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Ashore Galleys: A Navy Business?

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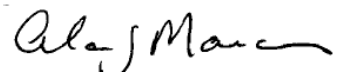

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Summary

Food service is a commercial activity. The provision of food service on the premises of other organizations is big business. It is highly developed, worldwide, and fiercely competitive. Corporations, universities, hospitals, resorts, entertainment complexes, and other such enterprises generally find it advantageous to use the services of outside providers.

It is the long-standing policy of the federal government to rely on the private sector for needed commercial services. Nonetheless, the Navy is its own food service provider. It has almost 10,000 billets for mess management specialists and fills 95 percent of them. About four times that number of people—some military, some government civilians, and some contract personnel—fill other jobs in galleys afloat and ashore.

Afloat galleys cannot be turned over to commercial firms. But ashore galleys exist at almost all bases, and 38 percent of all MS-rated sailors are ashore. Forty-six percent of all MS-rated sailors who are past their first tours of duty are ashore.

Ashore galleys often co-exist with commercial establishments, usually fast-food units, on bases. Routine functions of the galleys—receiving, setup, serving, cleanup, maintenance, and the like—are commonly turned over to contractors. Some cooked and baked goods are obtained from purveyors. But on-premise cooking and baking, as well as general supervision, are reserved for MS-rated personnel.

The cost of operating ashore galleys varies widely and is often high. Among the 45 installations for which we have reliable data, cost per customer per day (a three-meal day) ranges from $13.58 to $79.24. Business for cash customers, as opposed to those on Navy rations or allowances, also varies widely—from less than 2 percent of business volume to more than 90 percent. Cost per customer tends to be

higher where cash sales are higher. Average cost per customer per day is $19.79 at installations with less than 27 percent cash sales and $40.58 per customer per day at installations with more than 27 percent cash sales.

A cash customer pays $8.10 for a three-meal day. The Navy pays the rest, amounting to a subsidy between 40 and 90 percent. But galleys do not exist for cash customers. The subsidy is part of the cost of having galleys available for their intended patrons, Navy personnel on rations or allowances. So we allocate all the Navy cost to them and find that the cost per intended patron ranges from $13.68 per day to $467.34 per day. The average Navy cost per intended patron per day is $21.49 at installations with less than 27 percent cash sales and $93.70 at installations with more than 27 percent cash sales.

So why stay in the business? Why not discard the burden of managing a non-core function and take advantage of the abundant expertise of a highly developed and competitive industry? Various arguments are offered, but only one is difficult to overcome: sea-shore rotation—that is, the need for shore billets for MS-rated personnel who are promised 3 years of shore duty for every 3 years of sea duty.

The basis for the Navy's sea-shore rotation rules can be challenged. Time at sea is less than commonly believed. Sailors are in port, and at home every night, most of the time they are assigned to ships. Evidence for the claimed relationship between the sea-shore time ratio and personnel retention is weak. Research has indicated that extra pay for additional sea duty would be an effective enticement for some sailors, saving shore billets and money.

Nonetheless, sea-shore rotation rules have not been changed. But the number of MS positions in afloat galleys is gradually diminishing, and programs like SMARTSHIP and Afloat Supply Department of the Future promise further reduction. Galleys on new and modernized ships have more efficient layouts, equipment that is easier to operate and maintain, processes that are simpler and more hygienic, and controls that eliminate waste and risk. When such changes are introduced, MS and other galley manning is reduced, often by one-third or more. For every E5–E9 MS billet eliminated afloat, one can be eliminated ashore.

More than half of the shore billets for E5–E9 MS personnel are in non-mess functions. Some of those in mess work are in naval hospitals, flag messes, and the White House mess. The number of MS billets in traditional Navy galleys ashore is only 29 percent of the number afloat. Consequently, a 15-percent reduction in MS positions afloat will result in a reduction of more then 50 percent in traditional galleys ashore if all the corresponding cuts are taken there.

Action should be taken immediately to terminate Navy operation of galleys where cash sales are more than 27 percent and cost per customer per day is more than $32. If volume is low, it might be cost-effective simply to abandon the galley and give special remuneration, not to exceed the per diem meal rate, to local Navy personnel on rations or allowances. Otherwise, the Navy should retain private firms to provide meals to those personnel, in accordance with contractual requirements governing amount, nutritional content, taste, appearance, and quality, and allow the firms to serve other customers at market prices.

This action should be regarded as a first step toward elimination of Navy operation of traditional galleys ashore.

The food service business

A commercial activity

"The long-standing policy of the federal government has been to rely on the private sector for needed government services [1]." So says Office of Management and Budget Circular A-76. That circular recognizes, however, that not all activities can be turned over to the private sector. Some are "so intimately related to the public interest as to mandate performance by government personnel." They are called "inherently governmental activities" and fall into two categories: 1) the exercise of sovereign governmental authority and 2) the establishment of procedures and processes related to the oversight of monetary transactions or entitlements.

Activities that are not inherently governmental are called "commercial." Circular A-76 says, "A commercial activity is a recurring service that could be performed by the private sector and is resourced, performed, and controlled by the agency through performance by government personnel, a contract, or a fee-for-service arrangement." It points out that commercial activities can be found throughout organizations that perform inherently governmental activities or classified work.

By government definition, then, ashore food service—that is, galley operation at Navy bases—is clearly a commercial activity. It is a recurring service performed throughout the private sector. It is common to a wide variety of organizations. It is a vast business, with companies of all sizes participating. Expertise is highly developed in the industry leaders and in small specialty firms. There is intense competition at all levels, which results in its being known as a "low margin business."

In profit-seeking, nonprofit, and government institutions alike, outsourcing of food service operation is common practice. Universities generally have private firms run their dining halls and cafeterias, rent

space in their food courts, and establish outlets on campus. Corporations call upon companies to provide services ranging from operation of employee cafeterias to the serving of board room dinners. Hospitals generally have their patient food prepared by outside providers, who also run on-site restaurants for employees and visitors. Resorts and retirement homes contract out their food service, as do prisons and sponsors of athletic events. Even the Olympic Village turns over food service completely to a large company. Numerous government organization—federal, state, and local—do the same.

Centers of expertise

The highest level and greatest concentration of food service expertise resides in the three industry leaders, all giant corporations. They are, in order of size, Compass, Ltd., Sodexho Alliance, and Aramark Corporation. All have extensive operations in the United States, but only Aramark is an American company. Compass is a British firm and Sodexho is French. Although there are many hundreds of other food service firms, none approaches the big three in size or scope of capability.

The three industry leaders maintain staffs in all the major areas of specialized knowledge. They do research and development, as well as marketing and management. They have large departments working on methods of food preparation. They have specialists in nutrition, who track steadily advancing scientific findings and continually changing regulations. They employ experts in menu planning and food presentation. They have technologists who explore new methods of cooking and baking, and others who concentrate on equipment and facility layout. They retain staffs of training and information technology specialists who continually upgrade instructional programs. They have other experts who maintain highly sophisticated systems of cost control and market research. Their databases are such that they can tell you the difference in eating preferences between different age groups in different geographic locations, and they can generate menus to satisfy any set of requirements for nutrition, quantity, amount, and time. As a result of their reputations

and standing, they are in a position to attract capable people with career interests in food service.

There are many highly competent smaller companies, but they are less relevant to Navy galleys for two reasons. First, their concentration tends to be high end restaurants and clubs. Second, they are highly specialized—in food preparation and presentation, or in facility decoration, or in restaurant management, or in training. These organizations include culinary institutes, chef schools, and business consultants.

An abundance of other firms have useful services to offer but are not in a position to take over food preparation or overall management. Many installations use contractors to provide routine services—receiving, storage, retrieval, setup, cleanup, refilling, serving, and the like—but have Navy personnel provide direction and do the cooking and baking. Still other firms do cooking and baking, but they perform those services remotely and deliver their products to the galleys.

This is not to say that the big three are the only candidates for taking over the complete operation of galleys. They simply stand out for the depth of their expertise in the whole range of food service functions and technologies, and because they provide food service on the premises of other organizations. For the most part, other food service firms that have total management and preparation capability want to do so under their own names in their own facilities.

Military practice

The military services have their own approaches to providing food service at fixed bases, that is, for troops that are not aboard ship or otherwise deployed. All use contracts, but each in its own way.

The Army has full-service, management and production, and KP contracts for various garrison dining facilities, but the vast majority of its contracting is for local KP support. Its large privatization study is stalled, but its food service leaders exhibit much interest in contracts with coverage that transcends individual bases. Regional contracting, as it is called, is an objective. In fact, it is an expectation, but it may take some time to achieve.

The Air Force, more than 20 years ago, turned to contractors for full food service, thereby eliminating the jobs of 2,000 cooks. It encountered severe shortfalls of cooks, however, when it had to mobilize for war. It decided to shift to contracting for mess attendants and to restore military cook positions, but that effort met resistance from the Office of the Secretary of Defense. To meet its shortfall, it created 1,100 billets for cooks in the Air National Guard. It still has full food service contracts at about 25 bases, but mess attendant contracts only at the others. Its pullback in contracting did not result from any bad experience with food service contractors, but solely from requirements for deployment. Air expeditionary forces must be ready to deploy for 90 days every 15 months, and must be self-sufficient.

To be ready for deployment but not have a surfeit of cooks at its bases, the Air Force made cooking a skill within a broader job category. It trains its cooks also to be competent in such other roles as management of bachelor officer and enlisted quarters, fitness training, and direction of various morale, welfare, and recreation programs. Most personnel have reacted well to their expanded areas of work, enjoying the variety of duties and believing that they lead to more options in retirement. A few, however, only want to cook, and the Air Force accommodates them.

Last year, the Marine Corps entered into contracts with Sodexho for management of its messes throughout the continental United States (CONUS). Sodexho has taken over all functions at 34 bases. It manages 18 others, but uses some Marine cooks there. The Marine Corps has retained management responsibility for the messes at the three remaining CONUS bases.

Contracting with one of the industry leaders for management of messes CONUS-wide was not easily achieved. The Marine Corps set out to do so about 4 years ago. It met strong resistance, mainly in the form of protests on behalf of small business, using the anti-bundling statute. Morrison's Cafeterias, Inc., joined the protest, as did advocates for the blind, under the Randolph-Sheppard Act. Contracts were let in March 2001, but protests continued. Ultimately, the Marine Corps prevailed, and the contracts were re-issued in July 2002. There were two, one for east coast bases and one for west coast bases.

They include a requirement that 30 percent of the work be subcontracted.

The contracts enabled the Marine Corps to eliminate 600 billets for cooks, one-third of the total, thereby reducing payroll by at least $25 million per year. Making an overnight change nationwide required quick but careful planning. There were some early problems, to no one's surprise, but messes are operating smoothly under the new arrangement.

The change is not as extensive, however, as it might have been. The Marine Corps insisted that Sodexho employ civilians already working in the messes, and the Marine Corps dictates the menus. Further, Sodexho uses the same equipment that was present before it took over. We visited a few Marine messes, and the equipment there was not as up-to-date as what we saw at Navy galleys. The Marine Corps is using one of the world's best food service companies but is limiting the extent to which it can apply its expertise.

The Navy has not contracted the work of cooks and bakers, known as mess management specialists or MS-rated personnel. It is common practice, however, at ashore galleys to purchase food already prepared and cooked or baked by nearby firms, thereby reducing the workload of MS personnel.

In general, 80 percent of the work in a Navy galley is not cooking or baking, but such service chores as receiving, setup, serving, and cleaning. It is performed by food service attendants (FSAs), along with storekeepers, general duty personnel, mess detail masters-at-arms, and sometimes others. For simplicity in this report, since we won't be differentiating among the individual roles of these non-MS-rated people, we'll use the FSA label for all of them collectively. Most galleys now outsource much of the work of FSAs. About a dozen outsource all of it. Contracting is done locally. Service organizations of all types compete for the work. Last year, the Ney award for excellence went to a galley where the FSA work was performed by Goodwill Industries.

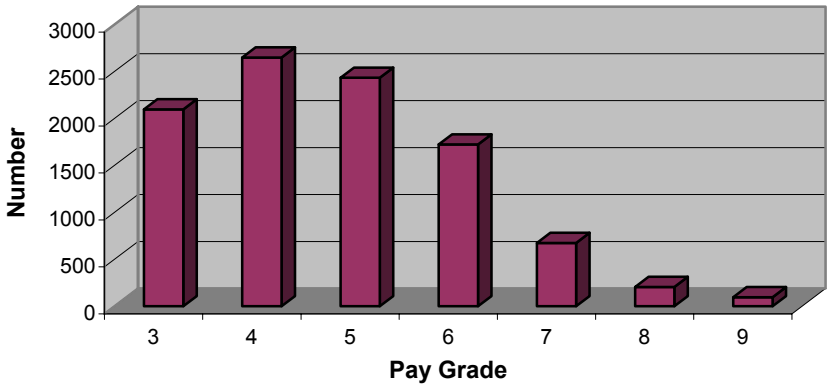
All the military services other than the Navy have occasionally used the leading commercial service providers for training. The Marine Corps has embedded personnel in food service contracts to expose them to industry methods. The Army and the Air Force have placed cooks and bakers as interns with companies for periods up to one year. The Army has retained commercial providers to offer instruction at its bases.

Navy ashore galleys

Mess management

The Navy uses its own specialists. There are 9,874 MS billets and 9,344 MS-rated personnel. Figure 1 shows the distribution of the billets over pay grades 3 through 9. Forty-eight percent are for E3s and E4s, who are in their first tours of duty. Almost no E5 MSs are in their first tours, so the remaining 52 percent of MS billets are for sailors who have renewed their enlistments.

Figure 1. MS billets by pay grade



The billets are spread across five seashore codes: Shore Duty is I; Sea Duty is II; Overseas Shore Duty is III; Nonrotated Sea Duty is IV; and Preferred Overseas Shore Duty is VI. For the purpose of sea-shore rotation, codes I and VI count as shore duty. Codes II, III, and IV count as sea duty. If we look only at MS billets for which sea-shore rota-

tion is relevant—those for pay grades 5 and above—we see that 46 percent count as shore duty and 54 percent count as sea duty.

Mess management specialists are not always assigned to mess duty. Fifteen percent of the billets for first tour MSs are in non-mess assignments. Almost all sea duty billets for MSs in their second or subsequent tours—95 percent—are in galleys. Only 47 percent of shore duty billets for MSs after their first tours are in galleys. Table 1 shows the split of first-tour and subsequent-tour MS billets between sea and shore duty, and between assignments to galleys and elsewhere.

Table 1. Authorized MS billets—summary

	Shore duty		Sea duty		
Pay grades	Mess	Other	Mess	Other	Σ
3&4	714	700	3,296	34	4,744
5–9	1,109	1,263	2,630	128	5,130
Σ	1,823	1,963	5,926	162	9,874

Not all assignments, especially on shore duty, represent jobs. Some are for training. Others are for transients, patients, prisoners, and holdees, abbreviated TPPH when shown as a group. Table 2 presents a more detailed breakdown of MS billets, by individual pay grade, by seashore code, and by mess or non-mess assignment.

Table 2. Authorized MS billets[a] [b]

	I Shore				II Sea		III Oversea shore		IV Nonrotated sea		VI Pref. OS shore	
Pay grade	Mess	TPPH[c]	Student	Other non-Mess	Mess	Non-Mess	Mess	Non-Mess	Mess	Non-Mess	Mess	Non-Mess
3	247	181	104	39	1,366	0	9	12	136	0	2	0
4	448	99	38	213	1,576	0	16	20	193	2	17	26
5	583	85	35	330	1,110	14	44	27	138	2	27	38
6	242	75	25	357	809	7	16	35	99	1	14	42
7	131	25	7	158	282	2	9	16	25	1	7	11
8	77	6	2	36	50	10	4	2	10	1	2	5
9	25	4	0	22	9	9	0	0	7	1	1	0
Σ	1753	475	211	1155	5,220	42	98	112	608	8	70	122
E3–E4	695	280	142	252	2,942	0	25	32	329	2	19	26
E5–E9	1,058	195	69	903	2,278	42	73	80	279	6	51	96

a. 2,372 E5–E9 billets count as shore duty (seashore codes I and VI).
b. 2,758 E5–E9 billets counts as sea duty (seashore codes II, III, and IV).
c. Transients, patients, prisoners, and holdees (TPPH).

Of the shore-duty mess billets, not all are in traditional base galleys. Twenty-nine percent are in naval hospitals. Forty-five percent of first-tour shore-duty mess assignments are in naval hospitals. See table 3.

Table 3. Authorized MS billets—naval hospital

	I Shore		II Sea		III Oversea shore		IV Nonrotated sea		VI Pref. OS shore	
Pay grade	Mess	Non-mess	Mess	Non-mess	Mess	Non-mess	Mess	Non-mess	Mess	Non-mess
3	221									
4	98				1					
5	123				10					
6	52	2			2				2	4
7	18	1			2	1			1	1
8	8									
9	1									
Σ	521	3			15	1			3	5

Another 6 percent of shore-duty mess billets are in flag messes or the White House mess. Most of them, however, are not first tour assignments. Ten percent of shore-duty mess assignments for E5s and above are in flag messes or the White House mess. See table 4.

Table 4. Authorized MS billets—White House or flag mess

	I Shore		II Sea		III Oversea shore		IV Nonrotated sea		VI Pref. OS shore	
Pay grade	Mess	Non-mess	Mess	Non-mess	Mess	Non-mess	Mess	Non-mess	Mess	Non-mess
3	2				5		1			
4	10				3					
5	36				4					
6	30				5				5	
7	26				1				2	
8	5	1					1			
9	3	1								
Σ	112	2			18		2		7	

Of 1,414 shore duty assignments, then, for E3 and E4 MS personnel, 50 percent are for mess duty, but only 27 percent are in traditional base galleys. Of 2,372 shore duty assignments for E5 through E9 MS personnel, 47 percent are for mess duty, but only 34 percent are in traditional base galleys.

Galley cost

Ashore galleys are relatively self-contained enterprises. It would seem that ascertaining the cost of operating them would be a simple matter, but such is not the case.

The Installation Management Accounting Project (IMAP) is a good system for collecting installation costs, but it does not receive all galley costs. It contains cost data on civilian personnel, contracts, supplies and consumables, and some equipment maintenance, but it does not include cost figures for military personnel, food, utilities, facility maintenance, facility depreciation, or overhead. Further, some installations are not reporting their costs to IMAP, or are not reporting them consistently. Some regions are combining the costs of galleys at different installations. Installations that have the Naval Air Systems Command (NAVAIR) or the Naval Sea Systems Command (NAVSEA) as their claimants operate under the Navy Working Capital Fund and do not participate in IMAP.

We fill some of the gaps by going to other sources. We obtain food costs from the Galley Integrated Process Team (IPT), which received them from the Naval Supply Systems Command (NAVSUP). Some military personnel costs also come from the Galley IPT, and some come from manpower data files maintained for the Navy by CNA. We calculate utility costs from square footage figures of the Galley IPT, overall installation rates, and a Naval Facilities Command instruction giving relative usage by type function [2]. We neglect capital costs, major maintenance, and overhead because we have no good sources, we want to avoid overstatement, and most of those costs would not change no matter who runs the galleys. Consequently, the costs we

present are bound to be understated, but they are closer to the true galley costs than any others of which we are aware. The cost differences are meaningful with respect to the outsourcing option.

Along with costs, we present data on the volume of meals served and on the mix of customers who are on Navy rations or subsistence allowances and customers who pay cash. We do so to be able to make fair comparison and analysis of costs. Our volume measure, consistent with Navy practice, is rations, with a ration being a day's meals—breakfast, lunch, and dinner. More precisely, we use a ration equivalent. Not everyone uses the galley for all his or her daily meals, so the numbers of the different meals are not equal. Individual meal counts are converted to rations by counting breakfast as 20 percent of a ration, lunch (which for some is the main meal) 40 percent, and dinner 40 percent.

Sales and cost data are summarized in table 5. The figures in it and in all subsequent cost tables reflect FY 2002 experience.

Table 5. Ashore galley sales and cost

Claimant and installation	Total fed	Cash sales	% cash sales	FY 2002 cost				
				Food $	MilPers $	IMAP $	G&A $	Total $
CNET								
NAS Pensacola	1,319,740	89,585	6.79%	8,439,165	273,459	11,657,201	3,182,416	23,552,241
NS Great Lakes	3,810,920	65,742	1.73%	24,054,270	3,832,181	18,749,881	5,118,718	51,755,050
NAS Meridian	152,986	14,815	9.68%	977,323	150,387	1,740,254	475,089	3,343,053
NS Ingleside	53,482	27,653	51.71%	352,988	276,892	977,175	266,769	1,873,824
CNO								
NS Annapolis	26,546	10,539	39.70%	186,235	207,595	707,380	193,115	1,294,325
LANTFLT								
NWS Yorktown	73,854	20,513	27.78%	473,834	1.343.234	1.621.328	442.623	3.881,019
NAVSUBASE New London	188,383	15,035	7.98%	1,205,721	2,413,528	1,723,901	470,625	5,813,775
NavShipNorfolk	54,879	22,186	40.43%	361,025	721,746	726,845	198,429	2,008,045
NAS Jacksonville	132,859	15,482	11.65%	861.603	1,958,562	968,667	264,446	4,053,278
NAS Key West	19,036	15,369	80.74%	135,957	933,319	344,997	94,184	1,508,457

Table 5. Ashore galley sales and cost (continued)

Claimant and installation	Total fed	Cash sales	% cash sales	FY 2002 cost Food $	MilPers $	IMAP $	G&A $	Total $
FCTC Atlantic Dam Neck VA	108,933	9,822	9.02%	698,092	0	1,213,407	331,260	2,242,759
NS Newport	203,688	48,109	23.62%	1,287,383	280,019	3,824,693	1,044,141	6,436,236
NAVSUBASE Kings Bay	183,008	24,420	13.34%	1,208,586	2,232,241	1,375,791	375,591	5,192,209
NAS Brunswick	53,294	24,096	45.21%	361,161	602,222	624,121	170,385	1,757,889
NAS Oceana	134,572	17202	12.78%	859,965	4,138,906	1,597,409	436,093	7,032,373
NS Mayport	79,649	30,807	38.68%	513,039	1,225,561	755,647	206,292	2,700,539
NavAmphib-Base Little Creek	152,158	30,853	20.28%	975,455	1,880,194	1,302,943	355,703	4,514,295
Constr Batt. Ctr Gulfport MS	168,742	13,610	8.07%	1,077,531	1,671,114	1,137,878	310,641	4,197,164
NS Norfolk	212,589	29,216	13.74%	1,375,148	4,172,175	1,713,211	467,707	7,728,241
NAS Keflavik	167,377	105,970	63.31%	1,395,272	158,262	3,254,880	888,582	5,969,996
NAVSUPACT Chesapeake	62,108	5,803	9.34%	402,778	0	861,615	235,221	1,499,614
NNTPC Charleston	398,746	20,850	5.23%	2,525,304	760,743	4,028,113	1,099,675	8,413,835
NAVEUR								
NAVSUPACT Capodichini IT	85,513	70,829	82.83%	705,782	0	1,954,574	533,599	3,193,955
NS Rota Spain	219,529	75,622	34.45%	1,800,278	1,295,079	1,930,137	526,927	5,552,421
NAS Sigonella IT	119,531	64,770	54.19%	1,001,492	214,214	3,145,801	858,804	4,220,311
NAVSUPACT Souda Bay	60,141	39,652	65.93%	498,770	84,161	765,600	209,009	1,557,540
PACFLT								
NS San Diego	107,523	19,238	17.89%	686,810	2,185,861	1,370,472	374,139	4,617,282
NAS North Island	289,422	74,230	25.65%	1,957,792	3,277,967	2,947,350	804,627	8,987,736
NAS Whidbey Island	146,240	25,110	17.17%	962,443	1,463,571	636,742	173,831	3,236,587
NS Bremerton	56,788	15,856	27.92%	375,068	2,801,793	689,569	188,252	4,054,682
Fleet Act Chin-hae Korea	12,353	8,894	72.00%	107,906	170,786	274,383	74,907	627,985
NAS Fallon	65,210	60,717	93.11%	444,606	769,003	1,082,443	295,507	2,591,559

Table 5. Ashore galley sales and cost (continued)

Claimant and installation	Total fed	Cash sales	% cash sales	FY 2002 cost Food $	MilPers $	IMAP $	G&A $	Total $
Fleet Act Yokosuka JA	155,858	36,398	23.35%	1,277,920	1,731,275	166,131	45,354	3,220,680
NAVAIRFAC Atsugi JA	141,323	18,947	13.41%	1,158,217	1,210,121	519,660	141,867	3,029,865
Fleet Act Sasebo JA	47,037	13,565	28.84%	403,446	75,867	299,307	81,711	860,331
NS Pearl Harbor	139,101	68,953	49.57%	1,190,515	2,755,429	2,238,445	611,095	6,795,484
NAS Lemoore	215,556	46,962	21.79%	1,403,842	2,169,737	985,112	268,936	4,827,627
NAVSUBASE San Diego	140,425	37,048	26.38%	909,672	1,232,811	2,081,760	568,320	4,792,563
NAVSUBASE Bangor	158,492	31,420	19.82%	1,039,486	1,512,038	1,136,364	310,227	3,998,115
NAVSUPFAC Diego Garcia	462,264	69,659	15.07%	3,871,160	84,161	2,033,949	555,268	6,544,538
NAVBASE Ventura County	173,879	52,740	30.33%	1,118,098	4,860,990	1,494,692	408,051	7,881,831
RESFOR								
NAS Willow Grove	39,025	20,874	53.49%	267,795	1,045,451	772,327	210,845	2,296,418
NAS Atlanta	21,936	12,010	54.75%	161,014	936,227	286,799	78,296	1,462,336
NAS New Orleans	43,883	25,439	57.97%	303,130	1,025,717	782,658	213,666	2,325,171
NAS Fort Worth	44,921	16,101	35.84%	304,513	941,110	671,983	183,451	2,101,057

The table includes 45 installations. It lists them under their six claimants. Installations of the other two claimants, NAVAIR and NAVSEA, are missing because they do not report their costs to IMAP. Many of the installations have multiple galleys but report their costs jointly. To be consistent and make fair comparisons, we use installation-wide data. The six claimants have other installations. They are not included because their data are missing, incomplete, or not credible.

The 45 installations do not, therefore, comprise a complete list or a random sample. They are simply the installations for which we could get galley data we could trust. We believe, however, that the list has enough galleys, enough variety, and enough volume to serve as a basis for conclusions about Navy galley operation in general.

The table shows that galley business volume varies widely from place to place. It also shows that the cash sales portion of galley volume varies widely. Those differences make it difficult to make a direct comparison of costs. Consequently, we use rates instead.

Galley cost rates

We compare galley costs by looking at cost per customer per day. A more precise, but less handy, label would be the average cost of a ration. Table 6 gives the figures.

Table 6. Ashore galley sales and cost rates

Claimant and installation	Total fed	Cash sales	% cash sales	Cost per customer per day				
				Food $	MilPers $	IMAP $	G&A $	Total $
CNET								
NAS Pensacola	1,319,740	89,585	6.79%	6.39	0.21	8.83	2.41	17.85
NS Great Lakes	3,810,920	65,742	1.73%	6.31	1.01	4.92	1.34	13.58
NAS Meridian	152,986	14,815	9.68%	6.39	0.98	11.37	3.11	21.85
NS Ingleside	53,482	27,653	51.71%	6.6	5.18	18.27	4.99	35.04
CNO								
NS Annapolis	26,546	10,539	39.70%	7.02	7.82	26.65	7.27	48.76
LANTFLT								
NWS Yorktown	73,854	20,513	27.78%	6.42	18.19	21.95	5.99	52.55
NAVSUBASE New London	188,383	15,035	7.98%	6.4	12.81	9.14	2.5	30.86
NavShipNorfolk	54,879	22,186	40.43%	6.58	13.15	13.24	3.62	36.59
NAS Jacksonville	132,859	15,482	11.65%	6.49	14.74	7.29	1.99	30.51
NAS Key West	19,036	15,369	80.74%	7.14	49.03	18.12	4.95	79.24
FCTC Atlantic Dam Neck VA	108,933	9,822	9.02%	6.41	0	11.13	3.04	20.59
NS Newport	203,688	48,109	23.62%	6.32	1.37	18.78	5.13	31.6
NAVSUBASE Kings Bay	183,008	24,420	13.34%	6.6	12.2	7.52	2.05	28.37
NAS Brunswick	53,294	24,096	45.21%	6.78	11.3	11.71	3.2	32.98
NAS Oceana	134,572	17,202	12.78%	6.39	30.76	11.86	3.24	52.26
NS Mayport	79,649	30,807	38.68%	6.44	15.39	9.49	2.59	33.91
NavAmphibBase Little Creek	152,158	30,853	20.28%	6.41	12.36	8.56	2.34	29.67

Table 6. Ashore galley sales and cost rates (continued)

Claimant and installation	Total fed	Cash sales	% cash sales	Cost per customer per day				
				Food $	MilPers $	IMAP $	G&A $	Total $
Constr Batt.Ctr Gulfport MS	168,742	13,610	8.07%	6.39	9.9	6.75	1.84	24.87
NS Norfolk	212,589	29,216	13.74%	6.47	19.63	8.06	2.2	36.35
NAS Keflavik	167,377	105,970	63.31%	8.34	0.95	19.45	5.31	34.04
NAVSUPACT Chesapeake	62,108	5,803	9.34%	6.49	0	13.87	3.79	24.15
NNTPC Charleston	398,746	20,850	5.23%	6.33	1.91	10.09	2.76	21.1
NAVEUR								
NAVSUPACT Capodichini IT	85,513	70,829	82.83%	8.25	0	22.86	6.24	37.35
NS Rota Spain	219,529	75,622	34.45%	8.2	5.9	8.8	2.4	25.29
NAS Sigonella IT	119,531	64,770	54.19%	8.38	1.79	26.31	7.18	43.67
NAVSUPACT Souda Bay	60,141	39,652	65.93%	8.29	1.4	12.73	3.48	25.9
PACFLT								
NS San Diego	107,523	19,238	17.89%	6.39	20.33	12.74	3.48	42.94
NAS North Island	289,m422	74,230	25.65%	6.76	11.33	10.18	2.78	31.05
NAS Whidbey Island	146,240	25,110	17.17%	6.58	10.01	4.35	1.19	22.13
NS Bremerton	56,788	15,856	27.92%	6.6	49.34	12.14	3.32	71.4
Fleet Act Chinhae Korea	12,353	8,894	72.00%	8.74	13.83	22.21	6.06	50.84
NAS Fallon	65,210	60,717	93.11%	6.82	11.79	16.6	4.53	39.74
Fleet Act Yokosuka JA	155,858	36,398	23.35%	8.2	11.11	1.07	0.29	20.66
NAVAIRFAC Atsugi JA	141,323	18,947	13.41%	8.2	8.56	3.68	1	21.44
Fleet Act Sasebo JA	47,037	13,565	28.84%	8.58	1.61	6.36	1.74	18.29
NS Pearl Harbor	139,101	68,953	49.57%	8l56	19.81	16.1	4.39	48.85
NAS Lemoore	215,556	46,962	21.79%	6.51	10.07	4.57	1.25	22.4
NAVSUBASE San Diego	140,425	37,048	26.38%	6.48	8.78	14.83	4.05	34.13
NAVSUBASE Bangor	158,492	31,420	19.82%	6.56	9.54	7.17	1.96	25.23
NAVSUPFAC Diego Garcia	462,264	69,659	15.07%	8.37	0.18	4.4	1.2	14.16
NAVBASE Ventura County	173,879	52,740	30.33%	6.43	27.96	8.6	2.35	45.33
RESFOR								
NAS Willow Grove	39,025	20,874	53.49%	6.86	26.79	19.79	5.4	58.84
NAS Atlanta	21,936	12,010	54.75%	7.34	42.68	13.08	3.57	66.66
NAS New Orleans	43,883	25,439	57.97%	6.91	23.37	17.83	4.87	52.99
NAS Fort Worth	44,921	16,101	35.84%	6.78	20.95	14.96	4.08	46.77

Cost per customer per day ranges from $13.58 to $79.24. No single reason stands out. In some cases, cost seems to be low because volume is high, or high because volume is low. High cost in most cases seems to be paired with a high percentage of cash sales. Food cost is relatively constant. The cost of military personnel ranges from zero to almost $50, but doesn't carry a message by itself. Some galleys use only or mainly civilians and employees of contractors, both of whom are covered by the IMAP cost component. Utility cost varies, but it is the smallest component.

To search for an explanation of the differences, we drop the cost components and list the installations in order of cash sales percentage. See table 7.

Table 7. Ashore galley sales and cost rates—reordered

	Total fed	% cash sales	Cost/ customer/day
NS Great Lakes	3,810,920	1.73%	$13.58
NNTPC Galley Charleston	398,746	5.23%	21.10
NAS Pensacola	1,319,740	6.79%	17.85
NAVSUBASE New London	188,383	7.98%	30.86
Constr Batt. Ctr Gulfport MS	168,742	8.07%	24.87
FCTC Atlantic Dam Neck VA	108,933	9.02%	20.59
NAVSUPACT New Chesapeake	62,108	9.34%	24.15
NAS Meridian	152,986	9.68%	21.85
NAS Jacksonville	132,859	11.65%	30.51
NAS Oceana	134,572	12.78%	52.26
NAVSUBASE Kings Bay	183,008	13.34%	28.37
NAVAIRFAC Atsugi JA	141,323	13.41%	21.44
NS Norfolk	212,589	13.74%	36.35
NAVSUPFAC Diego Garcia	462,264	15.07%	14.16
NAS Whidbey Island	146,240	17.17%	22.13
NS San Diego	107,523	17.89%	42.94
NAVSUBASE Bangor	158,492	19.82%	25.23
NavAmphibBase Little Creek	152,158	20.28%	29.67
NAS Lemoore	215,556	21.79%	22.40
Fleet Act Yokosuka JA	155,858	23.35%	20.66
NS Newport	203,688	23.62%	31.60

Table 7. Ashore galley sales and cost rates—reordered (continued)

	Total fed	% cash sales	Cost/ customer/day
NAS North Island	289,422	25.65%	31.05
NAVSUBASE San Diego	140,425	26.38%	34.13
NWS Yorktown	73,854	27.78%	52.55
NS Bremerton	56,788	27.92%	71.40
Fleet Act Sasebo JA	47,037	28.84%	18.29
NAVBASE Ventura County	173,879	30.33%	45.33
NS Rota Spain	219,529	34.45%	25.29
NAS Fort Worth	44,921	35.84%	46.77
NS Mayport	79,649	38.68%	33.91
NS Annapolis	26,546	39.70%	48.76
NavShipNorfolk	54,879	40.43%	36.59
NAS Brunswick	53,294	45.21%	32.98
NS Pearl Harbor	139,101	49.57%	48.85
NS Ingleside	53.482	51.71%	35.04
NAS Willow Grove	39,025	53.49%	58.84
NAS Sigonella IT	119,531	54.19%	43.67
NAS Atlanta	21,936	54.75%	66.66
NAS New Orleans	43,883	57.97%	52.99
NAS Keflavik	167,377	63.31%	34.04
NAVSUPACT Souda Bay	60,141	65.93%	25.90
Fleet Act Chinhae Korea	12,353	72.00%	50.84
NAS Key West	19,036	80.74%	79.24
NAVSUPACT Capodichino IT	85,513	82.83%	37.35
NAS Fallon	65,210	93.11%	39.74

A pattern is not evident within the first 23 installations listed—that is, for those installations with cash sales less than 27 percent. However, when we compare the costs at those installations with the costs at the remaining 22 installations, we see an enormous difference.

The average cost per customer per day is $19.79 at installations with cash sales less than 27 percent. If we exclude Great Lakes and Pensacola, training bases that account for 57 percent of the volume, the average is $26.49. It is $40.58 at installations with cash sales more than 27 percent. In the first group, only 4 of the 23 installations have daily per-customer costs that exceed $32.00. In the second group, only 3 of the 22 installations have daily per-customer costs under $32.00.

Because all three of those installations are on foreign soil, we are prompted to look at the CONUS installations by themselves. See table 8.

In the CONUS table, we have 35 installations. Twenty have cash sales under 27 percent. The average cost per customer per day at those installations is $20.06. Without Great Lakes and Pensacola, it is $28.81. Only 4 of the 20 installations have costs per customer per day over $32.00.

Fifteen of the CONUS installations have cash sales higher than 27 percent. The average cost per customer per day at those installations is $47.10. None of the 15 has cost per customer per day under $32.00.

In general, where cash sales constitute a higher percentage of total volume, cost per customer per day is higher. Even though the sales are labelled "cash," the major portion of the cost is borne by the Navy. The cash customer pays $8.10 for a day's ration—breakfast, lunch, and dinner. The Navy pays the balance. At Pearl Harbor, with 50 percent cash sales, the cash customer pays $8.10 and the Navy pays $40.75. At Key West, with 81 percent cash sales, the cash customer pays $8.10 and the Navy pays $71.14. At all installations with cash sales greater than 27 percent, the cash customer pays $8.10 and the Navy pays an average of $39.00. In other words, the Navy bears 83 percent of the cost of serving cash customers at those installations.

Serving the heavily-subsidized cash customer is not the galley's mission. The subsidy is part of the cost of having the galley available for its intended patrons—Navy personnel on rations-in-kind or basic allowances for subsistence. We therefore allocate the Navy's cost of serving cash customers to the intended patrons.

We take the total cost of the galley and subtract the payments received from cash customers. We then divide the resulting net cost—what the Navy pays—by the number of customers on rations or allowances. We label the new ratio "Navy cost per intended patron per day" and add it to our chart. The result is table 9.

Table 8. Ashore galley sales and cost rates—CONUS

Installation	Total fed	%Cash sales	Cost/ customer/day
NS Great Lakes	3,810,920	1.73%	$13.58
BBTPC Galley Charleston	398,746	5.23%	21.10
NAS Pensacola	1,319,740	6.79%	17.85
NAVSUBASE New London	188,383	7.98%	30.86
Constr Batt. Ctr Gulfport MS	168,742	8.07%	24.87
FCTC Atlantic Dam Neck VA	108,933	9.02%	20.59
NAVSUPACT NW Chesapeake	62,108	9.34%	24.15
NAS Meridian	152,986	9.68%	21.85
NAS Jacksonville	132,859	11.65%	30.51
NAS Oceana	134,572	12.78%	52.26
NAVSUBASE Kings Bay	183,008	13.34%	28.37
NS Norfolk	212,589	13.74%	36.35
NAS Whidbey Island	146,240	17.17%	22.13
NS San Diego	107,523	17.80%	42.94
NAVSUBASE Little Creek	152,158	20.28%	29.67
NavAmphibBase Little Creek	152,158	20.28%	29.67
NAS Lemoore	215,556	21.79%	22.40
NS Newport	23,688	23.62%	31.60
NAS North Island	289,422	25.65%	31.05
NAVSUBASE San Diego	140.425	26.38%	34.13
NWS Yorktown	73,854	27.78%	52.55
NS Bremerton	56,788	27.92%	71.40
NAVBASE Ventura County	173,879	30.33%	45.33
NAS Forth Worth	44,921	35.84%	46.77
NS Mayport	79,649	38.68%	33.91
NS Annapolis	26,546	39.70%	48.76
NavShipNorfolk	54,879	40.43%	36.59
NAS Brunswick	53,294	45.21%	32.98
NS Pearl Harbor	139,101	49.57%	48.85
NS Ingleside	53,482	51.71%	35.84
NAS Willow Grove	39,025	53.49%	58.84
NAS Atlanta	21,936	54.75%	66.66
NAS New Orleans	43,883	57.97%	52.99
NAS Key West	19,036	80.74%	79.24
NAS Fallon	65,210	93.11%	39.74

Table 9. Ashore galley sales and cost rates—extended

Installation	Total fed	% Cash sales	Cost/ customer/ day	Navy cost/ intended patron/ day
NS Great Lakes	3,810.920	1.73%	$13.58	$13.68
NNTPC Galley Charleston	398,746	5.23%	21.10	21.82
NAS Pensacola	1,319,740	6.79	17.85	18.56
NAVSUBASE New London	188,383	7.98%	30.86	32.84
Constr Batt. Ctr Gulfport MS	168,742	8.07%	24.87	26.34
FCTC Atlantic Dam Neck VA	108,933	9.02%	20.59	21.83
NAVSUPACT NW Chesapeake	62,108	9.34%	24.15	25.80
NAS Meridian	152,986	9.68%	21.85	23.33
NAS Jacksonville	132,859	11.65%	30.51	33.46
NAS Oceana	134,572	12.78%	52.26	58.73
NAVSUBASE Kings Bay	183,008	13.34%	28.37	31.49
NAVAIRFAC Atsugi JA	141,323	13.41%	21.44	23.50
NS Norfolk	212,589	13.74%	36.35	40.85
NAVSUPFAC Diego Garcia	462,264	15.07%	14.16	15.23
NAS Whidbey Island	146,240	17./17%	22.13	24.04
NS San Diego	107,523	17.89%	42.94	50.53
NAVSUBASE Bangor	158,492	19.82%	25.23	29.46
NavAmphibBase Little Creek	152,158	20.28%	29.67	35.15
NAS Lemoore	215,556	21.79%	22.40	26.38
Fleet Act Yokosuka JA	155,858	23.35%	20.66	24.49
NS Newport	203,688	23.62%	31.60	38.86
NAS North Island	289,422	25.65%	31.05	38.97
NAVSUBASE San Diego	140,425	26.38%	34.13	43.46
NWS Yorktown	73,854	27.78%	52.55	69.64
NS Bremerton	56,788	27.92%	71.40	95.92
Fleet Act Sasebo JA	47,037	28.84%	18.29	22.42
NAVBASE Ventura County	173,879	30.33%	45.33	61.54
NS Rota Spain	219,529	34.45%	25.29	34.33
NAS Fort Worth	44,921	35.84%	46.77	68.38
NS Mayport	79,649	38.68%	33.91	50.18

Table 9. Ashore galley sales and cost rates—extended

Installation	Total fed	% Cash sales	Cost/ customer/ day	Navy cost/ intended patron/ day
NS Annapolis	26,546	39.70%	48.76	75.53
NavShipNorfolk	54,879	40.43%	36.59	55.92
NAS Brunswick	53,294	45.21%	32.98	53.52
NS Pearl Harbor	139,101	49.57%	48.85	88.91
NS Ingleside	53,482	51.71%	35.04	63.88
NAS Willow Grove	39,025	53.49%	58.84	117.20
NAS Sigonella IT	119,531	54.19%	43.67	85.75
NAS Atlanta	21,936	54.75%	66.66	137.52
NAS New Orleans	43,883	57.97%	52.99	114.89
NAS Keflavik	167.377	63.31%	34.04	78.80
NAVSUPACT Souda Bay	60.141	65.93%	25.90	60.34
Fleet Act Chinhae Korea	12,353	72.00%	50.84	160.72
NAS Key West	19,036	80.74%	79.24	377.41
NAVSUPACT Capodichino IT	85,513	82.83%	37.35	178.44
NAS Fallon	65,210	93.11%	39.74	467.34

Navy cost per intended patron per day ranges from $13.68 to $467.34. For installations with less than 27 percent cash sales, the average is $21.49. Without Great Lakes and Pensacola, it is $30.08. For installations with cash sales greater than 27 percent, the average is $93.70. Only 2 of the 23 installations with cash sales under 27 percent have Navy cost per intended patron per day over $50.00. Only 2 of the 22 installations with cash sales over 27 percent have Navy cost per intended patron per day under $50.00.

Figure 2 graphs cost per customer per day and Navy cost per intended patron per day for the 45 galleys worldwide.

If we look only at the 35 CONUS installations, we have table 10.

For the CONUS installations alone, the range of Navy cost per intended patron per day is the same as that of installations worldwide. CONUS installations with less than 27 percent cash sales have an average Navy cost per intended patron per day of $21.75. Without Great Lakes and Pensacola, it is $32.83. Those with cash sales above 27 percent have an average Navy cost per intended patron per day of $108.26.

Figure 2. Galleys worldwide

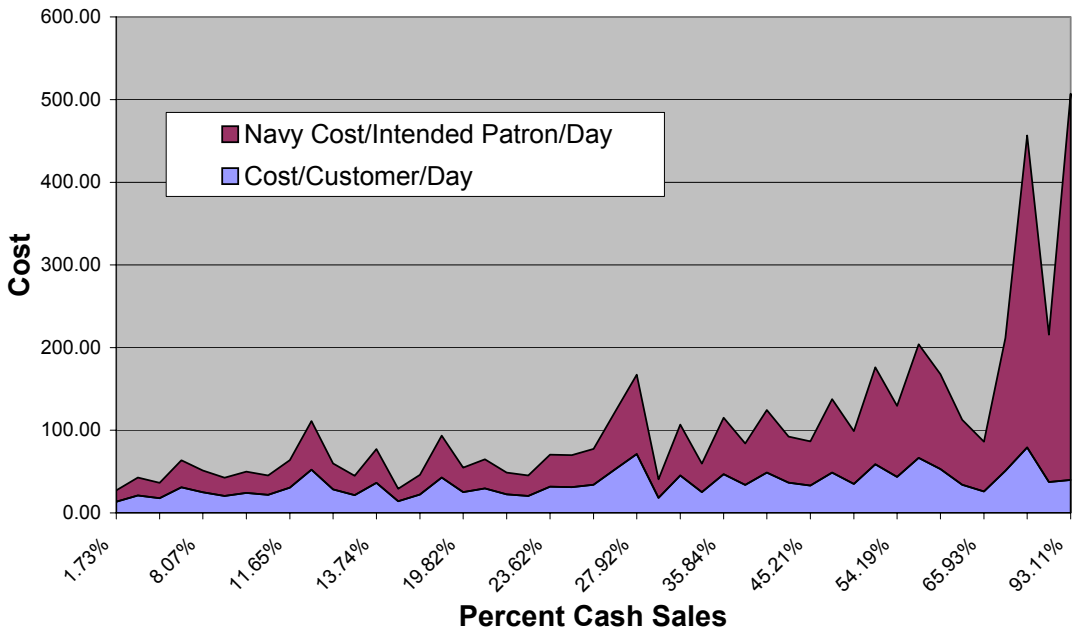


Table 10. Ashore galley sales and cost rates—CONUS extended

Installation	Total fed	% cash sales	Cost/ customer/ day	Navy cost/ intended patron/day
NS Great Lakes	3,810.920	1.73%	$13.58	$13.68
NNTPC Galley Charleston	398,746	5.23%	21.10	21.82
NAS Pensacola	1,319,740	6.79%	17.85	18.56
NAVSUBASE New London	188,383	7.98%	30.86	32.84
Constr Batt. Ctr Gulfport MS	168,742	8.07%	24.87	26.34
FCTC Atlantic Dam Neck VA	108,933	9.02%	20.59	21.83
NAVSUPACT NW Chesapeake	62,108	9.34%	24.15	25.80
NAS Meridian	152,986	9.68%	21.85	23.33
NAS Jacksonville	132,859	11.65%	30.51	33.46
NAS Oceana	134,572	12.78%	52.26	58.73
NAVSUBASE Kings Bay	183,008	13.34%	28.37	31.49
NS Norfolk	212,589	13.74%	36.35	40.85
NAS Whidbey Island	146,240	17.17%	22.13	24.04
NS San Diego	107,523	17.89%	42.94	50.53
NAVSUBASE Bangor	158,492	19.82%	25.23	29.46
NavAmphibBase Little Creek	152,158	20.28%	29.67	35.15
NAS Lemoore	215,556	21.79%	22.40	26.38

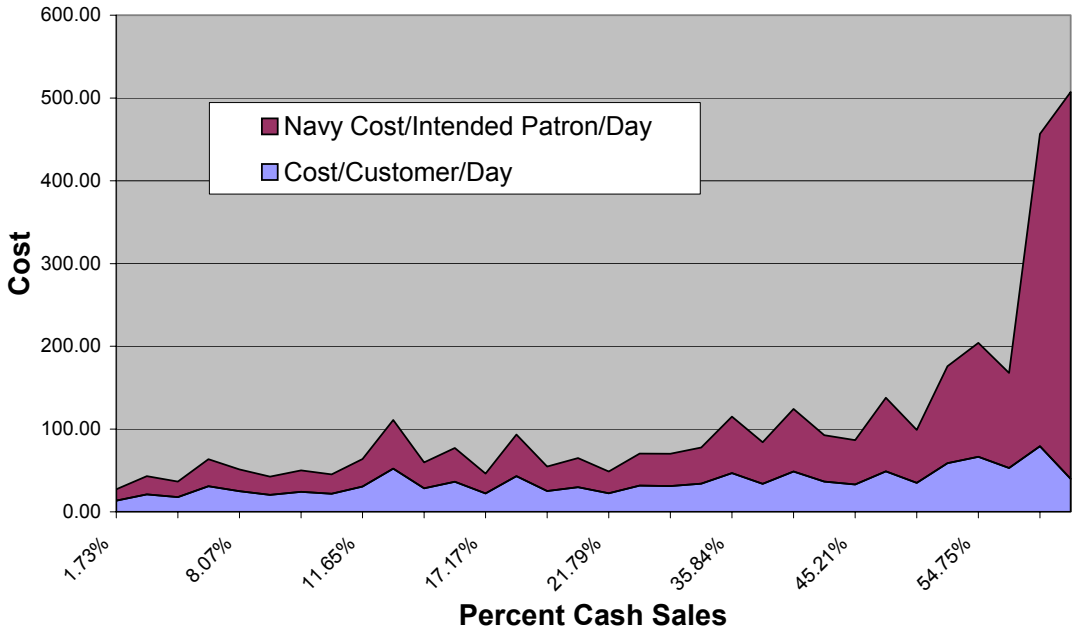
Table 10. Ashore galley sales and cost rates—CONUS extended (continued)

Installation	Total fed	% cash sales	Cost/ customer/ day	Navy cost/ intended patron/day
NS Newport	203,688	23.62%	31.60	38.86
NAS North Island	289,422	25.65%	31.05	38.97
NAVSUBASE San Diego	140,425	26.38%	34.13	43.46
NWS Yorktown	73,854	27.78%	52.55	69.64
NS Bremerton	56,788	27.92%	71.40	95.92
NAVBASE Ventura County	173,879	30.33%	45.33	61.54
NAS Fort Worth	44,921	35.84%	46.77	68.38
NS Mayport	79,649	38.68%	33.91	50.18
NS Annapolis	26,546	39.70%	48.76	75.53
NavShipNorfolk	54,879	40.43%	36.59	55.92
NAS Brunswick	53,294	45.21%	32.98	53.52
NS Pearl Harbor	139,101	49.57%	48.85	88.91
NS Ingleside	53,482	51.71%	35.04	63.88
NAS Willow Grove	39,025	53.49%	58.84	117.20
NAS Atlanta	21,936	54.75%	66.66	137.52
NAS New Orleans	43,883	57.97%	52.99	114.89
NAS Key West	19,036	80.74%	79.24	377.41
NAS Fallon	65,210	93.11%	39.74	467.34

Two of the 20 installations with less than 27 percent cash sales have Navy cost per intended patron per day in excess of $50.00. The highest is $58.73. None of the 15 installations with greater than 27 percent cash sales has Navy cost per intended patron per day under $50.00.

Figure 3 graphs cost per customer per day and Navy cost per intended patron per day for the CONUS installations. It is similar to the graph of figure 2, but smoother.

Figure 3. CONUS galleys



Outsourcing

Why does the Navy not outsource the operation of its ashore galleys? Food service is a commercial, not a military, activity. The greatest expertise lies in the private sector. Providers are numerous and highly competitive. It has become the predominant practice of universities, corporations, hospitals, sponsors of athletic events, and many agencies of government to rely on private enterprise for their food service.

The Navy's cost of operating its own ashore galleys varies widely. It can be five times as high at one installation as at another. Further, much of the cost is incurred for people who are not the intended patrons of galleys—civilian guests, contract personnel, military officers on per diem, and others who just happen to be on the base.

So why not hire commercial food service firms to provide meals for uniformed personnel who are on rations-in-kind or allowances for subsistence, and allow them to serve other customers at market prices? The primary reason is the Navy's sea-shore rotation policy.

Sea-shore rotation

The Navy goal is for E5 through E9 personnel to have 36 months of shore duty for every 36 months of sea duty [3]. The 36:36 ratio would require equal numbers of sea duty and shore duty billets. When the numbers are not equal, a formula is used to determine the sea tour necessary for every 36 months ashore. The number of sea billets is divided by the number of shore billets, and the quotient is multiplied by 36. With our count of 2,758 E5-E9 sea billets, and 2,372 shore billets, the sea tour for MS-rated personnel is 42 months.

There are not enough shore-duty MS billets to accommodate all MS-rated personnel qualifying for shore duty. The result is that the MSs are assigned to other jobs. For example, they help manage bachelor officer quarters and bachelor enlisted quarters, stand watch duty, and

serve as postal clerks and storekeepers. The unevenness of military manning of ashore galleys suggests that there are still more MSs there than are necessary.

Because it is difficult to place MSs ashore, personnel management officials object strongly to any attempt to reduce the number of ashore MS billets. They take the position that outsourcing ashore galleys results in a direct loss of shore billets and an increase in the sea-shore ratio. They say that it cannot be allowed unless additional shore billets are funded through the Manning Control Authority.

Without question, existing sea-shore rotation rules make it difficult to find assignments for MS personnel who are eligible. But the rules are subject to challenge.

Time at sea is much less than commonly believed. Most sailors in sea billets are not deployed. More than half their time is spent in the ship's home port, where they go home every night. Evidence for the alleged negative impact of extended sea duty on retention is weak [4, 5]. Studies have indicated that reasonable levels of extra compensation would be enough to motivate some to extend their tours at sea, thereby reducing the need for shore billets and saving money overall [5,6].

Research has also shown a hidden cost of reserving shore billets for military personnel. Activities with the highest percentages of military personnel produce the greatest savings when they are opened to competitive bidding [7 through 10].

Other reasons not to outsource

Although sea-shore rotation is the predominant argument against outsourcing the work of MS personnel, other reasons also are given. One is that the MSs will leave the Navy if they are forced to do work other than cooking and baking. Another is that they need to stay in the galley to retain their skills. A third is that the probability of finding good private sector positions in retirement is increased by staying in the galley. Still another is that they can earn valuable training—such as assignment to a chef school or culinary institute—only if they stay

in the galley. It is also argued that they are needed in the galley to serve as mentors and to prepare younger MS personnel for galley duty at sea.

Conversations with current galley managers, retired MS personnel, and commercial food service officials convince us that these arguments have little merit. More often than not, MSs returning from sea duty want a break from galley work. Their skills are not perishable; they are "like riding a bicycle." Training of junior personnel is not a problem. Most have already been at sea because most E3 and E4 MS billets are for sea duty. The type of training provided by chef schools and culinary institutes might help someone assigned to the White House mess or flag messes, but it is not needed for work in the vast majority of galleys.

Staying in galley work for 20 years does little to improve one's prospects in commercial food service. Companies value retired military personnel for their discipline as employees, but not for their managerial or cooking experience. As managers, they are "weak in the financials." They might be attractive as "number two" in a food service operation, but not as manager. They are not well positioned for cooking positions because they generally have had administrative rather than cooking responsibilities for the last 6 to 10 years.

Retention

Much of the resistance to outsourcing is rooted in a concern about retention. The MS rating is not popular among recruits. It is categorized as low tech, and thus does not carry much prestige. Some officials worry that MS-rated sailors will be easily discouraged and leave the Navy in disproportionately high numbers. In fact, many believe that retention of MSs is poor. We shall show in this section that, relative to experience with other low tech sailors and with enlisted personnel in general, such is not the case.

To evaluate MS retention, we have to look at personnel data rather than billet data. We use billets almost exclusively in other sections of this report because they reflect requirements. We do not want shortfalls or surfeits of MSs to mislead us about how many are needed at

sea and ashore, or in each pay grade. Retention is not determined by requirements, however, but by the Navy's ability to fill them with personnel in their second and subsequent tours. Table 11 presents MS-rated personnel by sea and shore duty and pay grade.

Table 11. MS-rated personnel

Pay grade	Shore duty	Sea duty	Total
E1	200	192	392
E2	132	512	644
E3	134	777	911
E4	637	1473	2110
E1–E4	1103	2954	4057
E5	1235	1393	2628
E6	826	906	1733[a]
E7	335	308	643
E8	115	78	194[a]
E9	56	33	89
E5–E9	2567	2718	5287
Total	3670	5672	9344[a]

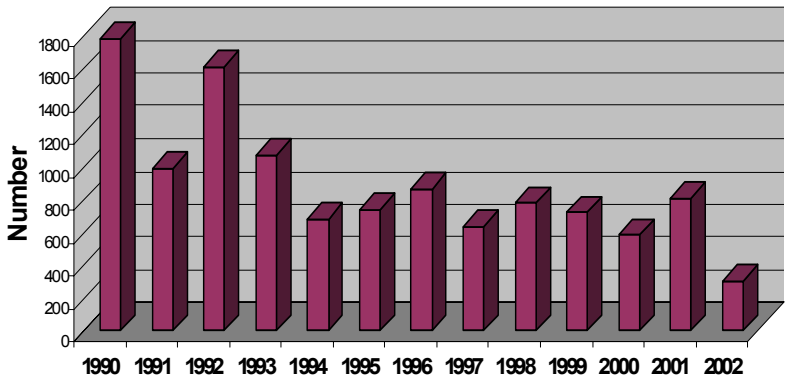
a. Totals include one E6 and one E8 not categorized as on sea or shore duty.

Comparison of tables 2 and 11 shows that 5.4 percent of MS billets are unfilled. Our interest is retention, so we must look separately at personnel who are past their initial tours of duty. Since almost no MSs attain E5 status in their first tours and virtually all become E5s with re-enlistment, we can use pay grades to make the split. We find an 8.6 percent vacancy rate in first-tour MS positions and a 3 percent surplus in positions for subsequent-tour MSs.

These figures may indicate difficulty in recruiting MSs, but they do not necessarily reflect success in retention because MS accessions have not

remained constant. They have decreased over the years, as indicated by figure 4.

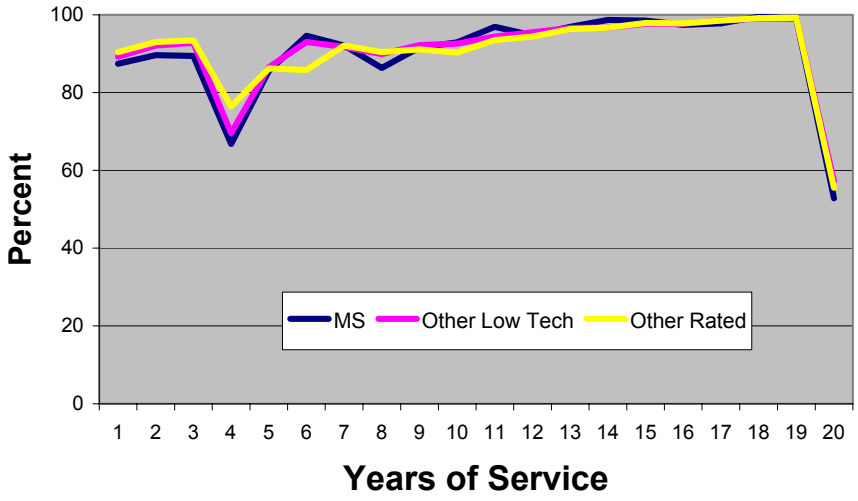
Figure 4. MS accessions



In a workforce of changing size, we can discern retention by observing continuation rates. In a given year, we look at personnel with each different number of years of service and see what percent remain in the Navy. In figure 5, which reflects experience in 2001, we see continuation rates for MS personnel in their first year and in each successive year through the twentieth year of service. In addition, we see the rates for personnel in other low tech specialties and for all rated personnel. The rates drop, as expected, at the end of the first period of enlistment and then rise and stay in the 82- to 100-percent range until the personnel become eligible for retirement. The rates for MS-rated and other low tech specialists are almost identical throughout the chart. The rate for all rated personnel is slightly higher at completion of the first tour, slightly lower shortly thereafter, and the same through all the other years.

A single year of retention data may not be representative, so we look at continuation rates for the five preceding years. Figures 6 through

Figure 5. 2001 continuation rates



10, for the years 1996 through 2000 in reverse order, exhibit basically the same pattern as the chart for 2001. Continuation of all rated personnel is slightly higher than that of MS or other low tech personnel at the end of the first enlistment period, especially in the more recent years. The rate for MS personnel drops below the others at the ten-year point, especially in the earlier years, but then resumes the same level. The differences are small, however, and there is no basis for concluding that retention of MS personnel is unusually high or unusually low.

Figure 6. 2000 continuation rates

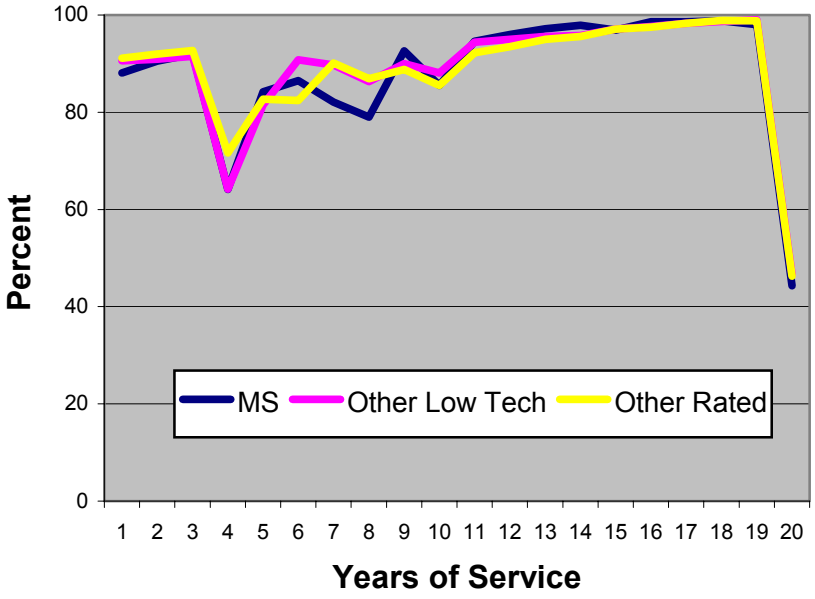


Figure 7. 1999 continuation rates

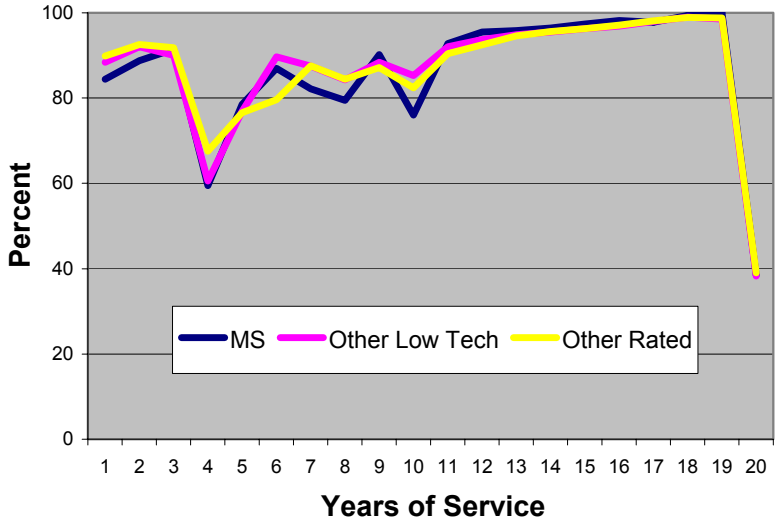


Figure 8. 1998 continuation rates

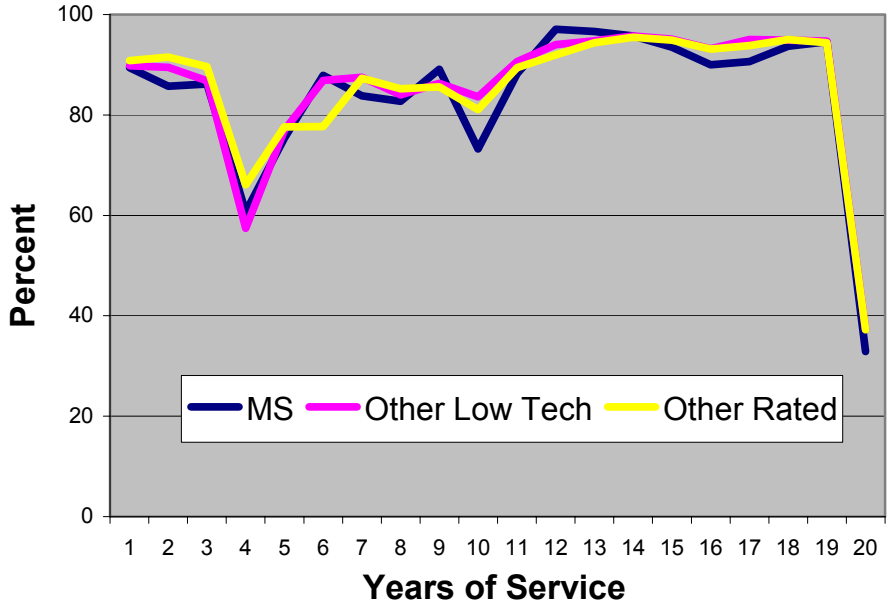


Figure 9. 1997 continuation rates

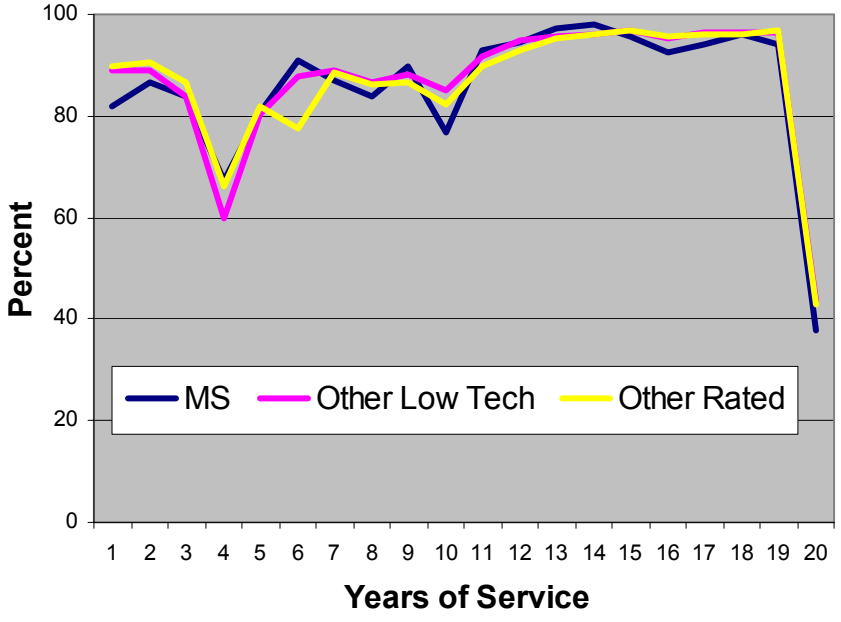
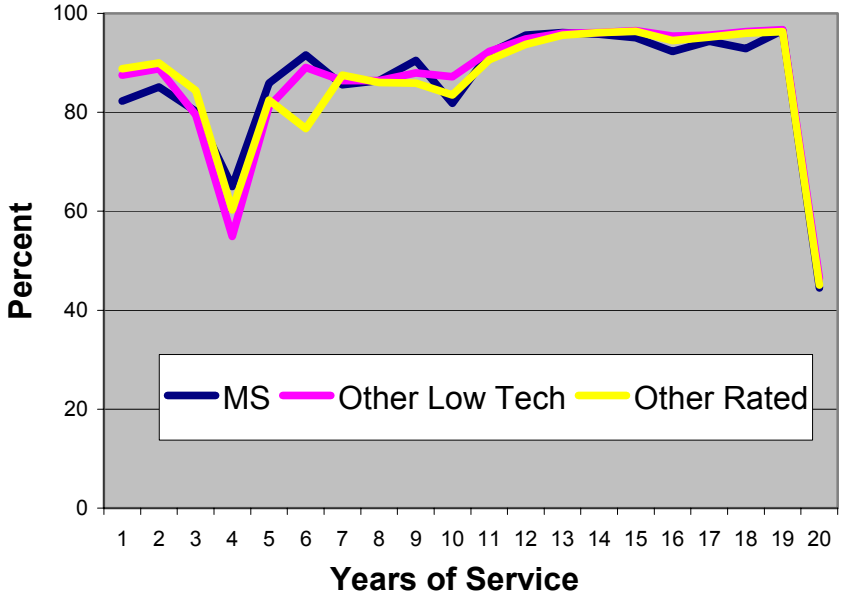


Figure 10. 1996 continuation rates



Reduction in afloat billets

Afloat MS billets have been decreasing in number over the years. (See figure 2 on accessions.) Every elimination of an E5 to E9 billet afloat allows one to be eliminated ashore, as the equivalent shore duty time is no longer required. The reduction will continue to occur because new ships and modernized ships will not require as many MS personnel.

One example of reduced need for MS-rated personnel afloat is the SMARTSHIP program. Redesign of galleys is one of the many changes being made in the ships. The new galley layouts are more efficient, and the new equipment that is installed is more versatile, easier to use, easier to clean, and easier to service. Stores are made more accessible, and record-keeping is automated. On USS *Mobile Bay*, the number of galley personnel has been reduced from 29 to 20. Three of the positions eliminated were MS billets. Similar changes can be expected in other ships of the program.

The Afloat Supply Department of the Future (ASDOF) program of NAVSUP is another source of reductions in afloat galley personnel. Some of the initiatives in ASDOF are contractor loadout of stores, advanced food technology, pre-prepared individual entrees, self-serve food lines, elimination of stateroom cleaning assignments of FSAs, up-to-date industry standard galley equipment, low maintenance decking, centralized food preparation, outsourced FSA work in port, price-based inventory management, bar coding in the receipt process, and low maintenance cookware. All these changes have been implemented in USS *Tarawa* and will be made in other ships. They will decrease the requirements for both MSs and FSAs.

ASDOF personnel are also partnering with scientists in the DoD Combat Feeding Program, located at the Natick Soldier Center in Natick, Massachusetts. Together, they are pursuing improvements in layout, safety, equipment, process, packaging, and control. In addition, the Combat Feeding Program conducts research in combat feeding and tracks developments in commercial food technology. Efficiency, as well as nutrition, is an objective, and further afloat manning decreases should result. Another result will be menus more

appropriate to tomorrow's crews of fewer but more technologically sophisticated officers and enlisted personnel.

A final example of reduction of afloat MS billets that can translate into fewer ashore MS billets is a change to civilian crews. The most recent decision is the transfer of four command ships—the USS *LaSalle*, USS *Coronado*, USS *Blue Ridge*, and USS *Mount Whitney*—to the Military Sealift Command. For the four ships, 269 Navy MSs and FSAs will be replaced by 157 civil marine food service personnel, although two of the four ships will augment their galley staffs for 60 days per year, and one more will add temporary people 125 days per year. Even in the periods of augmentation, their galley contingents will be smaller than when they had all Navy personnel [11].

Civilianization of crews has been occurring gradually for some time. The other sources of change are new. Their impact has not been felt, but it will be, and it will grow. As it does, it will enable reduction in ashore as well as afloat MS billets.

A multiplier effect

There are more sea billets than shore billets for E5 through E9 MS personnel. Therefore, a shore billet removed will be a larger percentage of the total. The difference will be slight if we view all shore MS billets as the same. But they are not the same. Only 46.75 percent of the shore MS billets are in galleys. So a reduction of one position is a much larger percentage of ashore MSs in galleys than of afloat MSs.

Some ashore MSs are in special kinds of galleys—hospital food operations, flag messes, or the White House mess. If we exempt them, then only 33.6 percent of ashore MSs are in traditional Navy galleys. (We could go farther and exclude those serving as instructors or those in brig messes, but the numbers would be small.)

If p is the percent reduction in sea-duty MS billets, then

c/s times p times $100/g$ = the percent reduction in shore duty MS billets in traditional galleys,

where: c = the total number of sea-duty E5–E9 MS billets,

s = the total number of shore-duty E5–E9 MS billets, and

g = the percent of shore-duty E5–E9 MS billets in traditional Navy galleys.

Because ***c*** = 2,758, ***s*** = 2,372, and ***g*** = 33.6, the formula reduces to 3.46***p,*** and we have the relationships of table 12.

Table 12. MS billet reduction multiplier (E5–E9 personnel)

% reduction: sea duty MS billets	% reduction: shore duty MS billets in traditional galleys
5	17.3
15	51.9
25	86.5

If, for every MS billet eliminated afloat, we eliminate an ashore MS billet in a traditional galley—that is, not in a hospital, a flag mess, the White House mess, or a non-mess function—a 25-percent reduction in afloat MS billets would translate into an 86.5-percent reduction ashore MS billets in traditional galleys. A 15-percent reduction in afloat MS billets would allow ashore MS billets in traditional galleys to be reduced by 51.9 percent.

Conclusions and recommendations

The Navy should not be in the business of operating ashore galleys except where it is not possible to allow private food service firms or where such firms are unavailable. Food service is a commercial activity with an abundance of capable companies competing for business. The Navy should not have to maintain a corps of specialists with all their required support on a broad scale in a non-core function.

Most ashore galleys are expensive to operate, and much of the Navy's cost is to subsidize the meal purchases of people other than those for whom the galleys exist—namely, military personnel on rations or subsistence allowances. Some galleys are much more expensive to operate than others.

If a galley has cash sales amounting to more than 27 percent of its business and cost per customer per day in excess of $32, it should closed or its operation should be turned over to a private firm. The firm should be committed to providing food service to Navy personnel on rations or allowances. Its contract should include all appropriate requirements for amount, nutritional content, taste, appearance, and quality, and allow it to provide service to other customers at market rates. This action should be considered the first step toward terminating or outsourcing the operation of all ashore galleys.

As such programs as SMARTSHIP and ASDOF eliminate second and subsequent tour MS positions afloat, the Navy should cut equal numbers of MS positions ashore. They should be taken from traditional galleys, rather than from hospitals, flag messes, the White House mess, or the non-mess activities to which most shore duty MSs are assigned. If 15 percent of afloat MS billets are eliminated—a reasonable expectation—more than 50 percent of the shore duty MS billets in traditional galleys can be eliminated. Until those billets are removed, some MSs on shore duty should be embedded in food service contracts or given work in functions of growing demand, such as security.

In the interest of making sound decisions on food service and other installation management functions, IMAP should be expanded to include all installation operating costs. Regional commanders and their program managers should be called on to enforce the reporting of costs to IMAP. Reporting should be by installation, regardless of the extent to which management is on a regional basis.

References

[1] Office of Management and Budget, *Performance of Commercial Activ ities*, Circular A-76, Revised, 29 May 2003

[2] NAVFAC Instruction M0303, Utilities Target Manual

[3] Chief of Naval Operations, Military Personnel and Plans Policy (N13), *Sea/Shore Rotation (SSR) Facts*, Jun 2003

[4] John Warner and Matthew Goldberg. "The Influence of Nonpecuniary Factors on Labor Supply: The Case of Navy Enlisted Personnel." *Review of Economics and Statistics,* pp. 26-35, 1984

[5] Timothy Cooke, Alan Marcus, and Aline Quester. *Personnel Tempo of Operations and Navy Enlisted Retention (*CNA Research Memorandum 91-150), Feb 1992

[6] Ravi Sharma and Henry Griffis. *Implications of Changes in Time Spent at Sea* (CNA Research Memorandum 94-150), Apr 1995

[7] Alan Marcus. *Analysis of the Navy's Commercial Acitivities Programs* (CNA Research Memorandum 92-226.10), Jul 1993

[8] Angela King, Angela Rademacher, and R. Derek Trunkey, *An Examination of the DoD Commercial Activities Inventory Data* (CNA Information Memorandum 471), Dec 1996

[9] R. Derek Trunkey, Robert Trost, and Christopher Snyder, *Analysis of DoD's Commercial Activities Programs* (CNA Research Memorandum 96-63), Dec 1996

[10] Christopher Snyder, Robert Trost, and R.Derek Trunkey *Bidding Behavior in DoD's Commercial Activities Competitions* (CNA Research Memorandum 97-68), Jan 1998

[11] Henry Eskew. *Civilian Manning of Navy Command Ships: The Potential for Cost Saving* (CNA Research Memorandum D0008624.A4/1Rev.), Oct 2003

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