCA commissaries from 2000-01. These contracts display a great deal of variation. For example, the contracts generally vary upon at least four dimensions: form of payment (fixed, variable, or hybrid), magnitude of payment, duration, and performance sought from DeCA. The performance sought might include supplying an end-cap, a specified amount of shelf space, a display rack, signage, or other forms promotional effort. Appendix A contains a sample slotting contract from the data set. Table 1 summarizes the product categories where slotting contracts were observed in commissaries, as well as the total value of the payments.

²³ This is not to say that there are no meaningful differences between fixed and variable payments. Profit maximizing retailers can use fixed payments on any competitive margin to increase store traffic, which in turn, increases the amount of slotting fees collected by the retailer. Retailers may use payments to reduce the prices of particular products which drive store traffic, or supply non-price services that will get more consumers into the store. In short, per unit time compensation gives the retailer the flexibility to invest these additional resources on the margin with the greatest return in terms of inter-retailer competition. For example, the retailer might lower prices on products likely to increase store traffic. A key point is that investments in store traffic-increasing assets will also benefit the retailer by increasing the amount of future slotting payments.

In addition to slotting contracts, I also observe a set of “plan-o-grams,” a shelf space schematic which details the precise shelf layout of Stock Keeping Units (“SKUs”) in a product category, at DeCA commissaries during the relevant time period. These plan-o-grams indicate the number of square inches of shelf space allocated to each product, exactly where the product is allocated on the shelf, and next to what products. Appendix B contains a sample plan-o-gram setting forth the shelf space allocation for juices in commissaries in 2005. Finally, I also observe the prices and quantities of each SKU sold by DeCA commissaries in the United States in product categories where a slotting contract exists. The dataset covers the sales of 11,688 SKUs (“SKUs”) in 73 product categories from 2000-03, generating approximately \$2.3 billion in revenues.

There are also several unique institutional details of the commissary system, discussed in Section 4, which provide important background information for the empirical analysis.

4 DeCA Commissaries

The Department of Defense operates grocery retail stores, called commissaries, for active and retired military personnel and their families. DeCA, formed in 1991, manages these commissaries and is responsible for product assortment decisions, negotiations with suppliers, pricing, and day to day operations. DeCA operates 275 commissaries, 171 within the 48 contiguous United States, and 104 located elsewhere throughout the world.²⁴ Annually, DeCA commissaries generate approximate \$5 billion in revenue. While commissaries are similar to traditional supermarket chains in terms of store content, size, management, and competitive dynamics,²⁵ there are some

²⁴ A list of the geographic locations of the commissaries is available at: http://www.commissaries.com/realign_maps/alpha_list.cfm.

²⁵ Commissary stores, according to 10 U.S.C. § 2486(a), are “similar to commercial grocery stores and may sell merchandise similar to that sold in commercial grocery stores.”

important differences between commissaries and conventional private sector supermarkets.

The most prominent difference between supermarkets and commissaries is that the latter are not-for-profit operations. DeCA's operating expenses are paid primarily through its annual appropriation of approximately \$1 billion. The DeCA mission is "to provide a significant non-pay compensation benefit to military families."²⁶ Specifically, DeCA aims to generate 30% in savings for military families relative to conventional supermarkets.²⁷

Significantly, however, private manufacturers compete for shelf space at both commissaries and supermarkets alike. Commissaries also face a unique regulatory environment. For instance, commissaries do not sell private label products, which have earned an increasing share of conventional supermarket sales in recent years.²⁸ The most important regulatory imposition directly impacts the retail pricing decision. Specifically, commissaries sell food and household items tax free at cost plus a 5% surcharge over the wholesale price.²⁹

²⁶ United States General Accounting Office Report to the Committee on Small Business and Entrepreneurship, Defense Commissaries (December 2002), at 5.

²⁷ DeCA estimates that during fiscal year 2003, the actual saving to commissary customers relative to supermarkets was 32.1%, exceeding its target of 30%. Defense Commissary Agency, Fiscal Year 2003 Annual Financial Report, at 1. The 30% target likely derives from a 1996 comparison of commissary and supermarket prices for a market basket of goods. See Defense Commissary Agency, 1996 Market Basket Comparison Study (prepared by Wirthlin Corporation, March 1996).

²⁸ Private label sales had captured up to 20.7% of supermarket unit sales and 16.9% of dollar sales according to the Private Label Manufacturers Association (citing Information Resources, Inc.). The absence of private label products does not appear to have compromised DeCA's bargaining power vis-à-vis manufacturers as DeCA generally secures "most-favored nation" pricing provisions with all suppliers. GAO Report.

²⁹ 10 U.S.C. § 2486(c) states that:

"an adjustment of or surcharge on sales prices in commissary stores under subsection (d) or section 2685(a) of this title or for any other purpose shall be applied as a uniform percentage of sales price of all merchandise sold in, at, or by commissary stores. Effective on November 18, 1997, the uniform percentage shall be equal to five percent and may not be changed except by a law enacted after such date."

As discussed *infra*, the fixed retail margin allows direct observation of the impact of the slotting ban because, in this environment, manufacturers cannot substitute towards alternative methods of paying for shelf space, such as reducing the wholesale price.

4.1 Commissary Shelf Space Decisions

Commissary shelves are not unlike those in private supermarkets. Both offer a similar range of products,³⁰ though commissaries are smaller than today's largest supermarkets by approximately 25% in terms of square footage, and carry about 40% fewer SKUs than the average supermarket.³¹ This is explained, in part, by the fact that commissaries do not sell beer, wine, or general merchandise items. Commissaries typically offer a comparable number of products per category. Commissaries also keep more limited hours than supermarkets, averaging 48 hours per week in 1996 compared to 131 hours for supermarkets.³²

DeCA purchases typically involve a competitive bidding process, though federal law exempts the purchase of brand name products from such bidding.³³ The "brand name exception" is triggered only where the commercial item "is regularly sold outside of commissary stores under the same brand name by which the commercial item will be sold in, at, or by the commissary stores."³⁴

DeCA's purchasing practices for brand name products are similar to the negotiations of a large chain of private supermarkets. These practices include,

³⁰ Federal law enumerates the categories of products that commissaries may sell, including: health and beauty aids, meat and poultry, fish and seafood, produce, food and non-food grocery items, bakery goods, dairy products, tobacco products, delicatessen items, frozen foods, and magazines and other periodicals. 10 U.S.C. §2486 (b). Commissaries may sell non-enumerated products "as the Secretary of Defense may prescribe" upon notification of Congress, but are not authorized to carry beer & wine, greeting cards, and most general merchandise items. *Id.*

³¹ Defense Commissaries, *supra* note __.

³² Progressive Grocer, Annual Report of the Grocery Industry (April 1996).

³³ 10 U.S.C. §2304(c)(5). This is to be compared to bidding procedures that are imposed for non-brand products set forth in Section 2304 mandating a sealed bid auction where feasible. DeCA may also escape the competitive procedures for product purchase under a number of other scenarios, including "unusual or compelling urgency," or national emergency. *Id.*

³⁴ 10 U.S.C. §2486 (e). The term "regularly sold outside of commissary stores" is to be interpreted by evaluating "sales of the item on a regional or national basis by commercial grocery or other retail operations consisting of multiple stores. *Id.* It is worth noting that DeCA sales do not include new product introductions, therefore negating the possibility that these contracts are caused by new product risk.

for example, entry into category management relationships with suppliers.³⁵ DeCA adopted category management in the mid 1990s, and accordingly, engages in intensive data-based analysis of nearly all of the 170 product categories.³⁶ DeCA assigns category managers and buyers to each category who meet with suppliers during a category review. Suppliers present DeCA with sales data, product selection recommendations, and display recommendations.³⁷ DeCA states that it “relies on market data” that it obtains from independent sources and that “large suppliers do not select the products that commissaries sell,” but notes that suppliers such as Kraft Foods, Inc. and General Mills, Inc. and other companies in the category often have input on display considerations.³⁸

DeCA commissaries are also substantially more geographically dispersed than supermarkets because military bases are not often placed in close proximity to one another. It is important to note, however, that commissary stores are not insulated from inter-retailer competition. A 1975 General Accounting Office

³⁵ Category management typically involves designating a category captain in a product category and conferring upon the captain some power to provide input and otherwise participate in the retailer’s shelf space allocation decisions. Benjamin Klein and Joshua Wright analyze this arrangement in an unpublished paper, *The Antitrust Law and Economics of Category Management*, mimeo (2005), draft available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=704181, arguing that this form of arrangement is a less restrictive form of controlling dealer free-riding incentives than exclusive dealing, but was perversely accorded stricter antitrust scrutiny in *Conwood Co. v. United States Tobacco Co.*

³⁶ DeCA utilizes data from Information Resources, Inc. (“IRI”), a data source commonly employed by private supermarkets.

³⁷ DeCA notes that the suppliers making such presentations include both “leading” manufacturers such as Kraft, General Mills and Pepsi, as well as other companies and distributors. DeCA describes its category management review process in seven steps, as follows: (1) DeCA announces a category review and invites companies supplying products to provide information and analysis; (2) DeCA conducts meetings with interested manufacturers, brokers, and distributors at DeCA’s headquarters in Fort Lee, Virginia; (3) DeCA’s category manager obtains IRI and scanner data on product performance; (4) DeCA analyzes IRI data as well as data presented by participating suppliers and prepares a schedule of category decisions indicating assortment decisions; (5) DeCA officials develop and sign-off on shelving plans called “plan-o-grams” illustrating how products will be arranged on the shelves. These plans are carried out with the assistance of the participating suppliers and distributors; (6) DeCA releases category review decisions and solicits comments from participating companies; (7) DeCA responds in writing to each company that objects to DeCA’s decisions; and (8) DeCA removes all deleted items from the stock system after 90 days. *Defense Commissaries*, *supra* note __, Appendix III.

³⁸ *Id.*

examination of 27 urban commissaries found that each one had at least four grocery stores within a five mile radius.³⁹ The significant growth in the number of supermarkets over the past 30 years suggests that the number of grocery stores in these areas has increased.⁴⁰

4.2 DeCA's Slotting Contracts

DeCA's report to Senator Christopher Bond, the Ranking Member of Senate Committee on Small Business and Entrepreneurship, states that:

"DeCA does not require its suppliers to pay for shelf space in commissaries, the agency accepts and stocks products for sale without charging slotting fees. However, in recent years the agency participated in a small number of promotional arrangements, called 'performance based agreements,' under which suppliers paid a negotiated fee for preferred product display space . . . The revenue from these performance based agreements . . . has been used to fund commissary construction. The agency discontinued offering its suppliers performance-based agreements for 2002 to assure that revenue obtained through these agreements was not limiting vendors' ability to reduce product prices and because the Congress had provided for funding commissary construction."⁴¹

This denial appears to be wholly semantic. There are simply no meaningful differences between "performance based agreements" ("PBAs") and the slotting contracts observed in private supermarkets.⁴²

³⁹ General Accounting Office, *The Military Commissary Store* (1975). A 1995 study estimates that in Hampton Roads, Virginia, local commissaries accounted for approximately 8.4% of all grocery retail sales, making DeCA the third leading retail chain in the region. Supermarkets Fight Commissary Proposal, *The Virginian-Pilot*, at page D1 (citing Food World study).

⁴⁰ The number of supermarkets has increased about 20% during this time period, from 26,997 in 1972 to 34,252 in 2004. Progressive Grocer, *Annual Report of the Grocery Industry* (various years).

⁴¹ Defense Commissaries, *supra* note ___, at 2.

⁴² Though apparently enough difference to justify Senator Bond's announcement that DeCA did not, in fact, use slotting fees. See United States Small Business Committee Press Release, available at: <http://sbc.senate.gov/107press/jan1503.html> (stating that "following a review of the Defense Department's commissaries by the General Accounting Office, Senator Kit Bond said today he is heartened by findings that the Defense Commissary Agency does not accept so-called slotting fees or cash payments from big manufacturers to control prime shelf space and limit the display of competing products produced by small manufacturers").

4.3 The Slotting Contract Ban

DeCA officials decided not to enter into any PBAs for fiscal year 2002 after using shelf space contracts in both 2000 and 2001.⁴³ The decision came after a number of Senate Small Business Committee hearings investigating the use of slotting, including a request that DeCA self-report on whether it charges slotting fees. While DeCA's publicly stated reason for putting an end to PBAs was that Congress granted funding for commissary construction, obviating the need for additional revenues from the contracts, a reasonable interpretation of the sequence of events might be that DeCA ceased practices as a result of the Senate and Department of Defense inquiries. Under either theory, the ban is exogenous to the bargaining process between manufacturers and DeCA, which allows empirical examination of the relationship between shelf space contracts and consumer welfare.

5 Do Slotting Contracts Harm Consumers?

Despite the substantial resources that have been invested into Congressional hearings, a Federal Trade Commission Report and Study, federal prosecutions in both the United States and the European Union resulting in settlements, and a growing body of antitrust cases involving slotting contracts, it remains the case that very little is known about their competitive consequences. The competitive concern, that slotting may be used by manufacturers to foreclose or otherwise disadvantage rivals, raising the costs of entry and consequently increasing prices, must be weighed against the consumer welfare benefits. A complete analysis of the consumer welfare benefits associated with slotting contracts would include the following:

⁴³ DeCA apparently justified the decision to no longer accept trade spending dollars because the revenue needed for commissary construction had been secured through the National Defense Authorization Act of 2002. Defense Commissaries, *supra* note __, at 8.

- (1) Shelf space payments may reduce the price of the slotted good directly;
- (2) Shelf space contracts may stimulate demand for the slotted product, creating “promotional sales” and increasing output;
- (3) Retailers may use shelf space payments to engage in non-price competition, i.e. advertising, provision of free parking, wider aisles, a deli, more cash registers, more employees, etc., in order to increase store traffic;
- (4) Retailers may use shelf space payments to subsidize price competition on “staple” products likely to increase store traffic, i.e. milk, diapers, and other staple items.

The data allow measurement of (1) and (2), but not (3) and (4), which the promotional services theory suggests are quite important since they increase store traffic, increase shelf space value, and lead to greater future slotting payments. On the other hand, the analysis should capture any net anticompetitive effects of slotting on price, output, or product variety. This suggests that the estimated effects should be interpreted as an upper bound on anticompetitive effects.

I present two different types of evidence regarding the impact of slotting contracts and consumer welfare. In Section 5.1, I consider the product-level effects associated with the slotting ban. In other words, I examine how the slotting ban impacted the price and output of slotted products relative to non-slotted products after the ban was implemented. While this evidence provides some insight into slotting contracts and their consequences, it does not address whether slotting is producing net anticompetitive effects. In search of these answers, Section 5.2 considers the relationship between slotting and product category output, prices, and product variety.

5.1 Differences-in-Differences Estimation of Product Level Effects

The basic strategy for identifying the competitive effects of slotting contracts is to utilize the natural experiment provided by the slotting ban at the end of 2001. I compare the effects of the ban on a “control group” consisting of the non-slotted products within a particular product category to the effects on the “treatment group,” which consists of the slotted products in the same product categories. This is the “differences in differences” or “double differences” estimate made possible by the natural experiment.

The intuition behind the strategy is simple: compare the change in prices on slotted products while controlling for changes that occur in the control group of non-slotted products in the same stores. Technically, one need not estimate a regression equation. One could calculate the difference in mean prices for “slotted” and “non-slotted” products before and after the ban and calculate the difference between those averages. To illustrate the intuition behind the estimation strategy, the regression framework is presented in Equation (1).

$$(1) \quad \ln p_{it} = \alpha + \beta_{it}(d_i \times d_t) + \beta_i(d_i) + \beta_t(d_t) + \varepsilon_{it}$$

P_{it} is the price (quantity) of a product, where i indexes whether the product was slotted or non-slotted, and t indexes whether the observation is before or after the policy change. The double differences estimator is β_{it} , which measures the true effect of the slotting ban. α is a product-specific fixed effect, β_i measures the treatment group specific effect to account for average permanent differences between slotted and non-slotted products, and β_t measures the time trend common to both groups. Equation (1) also describes the regression framework for the product level output regressions, substituting output as the dependent variable. The interesting policy variable is β_{it} , which answers the crucial

counterfactual: what would happen to the prices and sales of slotted products in a world without slotting contracts?

The results tentatively suggest that the slotting ban did not reduce prices or increase output for DeCA consumers. To the contrary, the significant product-specific quantity effects are much more likely to be negative. The slotting ban also had generally negligible price effects. Where significant, the ban was more likely to increase prices than lower them.

5.1.1 Quantity Effects

These regressions capture the possibility that slotting contracts generate “promotional sales,” thereby increasing output by inducing sales that would not otherwise occur. If slotting contracts induce promotional sales, one would expect the ban to reduce the output of the slotted products relative to non-slotted products which are unaffected by the ban. I begin by identifying those product categories where slotted products experienced a significant change in quantity relative to non-slotted products as a result of the ban. Fifteen product categories generate statistically significant quantity effects at the 10% level, 9 at the 5% level, and 6 at the 1% level.⁴⁴ The impact of the slotting ban on the output of slotted versus non-slotted products was negative in 13 out of 15 of these categories. The average effect of the slotting ban on quantity was a 13.36% reduction. Table 2 summarizes the results for the 19 categories with the strongest quantity effects.

5.1.2 Price Effects

These regressions measure the impact of the slotting ban on the price of the slotted product. The initial price regressions show that, generally, the slotting contract ban had little effect on prices. Price effects are significant (at the

⁴⁴ Future research will attempt to incorporate additional sources of variation in the shelf space contracts (duration, magnitude of payment, form of payment).

10% level) in just 28 of 73 product categories.⁴⁵ The slotting ban increased prices in 17 of these categories, and on average, increased prices by 3.7%. Table 3 presents the price results for the same 19 product categories in Table 2.

The fact that the slotting ban did not generate strong product-specific price effects is unsurprising in light of the promotional services theory, which suggests that slotting payments are likely to be passed on to consumers on margins other than the price of the slotted product. Analyzing product-level effects alone is not sufficient to support the conclusion that slotting is anticompetitive. Where the impact of the slotting ban was significant, the average effect was to reduce the quantity and increase the price of products slotted prior to the ban.

There are, however, two important qualifications to the product level estimates generated in this section which stem from the same concern. It is entirely possible, perhaps probable, that commissaries would re-optimize shelf space allocations after the slotting ban. This is important because such re-optimization would result in changes in the manner in which products in both the treatment and control groups were displayed after the ban. Because I do not know that the products that were not slotted prior to the ban were unaffected by the ban as a result of such re-optimization, I cannot be certain that the estimates are from an entirely “clean” experiment. I can explore this possibility in one of two ways. One way to account for this possibility is to utilize plan-o-grams to compare shelf space allocations of slotted products before and after the ban. A second, but related complication, is to ensure that such re-optimization does not involve quantity effects that mask changes in the sizes of units offered by

⁴⁵ Price effects are significant at the 5% level in 21 product categories and significant at the 1% level in 13 categories.

commissaries, i.e. selling a single twelve pack instead of two six packs. I am currently collecting the data that will make both tests possible.

These qualifications aside, the results provide some evidence that slotting contracts have the intended effect, increasing sales of the slotted product. However, a proper consumer welfare analysis must address whether the use of slotting practices within a product category results in higher prices, reduced output, or a reduction in product variety.

5.2 *Category Level Effects*

If slotting contracts are likely to generate anticompetitive effects, one would expect that DeCA's slotting ban would generate more significant increases in consumer welfare in the form of lower prices, greater output, or increased product variety, in those product categories where slotting practices were more intense. To measure the intensity of slotting within a product category, I construct the variable, "*SLOTSHARE*," which is the total category sales attributable to slotted products before the ban. Because there is substantial variance in slotting intensity across product categories prior to the ban, it is possible to examine whether increased slotting affects consumer welfare. Specifically, I estimate the following equation:

$$(2) \quad \ln q_{st} = \alpha + \beta_{st}(SLOTSHARE \times d_t) + \beta_s(SLOTSHARE) + \beta_t(d_t) + \varepsilon_{it}$$

Where α is a constant, d_t is a dummy that takes the value of 1 for observations after the slotting ban. The coefficient on $SLOTSHARE \times d_t$, β_{st} , is the crucial policy variable of interest, and can be interpreted as the effect of the slotting ban on category output weighted by the intensity of slotting within the product category. I run similar regressions in price and product variety, defined as the number of SKUs in the product category.

I am unable to find any evidence supporting the theory that slotting is anticompetitive, or that the ban improved consumer outcomes by any measure. Given that the category level regressions should also be interpreted as an upper bound on competitive injury because they do not capture the pass-through of slotting payments to consumers on various margins, the results support the conclusion that slotting contracts are a pro-competitive consequence of competition for distribution.

5.2.1 *Category Output*

Table 4 summarizes the results from the category output regressions. There is no evidence that product categories with greater intensity of slotting experienced any increase or decrease in output relative to those where slotting is less prevalent. Interestingly, there is a significant negative correlation between the intensity of slotting and sales. In other words, slotting appears to be more intense in categories with less sales volume.

5.22 *Category Prices*

Table 5 summarizes the results from the category level price regressions. There is no evidence of differential price effects in product categories with greater slotting shares, or that the slotting ban produced lower prices. In sum, there is no evidence that slotting contracts impact category level prices.

5.23 *Category Variety*

The FTC Study raises the concern that slotting contracts might reduce product variety.⁴⁶ I measure whether product categories with greater slotting shares experienced different changes in product variety, as measured by the total number of SKUs in the category, after the slotting ban. Table 6 summarizes the results, which find no evidence that slotting contracts reduce product variety.

⁴⁶ See *FTC Study*, *supra* note __, at 3-4 (citing Greg Shaffer, Slotting Allowances and Optimal Product Variety, 5(1) *Advances in Economic Analysis & Policy*: Article 3 (2005)).

6 Conclusions, Implications, and Future Research

The empirical analysis offered herein is unique for three reasons. It is the first to analyze the competitive effects of actual slotting contracts. Specifically, I analyze a complete set of 32 slotting contracts in operation at military commissaries in fiscal years 2000 and 2001. The second unique feature of the analysis is that it exploits DeCA's prohibition of slotting contracts in response to Congressional scrutiny and pressure. The prohibition enables a systematic analysis of the effects of slotting on prices, quantities, and product variety at both the product and category levels. The results are contrary to the conventional assumptions, that slotting contracts are anticompetitive, adopted by antitrust plaintiffs and underlying recent economic analysis of the practice. Specifically, I find that at the product level, the slotting ban was more likely to decrease sales and increase prices than to help consumers. More importantly, at the category level, there is no evidence that slotting contracts reduce output or variety, or increase prices.

One implication of the results is that it appears that slotting contracts primarily shift sales between brands rather than increasing or decreasing category output. This result is consistent with the promotional services theory, which teaches that manufacturers with large margins seeking incremental "impulse sales" must compensate retailers for providing premium shelf space because consumers are not willing to pay for the full cost of the promotion.⁴⁷

Obviously, the category level evidence also does not strongly suggest that slotting contracts are procompetitive. However, as discussed, these estimates do not account for the benefits flowing to consumers from slotting payments, such as price reductions in other product categories or increases in non-price

⁴⁷ This does not imply social inefficiency. See Gary Becker and Kevin M. Murphy, A Simple Theory of Advertising as a Good or Bad, 108 Q. J. Econ. 941 (1993).

competition likely to increase store traffic. While these payments amount to a trivial fraction of total commissary revenue, less than 1%, it should be noted that slotting revenues are a considerably larger fraction of total private supermarket revenue,⁴⁸ revenues that are passed on to consumers in various forms.

One obvious weakness of the study is that it involves non-profit commissaries rather than private supermarkets. This fact raises some questions regarding the external validity of the results. However, this concern is largely mitigated by two observations. First, the manufacturers offering slotting contracts to both private supermarkets and commissaries are both profit maximizing enterprises. The unique regulatory framework imposed on DeCA, such fixed retail margins, actually enhances the analysis by holding retailer behavior constant. In other words, because commissary retailers cannot re-optimize by shifting sales to higher margin products after the slotting ban, the estimates herein measure the “true” effect of the ban. Second, as discussed, the payments to private supermarkets, and benefits passed on to consumers, are significantly greater than in commissaries, suggesting yet another reason why these estimates should be interpreted as an upper bound on consumer harm.

Finally, while the consumer welfare question is an important one, several other questions can be addressed with this data. How do shelf space allocations change when the slotting ban is imposed? How are private labels and smaller firms impacted by competition for shelf space? Future research will attempt to answer these questions, as well as questions focusing on the predictions of the promotional services theory, such as identifying the characteristics of industries, firms, and products where slotting contracts are likely.

⁴⁸ One estimate is that slotting and other trade promotion revenues account for 50-75% of supermarket net profit. John Stanton, *Rethinking Retailers' Fees*, 60(8) *Food Processing* 32 (1999). Consistent with this estimate, one manufacturer estimated the approximately \$9 billion in trade promotions in 1999, approximately 4% of gross supermarket revenues. FTC Workshop (Tr. 159).

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TABLE 1. SUMMARY OF SLOTTING CONTRACTS			
<i>Year</i>	<i>No. of Agreements</i>	<i>Product Categories</i>	<i>Estimated Revenue</i>
2000	18	Candy, pet supplies, breakfast foods, butter, margarine, baked goods, cheese, drinks, snack foods and home care products	\$1.7 million
2001	14	International products, snack foods, baked goods, drinks, frozen foods, health foods, kitchen aids, insecticides	\$1.2 million

TABLE 2. PRODUCT LEVEL QUANTITY EFFECTS BY CATEGORY
Log (Quantity)

<i>Product Category</i>	<i>DD Estimator (Standard Error)</i>	<i>% Change</i>	<i>P-Value</i>
Tomato Paste	-3.956 (0.766)	-98.086	0.000
Health Food Bars	-3.785 (1.033)	-97.729	0.000
Diced Tomatoes	-1.695 (0.503)	-81.640	0.001
Pastries	1.567 (0.437)	379.225	0.001
Chili Beans	-2.636 (0.860)	-92.835	0.003
Soda	-0.978 (0.330)	-62.394	0.003
Tea Mix	-2.21 (0.947)	-89.030	0.023
Donuts/Muffins	-0.355 (.163)	-29.883	0.030
Pretzels	-0.597 (0.284)	-44.954	0.036
Snack Cakes	-0.365 (0.191)	-30.580	0.056
Cookies	-0.423 (0.239)	-34.492	0.077
Tortilla Chips	-0.481 (0.276)	-38.184	0.082
Specialty Pet Food	-0.655 (0.366)	-48.056	0.085
Cheese	-0.407 (0.236)	-33.436	0.086
Popcorn	1.472 (0.878)	335.794	0.103
Insecticides	0.522 (0.326)	68.540	0.111
Tea Bags	-0.631 (0.391)	-46.794	0.112
Coffee Filters	1.598 (0.994)	394.314	0.116
Tea	-0.799 (0.551)	-55.022	0.150

TABLE 3. PRODUCT LEVEL PRICE EFFECTS BY CATEGORY			
Log (Price)			
<i>Product Category</i>	<i>DD Estimator (Standard Error)</i>	<i>% Change</i>	<i>P-Value</i>
Tomato Paste	0.430 (0.016)	53.737	0.008
Health Food Bars	-0.567 (0.038)	-43.295	0.144
Diced Tomatoes	0.004 (0.019)	0.4	0.836
Pastries	-0.064 (0.024)	-6.171	0.010
Chili Beans	-0.081 (0.047)	-7.799	0.089
Soda	0.005 (0.030)	0.518	0.864
Tea Mix	0.047 (0.035)	4.861	0.174
Donuts/Muffins	0.024 (0.014)	2.433	0.080
Pretzels	0.089 (0.018)	9.293	0.000
Snack Cakes	0.004 (0.013)	0.437	0.728
Cookies	0.006 (0.019)	0.604	0.754
Tortilla Chips	-0.011 (0.015)	-1.101	0.449
Specialty Pet Food	0.003	0.322	0.789
Cheese	0.028 (0.022)	2.83	0.211
Popcorn	0.14 (1.07)	15.081	0.196
Insecticides	-0.055 (0.018)	-5.315	0.003
Tea Bags	-0.004 (0.038)	-0.419	0.911
Coffee Filters	-0.014 (0.051)	-1.422	0.780
Tea	-0.045 (0.014)	-4.419	0.001

TABLE 4. CATEGORY LEVEL VARIETY EFFECTS (# of SKUs in Category)		
<i>Variable</i>	<i>Coefficient Estimate</i> (<i>Std. Error</i>)	<i>P-Value</i>
Slotshare* After	1.019 (41.965)	0.981
Slotshare	-10.01 3 (29.692)	0.736
After	-0.631 (16.151)	0.969
Constant	96.641 (11.442)	0.000
Number of Observations	497	

TABLE 5. CATEGORY LEVEL PRICE EFFECTS		
Log (Price)		
<i>Variable</i>	<i>Coefficient Estimate (Std. Error)</i>	<i>P-Value</i>
Slotshare* After	0.106 (0.164)	0.518
Slotshare	-0.042 (0.118)	0.722
After	0.013 (0.063)	0.836
Constant	0.307 (0.045)	0.000
Number of Observations	492	

TABLE 6. CATEGORY LEVEL QUANTITY EFFECTS		
Log (Quantity)		
<i>Variable</i>	<i>Coefficient Estimate (Std. Error)</i>	<i>P-Value</i>
Slotshare* After	-0.188 (0.500)	0.707
Slotshare	0-.636 (0.358)	0.077
After	0 .388 (0.191)	0.042
Constant	14.5161 4 (0.135)	0.000
Number of Observations	492	

Appendix A: Slotting Contract Sample

ITEMS	PERFORMANCE GOALS	SPECIAL CONSIDERATIONS	SHARING INCENTIVE
<p>SALTY SNACK CATEGORY</p>	<p>Off-Shelf Displays in each of the 24 display periods. This will be done in conjunction with the DeCA DSD display cycle.</p> <p>Equipment will be used to display Frito-Lay Brands</p> <p>DeCA will promote two national brands with VPRs of over and above 15%-30% monthly.</p> <p>Proper allocation of Gondola Shelf Space by Salty Snack Competitors</p> <p>Space to Sales in Gondola. 90% of Space to Sales for each store as a Suggested Guideline.</p> <p>Single Serve Items provided on "Grab N Go" Listing for all stores. Equipment will be provided as needed.</p>	<p>Space will be allocated for contractor to build, maintain, and break down displays.</p> <p>DeCA commissaries are required to provide a minimum of 1 Frito-Lay rack (endcap or shop-around, etc.) in all R4 and R3 stores. DeCA commissaries will provide a minimum of 1 piece of small equipment in all R1 and R2 stores (bread table, cooler rack, snacks on tap, etc.). This is in addition to the 52 weeks of off-shelf displays.</p>	<p>Contractor shall pay DeCA \$100,250 under PBA funds per quarter performance period of this PBA. Quarter periods shall be Jan-Mar, Apr-Jun, Jul-Sep, and Oct-Dec.</p> <p>Contractor shall pay \$500,000 CMA flexible funds to spend at local, regional and national levels for the following after coordination with the MBU Category Manager:</p> <ul style="list-style-type: none"> -contests, shopping sprees, & customer giveaways as overlays to Frito-Lay national events (Superbowl, etc.) - in-store demos - coupons - parking lot sales; truckload sales - credit card VCMS <p>This incentive shall be based on the sales from total sales of product in store.</p>

ITEMS	PERFORMANCE OR PROMOTION GOAL	SPECIAL CONSIDERATIONS	SHARING INCENTIVE
			<p>Contractor shall pay DeCA \$99,000 toward CONUS Zone Incentives for Frito-Lay growth contests as follows:</p> <ul style="list-style-type: none"> - \$15,000 shall be paid to the DeCA zone with the highest percentage increase. - \$10,000 shall be paid to the DeCA zone with the second highest percentage increase. - \$8,000 shall be paid to the DeCA zone with the third highest percentage increase <p>*Funds shall be allocated to the winning zones at close of the first 3 quarterly cycles (Jan-Mar, Apr-Jun, July-Sep) The money will be spent by DeCA in the fourth quarter (Oct-Dec).</p> <p><i>(After a thorough coordination with Frito Lay and the winning zone manager, a determination will be made whether a check will be forwarded or Frito Lay will apply the incentive to the cost-of-goods on Frito Lay products).</i></p>

ADDITIONAL TERMS AND CONDITIONS:

- Shelf space will be determined by using Frito-Lay sales percentage within the salty snack category (i.e. 50% of all sales is Frito Lay) and by applying a 90% factor to that number will determine allotted shelf space. Example: A 48 ft salty snack section whereby Frito Lay represents 50% of total sales x 90% = allocated space (48' x .50 x .90 = 21'6" space)
- Contractor asserts in execution of this PBA/CMA that the patron has been offered the lowest price possible prior to the agreement and that the moneys used to fund the PBA portion of this agreement could not have been used to further reduce the price of the product.
- All terms of this agreement shall be confidential and shall not be disclosed by either party to any entity or individual which is not a party to this agreement.
- Frito Lay will monitor the performance goals and will track all sales and provide a recap within fifteen days of the end of each quarter for the region incentive program.
- Contractor shall submit PBA sharing incentive revenue quarterly with the final payment due no later than 60 days after completion of this PBA.
- Total PBA potential revenue generated under this agreement is approximately \$401,000.

Signatures: *Bud Hand*

BUD HAND
Contractor Representative

Alfonse
Manager, MBU or Alternate

MANAGER MARY SALES
Title of Representative

12/19/00
Date

DECEMBER 14, 2000
Date

Chara E. Shingwood
Contracting Officer

12/19/00
Date

SHELF STABLE JUICE, 16 FT. SECTION

HQ DECA PLANOGRAM - CLASS 1 STORES

Bld nbs 20K2.psa

Schematic Report

LOCID	UNC	WIDTH:62 in	NAME	MESH HEIGHT:13.00 m	SIZE UOM	NOF	RSL	DEPTH:20 in	CSPK	PACKOUT	NO OF CASES	SPACE AVAIL:0.66 m	H	W	D	Orientation
1	418007190	WILL CHIS GRAPPE	WILL CHIS GRAPPE WHITE	64.00 OZ	3	K1	12	18	150	12.00 m	3.25 in	3.25 in	3.25 in	3.25 in	3.25 in	Front
2	412400006	MARTINELLE SPARKLING	MARTINELLE SPARKLING	25.40 OZ	3	K1	12	18	150	12.10 m	3.22 in	3.22 in	3.22 in	3.22 in	3.22 in	Front
3	418007300	WILL CHIS GRAPPE	WILL CHIS GRAPPE	64.00 OZ	3	K1	12	18	150	8.80 m	4.38 in	4.38 in	4.38 in	4.38 in	4.38 in	Front
4	280000040	J&J APPLE 46%	J&J APPLE 46%	46.00 OZ	3	K1	8	12	150	8.82 m	4.38 in	4.38 in	4.38 in	4.38 in	4.38 in	Front
5	280000040	J&J APPLE 46%	J&J APPLE 46%	46.00 OZ	3	K1	8	12	150	8.82 m	4.38 in	4.38 in	4.38 in	4.38 in	4.38 in	Front
6	480000800	SEASONS BEST ORANGE JUICE	SEASONS BEST ORANGE JUICE	15.20 OZ	5	K1	12	35	292	7.95 m	2.75 in	2.75 in	2.75 in	2.75 in	2.75 in	Front
7	480000801	SEASONS BEST APPLE JUICE	SEASONS BEST APPLE JUICE	15.20 OZ	4	K1	12	32	267	7.50 m	2.50 in	2.50 in	2.50 in	2.50 in	2.50 in	Front
8	214800905	WAL LUT ACEES CORDON ROUGE	WAL LUT ACEES CORDON ROUGE	32.00 OZ	4	K1	12	20	167	8.00 m	3.61 in	3.61 in	3.61 in	3.61 in	3.61 in	Front
9	312000051	ONS OET CRANBERRY LT	ONS OET CRANBERRY LT	32.00 OZ	3	K1	12	18	150	0.77 m	3.27 in	3.27 in	3.27 in	3.27 in	3.27 in	Front
10	312000005	ONS ORANBERRY	ONS ORANBERRY	48.00 OZ	3	K1	12	12	150	8.87 m	4.56 in	4.56 in	4.56 in	4.56 in	4.56 in	Front
11	518050002	LIBERTY BOTTLED WATER	LIBERTY BOTTLED WATER	11.50 OZ	6	K1	24	42	175	4.86 m	2.60 in	2.60 in	2.60 in	2.60 in	2.60 in	Front
12	510000283	CAMPBELL TOMATO SO	CAMPBELL TOMATO SO	11.50 OZ	6	K1	24	84	350	4.80 m	2.60 in	2.60 in	2.60 in	2.60 in	2.60 in	Front
13	510000285	CAMPBELL V8 HTSP 513	CAMPBELL V8 HTSP 513	11.50 OZ	4	K1	24	84	350	4.80 m	2.54 in	2.54 in	2.54 in	2.54 in	2.54 in	Front
14	148005124	MOTT'S CLAMATO	MOTT'S CLAMATO	32.00 OZ	4	K1	12	20	167	7.74 m	3.70 in	3.70 in	3.70 in	3.70 in	3.70 in	Front
15	148005123	MOTT'S LEMON	MOTT'S LEMON	15.00 OZ	3	K1	12	24	200	8.00 m	2.50 in	2.50 in	2.50 in	2.50 in	2.50 in	Front
16	148005126	REVL LEMON	REVL LEMON	32.00 OZ	3	K1	12	18	150	10.00 m	3.25 in	3.25 in	3.25 in	3.25 in	3.25 in	Front

LOCID	UNC	WIDTH:64 in	NAME	MESH HEIGHT:13.00 m	SIZE UOM	NOF	RSL	DEPTH:22 in	CSPK	PACKOUT	NO OF CASES	SPACE AVAIL:4.01 m	H	W	D	Orientation
1	418002700	WILL CHIS GRAPPE	WILL CHIS GRAPPE WHITE	64.00 OZ	3	K1	8	12	150	10.49 m	4.54 in	4.54 in	4.54 in	4.54 in	4.54 in	Front
2	418002700	WILL CHIS GRAPPE	WILL CHIS GRAPPE WHITE	64.00 OZ	3	K1	8	12	150	10.49 m	4.54 in	4.54 in	4.54 in	4.54 in	4.54 in	Front
3	280000821	J&J APPLE JR	J&J APPLE JR	64.00 OZ	3	K1	8	15	188	10.26 m	4.63 in	4.63 in	4.63 in	4.63 in	4.63 in	Front
4	280000822	J&J APPLE JR	J&J APPLE JR	64.00 OZ	3	K1	8	15	188	10.27 m	4.63 in	4.63 in	4.63 in	4.63 in	4.63 in	Front
5	480000018	TROPICAL TROPICAL FRUIT	TROPICAL TROPICAL FRUIT	1.75 LT	2	K1	6	10	167	10.00 m	5.75 in	4.00 in	4.00 in	4.00 in	4.00 in	Front
6	312000227	ONS LIGHT CRAN ORANGE	ONS LIGHT CRAN ORANGE	64.00 OZ	3	K1	8	18	225	10.30 m	4.59 in	3.06 in	3.06 in	3.06 in	3.06 in	Front
7	312000227	ONS LIGHT CRAN ORANGE	ONS LIGHT CRAN ORANGE	64.00 OZ	3	K1	8	18	225	10.30 m	4.59 in	3.06 in	3.06 in	3.06 in	3.06 in	Front
8	312000227	ONS LIGHT CRAN ORANGE	ONS LIGHT CRAN ORANGE	64.00 OZ	3	K1	8	18	225	10.30 m	4.59 in	3.06 in	3.06 in	3.06 in	3.06 in	Front
9	312000227	ONS LIGHT CRAN ORANGE	ONS LIGHT CRAN ORANGE	64.00 OZ	2	K1	8	12	150	10.30 m	4.59 in	3.06 in	3.06 in	3.06 in	3.06 in	Front
10	312000227	ONS LIGHT CRAN ORANGE	ONS LIGHT CRAN ORANGE	64.00 OZ	2	K1	8	12	150	10.30 m	4.59 in	3.06 in	3.06 in	3.06 in	3.06 in	Front
11	148001864	SUN SWEET PRUNE JUICE	SUN SWEET PRUNE JUICE	64.00 OZ	3	K1	8	12	150	10.33 m	4.60 in	4.60 in	4.60 in	4.60 in	4.60 in	Front

LOCID	UNC	WIDTH:64 in	NAME	MESH HEIGHT:11.00 m	SIZE UOM	NOF	RSL	DEPTH:22 in	CSPK	PACKOUT	NO OF CASES	SPACE AVAIL:2.72 m	H	W	D	Orientation
1	418000780	WILL CHIS GRAPPE	WILL CHIS GRAPPE	64.00 OZ	4	K1	8	16	200	10.49 m	4.54 in	4.54 in	4.54 in	4.54 in	4.54 in	Front
2	280000806	J&J APPLE JR	J&J APPLE JR	64.00 OZ	3	K1	8	15	188	10.27 m	4.63 in	4.63 in	4.63 in	4.63 in	4.63 in	Front
3	280000823	J&J APPLE JR	J&J APPLE JR	64.00 OZ	3	K1	8	15	188	10.27 m	4.63 in	4.63 in	4.63 in	4.63 in	4.63 in	Front
4	480000018	TROPICAL TROPICAL FRUIT	TROPICAL TROPICAL FRUIT	1.75 LT	3	K1	6	15	250	10.00 m	5.75 in	4.00 in	4.00 in	4.00 in	4.00 in	Front
5	312000227	ONS ORANBERRY	ONS ORANBERRY	64.00 OZ	2	K1	8	12	150	10.30 m	4.54 in	3.06 in	3.06 in	3.06 in	3.06 in	Front
6	312000227	ONS ORANBERRY	ONS ORANBERRY	64.00 OZ	2	K1	8	12	150	10.30 m	4.54 in	3.06 in	3.06 in	3.06 in	3.06 in	Front
7	312000227	ONS ORANBERRY	ONS ORANBERRY	64.00 OZ	3	K1	8	18	225	10.30 m	4.54 in	3.06 in	3.06 in	3.06 in	3.06 in	Front
8	312000227	ONS ORANBERRY	ONS ORANBERRY	64.00 OZ	2	K1	8	12	150	10.30 m	4.54 in	3.06 in	3.06 in	3.06 in	3.06 in	Front
9	312000227	ONS ORANBERRY	ONS ORANBERRY	64.00 OZ	2	K1	8	12	150	10.30 m	4.54 in	3.06 in	3.06 in	3.06 in	3.06 in	Front
10	789020025	NORFOLK AND 100% ORANBERRY	NORFOLK AND 100% ORANBERRY	64.00 OZ	3	K1	8	15	188	10.55 m	4.75 in	3.70 in	3.70 in	3.70 in	3.70 in	Front

SHELF STABLE JUICE, 16 FT. SECTION

HQ DECA PLANOGRAM - CLASS 1 STORES

Ble nds 20K2, pss

Schematic Report

11	510002573	V8 SPLASH TROPIC BLEND	64.00OZ	3	K1	8	12	150	10.63 m	4.58 in	4.58 in	4.58 in	Front
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LOC ID	UFG	WIDTH:44 in	NAME	MERCH HEIGHT:11.00 m	SIZE UOM	NOF	RSL	DEPTH:24 in	CSPK	PACKOUT	NO OF CASES	SPACE AVAIL: 12 m	H	W	D	Orientation
1	287000271	TRETOP APPLE JUICE	64.00OZ	4	K1	8	20	250	10.49 m	4.63 in	4.63 in	4.63 in	4.63 in	4.63 in	4.63 in	Front
2	280000824	J&J APPLE	64.00OZ	3	K1	8	15	188	10.27 m	4.60 in	4.60 in	4.60 in	4.60 in	4.60 in	4.60 in	Front
3	280000824	J&J APPLE	64.00OZ	3	K1	8	15	188	10.27 m	4.60 in	4.60 in	4.60 in	4.60 in	4.60 in	4.60 in	Front
4	480000747	TROP TWIST STRAWBWI	1.75LT	3	K1	6	18	300	10.00 m	5.65 in	4.00 in	4.00 in	4.00 in	4.00 in	4.00 in	Front
5	480000744	TROP ORANGE	1.75LT	3	K1	6	18	300	10.00 m	5.75 in	4.00 in	4.00 in	4.00 in	4.00 in	4.00 in	Front
6	510002007	OIS ORANGEAPPLE	64.00OZ	5	K1	8	30	375	10.30 m	4.54 in	3.66 in	3.66 in	3.66 in	3.66 in	3.66 in	Front
7	510002007	OIS ORANGEAPPLE	64.00OZ	3	K1	8	18	225	10.30 m	4.54 in	3.66 in	3.66 in	3.66 in	3.66 in	3.66 in	Front
8	510002773	V8 SPLASH STRAWBWI	64.00OZ	3	K1	8	15	188	10.30 m	4.53 in	4.53 in	4.53 in	4.53 in	4.53 in	4.53 in	Front
9	510002771	V8 SPLASH BERRY BLEND	64.00OZ	3	K1	8	15	188	10.63 m	4.58 in	4.58 in	4.58 in	4.58 in	4.58 in	4.58 in	Front

LOC ID	UFG	WIDTH:42 in	NAME	MERCH HEIGHT:10.00 m	SIZE UOM	NOF	RSL	DEPTH:24 in	CSPK	PACKOUT	NO OF CASES	SPACE AVAIL: 20 m	H	W	D	Orientation
1	280000224	TRETOP APPLE GORN	64.00OZ	3	K1	8	15	188	10.49 m	4.63 in	4.63 in	4.63 in	4.63 in	4.63 in	4.63 in	Front
2	148000084	MOTT'S APPLE JUICE	64.00OZ	3	K1	8	15	188	9.67 m	4.71 in	4.71 in	4.71 in	4.71 in	4.71 in	4.71 in	Front
3	510000348	SENCA APPLE JUICE	64.00OZ	3	K1	8	15	188	10.29 m	4.60 in	4.60 in	4.60 in	4.60 in	4.60 in	4.60 in	Front
4	280000880	J&J 100% WATERMELON JUICE	64.00OZ	2	K1	8	12	150	10.40 m	4.62 in	3.73 in	3.73 in	3.73 in	3.73 in	3.73 in	Front
5	310002027	OIS RED TANGERINEAPPLE	64.00OZ	3	K1	8	18	225	10.30 m	4.58 in	3.66 in	3.66 in	3.66 in	3.66 in	3.66 in	Front
6	310002027	OIS GRAPESRUT RED	64.00OZ	3	K1	8	18	225	10.30 m	4.54 in	3.66 in	3.66 in	3.66 in	3.66 in	3.66 in	Front
7	310002027	OIS ORANGEAPPLE	64.00OZ	2	K1	8	12	150	10.30 m	4.54 in	3.66 in	3.66 in	3.66 in	3.66 in	3.66 in	Front
8	310002027	OIS ORANGEAPPLE	64.00OZ	3	K1	8	18	225	10.30 m	4.54 in	3.66 in	3.66 in	3.66 in	3.66 in	3.66 in	Front
9	310002007	OIS ORANGEAPPLE	64.00OZ	3	K1	8	18	225	10.30 m	4.54 in	3.66 in	3.66 in	3.66 in	3.66 in	3.66 in	Front
10	510000882	V8 B&W	64.00OZ	3	K1	8	15	188	10.34 m	4.60 in	4.60 in	4.60 in	4.60 in	4.60 in	4.60 in	Front
11	148000600	HAWAIIAN PUNCH PINE PUNCH	64.00OZ	3	K1	8	15	188	10.54 m	4.66 in	4.66 in	4.66 in	4.66 in	4.66 in	4.66 in	Front
12	250000138	HI C FRUIT PUNCH	128.00OZ	2	K1	4	8	200	10.20 m	7.85 in	5.28 in	5.28 in	5.28 in	5.28 in	5.28 in	Front
13	250000138	HI C ORANGE LAUGHURST	128.00OZ	2	K1	4	8	200	10.50 m	7.90 in	5.30 in	5.30 in	5.30 in	5.30 in	5.30 in	Front
14	450008902	CHRISTAL LIGHT RASPBERRY TSA	64.00OZ	3	K1	6	12	200	8.56 m	4.96 in	4.96 in	4.96 in	4.96 in	4.96 in	4.96 in	Front

LOC ID	UFG	WIDTH:42 in	NAME	MERCH HEIGHT:12.00 m	SIZE UOM	NOF	RSL	DEPTH:24 in	CSPK	PACKOUT	NO OF CASES	SPACE AVAIL: 1.86 m	H	W	D	Orientation
1	287000942	TRETOP APPLE JC	64.00OZ	4	K1	8	20	250	8.49 m	4.53 in	4.53 in	4.53 in	4.53 in	4.53 in	4.53 in	Front
2	287000300	TRETOP COCO	128.00OZ	2	K1NEW	4	8	200	10.37 m	7.00 in	5.26 in	5.26 in	5.26 in	5.26 in	5.26 in	Front
3	148000039	MOTT'S 100% APPLE JC	128.00OZ	3	K1	5	8	180	11.40 m	6.28 in	6.28 in	6.28 in	6.28 in	6.28 in	6.28 in	Front
4	310003314	MUSSEL MAN PINEAPPLE	64.00OZ	3	K1NEW	8	15	188	10.40 m	4.40 in	4.40 in	4.40 in	4.40 in	4.40 in	4.40 in	Front
5	480000572	SENSORS BEST ORANGE JOE	64.00OZ	4	K1	8	24	300	9.49 m	5.00 in	3.96 in	3.96 in	3.96 in	3.96 in	3.96 in	Front
6	480000770	TROP ORANGE JC	96.00OZ	4	K1	6	24	333	10.40 m	4.60 in	4.60 in	4.60 in	4.60 in	4.60 in	4.60 in	Front
7	380000818	DOLE PINEAPPLE	64.00OZ	3	K1WCHG	12	24	200	6.85 m	4.36 in	4.36 in	4.36 in	4.36 in	4.36 in	4.36 in	Front
8	310002000	OIS ORANGEAPPLE	128.00OZ	2	K1	6	12	167	10.57 m	6.00 in	4.72 in	4.72 in	4.72 in	4.72 in	4.72 in	Front
9	510000366	CAMPBELL TOMATO JC	48.00OZ	4	K1	12	24	200	7.00 m	4.25 in	4.25 in	4.25 in	4.25 in	4.25 in	4.25 in	Front
10	510000363	CAMPBELL V8 PEF	48.00OZ	4	K1	12	20	167	8.76 m	4.38 in	4.38 in	4.38 in	4.38 in	4.38 in	4.38 in	Front
11	510000336	CAMPBELL V8	48.00OZ	3	K1	12	24	200	7.00 m	4.30 in	4.30 in	4.30 in	4.30 in	4.30 in	4.30 in	Front
12	148000608	HAWAIIAN PUNCH PINE JC RED	128.00OZ	2	K1	4	8	200	11.80 m	6.62 in	6.62 in	6.62 in	6.62 in	6.62 in	6.62 in	Front
13	148000609	HAWAIIAN PUNCH ORANGE	128.00OZ	2	K1NEW	4	8	200	11.80 m	6.62 in	6.62 in	6.62 in	6.62 in	6.62 in	6.62 in	Front

SHELF STABLE JUICE, 16 FT. SECTION
HQ DECA PLANOGRAM - CLASS 1 STORES

Ble nds 20K2.pptx

Schematic Report

SHELF ID	UNC	WIDTH48 in	MESH HEIGHT: 13.00 in	SIZE	UOM	NOF	RSL	CSHPK	PACQUOI	NO OF CASES	H	W	D	Orientation
1	510000315	CAMPBELL V8 8OZ	11.5000Z	5	KI	48	80	1.67	4.81 in	2.00 in	2.00 in	2.00 in	4.81 in	Front
2	510000067	CAMPBELL V8 L8 6PK	5.5000Z	2	KI MSW	8	20	2.50	3.78 in	6.36 in	4.81 in	4.81 in	4.81 in	Front
3	148006257	RESAL LEMON 9OZ	4.5000Z	1	KI	24	36	1.50	7.02 in	10.02 in	18.50 in	18.50 in	18.50 in	Front
4	148006202	RESAL LIME 9OZ	4.5000Z	1	KI	24	36	1.50	7.02 in	10.02 in	18.50 in	18.50 in	18.50 in	Front

SHELF ID	UNC	WIDTH48 in	MESH HEIGHT: 11.00 in	SIZE	UOM	NOF	RSL	CSHPK	PACQUOI	NO OF CASES	H	W	D	Orientation
1	510000020	CAMPBELL V8 6PK	5.5000Z	4	KI	8	40	5.00	3.81 in	6.36 in	4.20 in	4.20 in	4.20 in	Front
2	510000007	CAMPBELL TOM 6PK	5.5000Z	3	KI	8	30	3.75	3.78 in	6.36 in	4.08 in	4.08 in	4.08 in	Front

SHELF ID	UNC	WIDTH48 in	MESH HEIGHT: 15.00 in	SIZE	UOM	NOF	RSL	CSHPK	PACQUOI	NO OF CASES	H	W	D	Orientation
1	312000465	OCEAN SPRAY GUM COCKTAIL	6.0000Z	2	KI	6	16	2.67	6.64 in	5.03 in	5.03 in	5.03 in	5.03 in	Front
2	418003711	WSL OHS 100% GRAPE JUICE 6PK	6.0000Z	2	KI	4	40	4.00	6.06 in	7.53 in	4.81 in	4.81 in	4.81 in	Front
3	489000478	TWISTER FRUIT PUNCH 6PK	6.0000Z	1	KI MSW	4	12	3.00	6.50 in	7.00 in	4.00 in	4.00 in	4.00 in	Front
4	281000987	THIRSTY TOP 6PK 6PK ASS	6.0000Z	1	KI MSW	4	8	2.00	6.00 in	7.50 in	5.28 in	5.28 in	5.28 in	Front
5	389000987	DOLE PINEAPPLE 6PK	6.0000Z	1	KI	8	15	1.88	3.98 in	6.36 in	4.28 in	4.28 in	4.28 in	Front