

NAVAL Postgraduate School

Comparing Online B2G Marketplaces: Purchasing Agent Preferences and Price Differentials

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- Abstract
- Background
- Methodology
 - Interview
 - GPC Survey
 - Regression Analysis
 - Between-Marketplace Comparison
- Results & Discussion
- Future Research





- Nearly \$19B in GPC spend
- 2016 GAO Report
 - Push for agencies to examine spend patterns
 - Find savings opportunities
- Amazon Business Pilot Program
- "Amazon Amendment"
- FY 18 NDAA Section 846
 - Procurement through e-commerce portals



- Comparative analysis of GSA Advantage! and Amazon Business
- Focuses on customer experience with GPC use
- Analyze:
 - Prices
 - Shipping costs
 - Shipping time
 - Website ease of use
 - Customer satisfaction
- Findings highlight several benefits, limitations, and risks
- Findings highlight potential improvements for each platform





- Interviews
 - Current state and goals
- Survey (Air Force GPC Program)
 - Collect demographic data
 - Assess preferences, perceptions, and trends
- Regression Analysis
- Between Market Comparison
 - Use Air Force FY15 GPC spend data
 - Identify 60 most commonly purchased items
 - Compare items across marketplaces



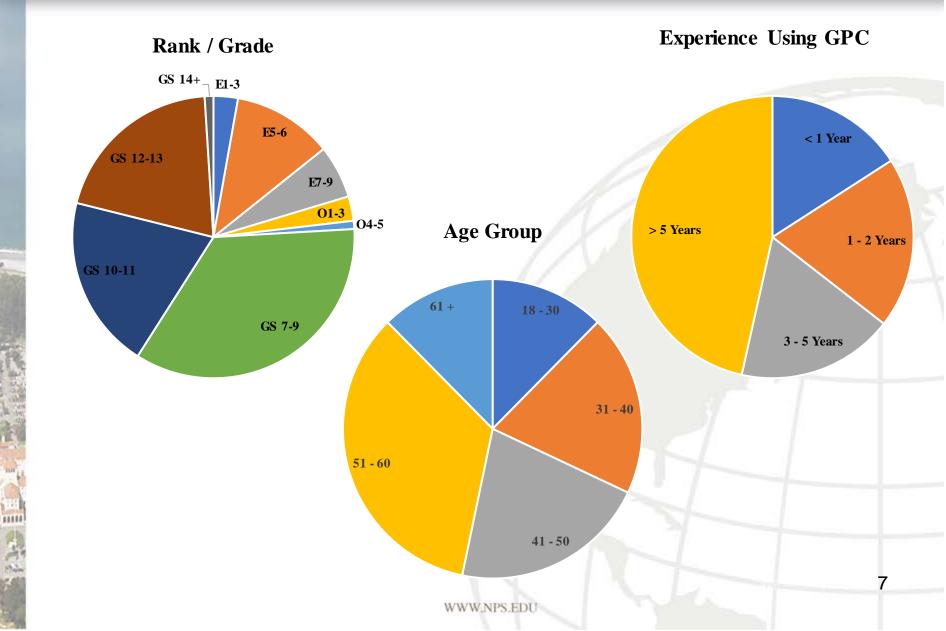


- GSA agreed to participate
- Current state and goals
- Shadow of e-commerce
- Minimum order requirements
- Level three data





GPC Survey Results





GSA Advantage! Survey Results

- 90% used GSA Advantage!
- Website ease of use
 - 46% rated more difficult to use
 - 45% rated similar to others
- Prices
 - 51% rated more expensive
 - 39% rated similar to others
- Finding lowest priced items
 - 41% rated more difficult
 - 46% rated similar



Amazon Business Survey Results

- 18% used Amazon Business
- Website ease of use
 - 3% rated more difficult to use
 - 68% rated easier than others
- Prices
 - 0% rated more expensive
 - 59% rated less expensive
- Finding lowest priced items
 - 57% rated easier
 - 42% rated similar



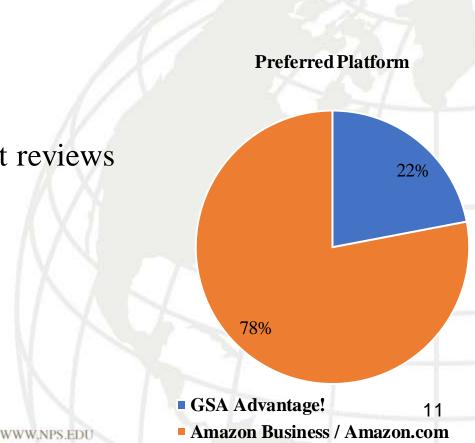
Amazon.com Survey Results

- 92% used Amazon.com
- Website ease of use
 - 1% rated more difficult to use
 - 70% rated easier than others
- Prices
 - 1% rated more expensive
 - 64% rated less expensive
- Finding lowest priced items
 - 59% rated easier
 - 37% rated similar



GPC Survey Results

- Decisions based on vendor ratings
 - 84% Yes
 - 16% No
- Product review importance
 - 92% Yes
 - 9% No
- Decisions based on product reviews
 - 92% Yes
 - 8% No





Regression Analysis Results

- Examined influential factors of preference
 - Age and customer satisfaction
 - Website ease of use
- Cardholder's odds of preferring Amazon to GSA Advantage!
 - Decreases 3% for each additional year group
 - Decreases 47% with each one-unit increase in level of satisfaction with GSA Advantage!
- When a cardholder thinks GSA Advantage! is easier to use
 - Odds of preferring Amazon decrease 78%
- Alternatively, if perception is GSA Advantage! is more difficult
 - Odds of preferring Amazon increase 177%



- GSA Advantage! prices lower 80% of the time
 - 60 items researched
 - 5 lowest vendors captured
- Shipping
 - Amazon Business: average time 9.25 days / \$2.33*
 - GSA Advantage!: average time 5.45 days / \$0.00
 - Small Business representation
 - GSA Advantage!: All 60 items represented / offered
 - Amazon Business: 21 of 60 items represented / offered



- Product Origin
 - GSA Advantage!: All products originated in USA
 - Amazon Business: Some products foreign / not identified
- Minimum order requirements
 - 100% of GSA Advantage! items
 - 0% of Amazon Business items



- Regulations do not limit using Amazon Business for GPC purchases
- Government purchasing agents have different preferences
 - Majority prefer Amazon platforms to GSA
- Commercial e-commerce vs public-policy requirements
 - Issue above micro-purchase threshold



Future Research

- Amazon Business Pilot Program
- Analyze GPC behavior with additional survey
- Compare greater breadth of items / categories
- Strictly commercially-available items
- Supply chain integrity