

## IPD 2013 Trade Show results

Here are the web show, trade show and final weighted averages for IPD 2013:

Web show: 866 customers, sales/customer scaled up to 3000

Product	Fixed cost (\$)	Variable cost (\$)	Avg sales per customer	Unit sales	Retail price (\$)	Margin (\$ per unit)	Margin %	Total revenues	Total Variable cost	Operating margin	Total web show profit
Unit	19.97	58	0.441	1323	100	42	42%	\$ 132,254.46	\$ 76,707.59	\$ 55,546.88	\$ 55,526.91
EZA		11.58	0.337	1011	30	18.42	61%	\$ 30,334.82	\$ 11,709.24	\$ 18,625.58	\$ 18,625.58
Flightstand		19.82	0.343	1028	49	29.18	60%	\$ 50,367.19	\$ 20,373.01	\$ 29,994.17	\$ 29,994.17
EmBed	19.97	21.75	0.225	676	55	33.25	60%	\$ 37,198.66	\$ 14,710.38	\$ 22,488.28	\$ 22,468.31
Treads		12.3	0.619	1858	24.95	12.65	51%	\$ 46,363.56	\$ 22,856.58	\$ 23,506.98	\$ 23,506.98
QUB		47.65	0.272	817	79.99	32.34	40%	\$ 65,348.97	\$ 38,928.35	\$ 26,420.63	\$ 26,420.63
Elevate		41.35	0.321	964	80	38.65	48%	\$ 77,142.86	\$ 39,873.21	\$ 37,269.64	\$ 37,269.64
Snap Rack	19.97	70.43	0.123	368	129.99	59.56	46%	\$ 47,875.78	\$ 25,939.62	\$ 21,936.16	\$ 21,916.19

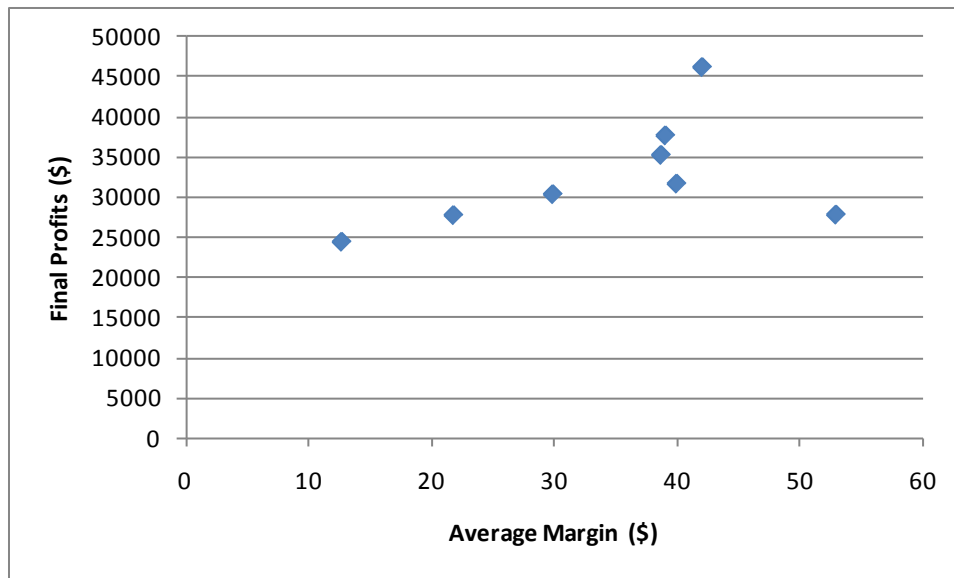
Trade show: 262 customers, sales/customer scaled up to 3000

Product	Fixed cost (\$)	Variable cost (\$)	Avg sales per customer	Unit sales	Retail price (\$)	Margin (\$ per unit)	Margin %	Total revenues	Total Variable cost	Operating margin	Total web show profit
Unit	19.97	58	0.328	985	100	42	42%	\$ 98,473.28	\$ 57,114.50	\$ 41,358.78	\$ 41,338.81
EZA		11.58	0.458	1374	35	23.42	67%	\$ 48,091.60	\$ 15,911.45	\$ 32,180.15	\$ 32,180.15
Flightstand		19.82	0.336	1008	49.99	30.17	60%	\$ 50,371.60	\$ 19,971.30	\$ 30,400.31	\$ 30,400.31
EmBed	19.97	21.75	0.279	836	65	43.25	67%	\$ 54,332.06	\$ 18,180.34	\$ 36,151.72	\$ 36,131.75
Treads		12.3	0.653	1958	24.95	12.65	51%	\$ 48,852.48	\$ 24,083.59	\$ 24,768.89	\$ 24,768.89
QUB		47.65	0.340	1019	89.99	42.34	47%	\$ 91,707.37	\$ 48,559.35	\$ 43,148.02	\$ 43,148.02
Elevate		41.35	0.294	882	80	38.65	48%	\$ 70,534.35	\$ 36,457.44	\$ 34,076.91	\$ 34,076.91
Snap Rack	19.97	70.43	0.206	618	119.99	49.56	41%	\$ 74,192.29	\$ 43,548.32	\$ 30,643.97	\$ 30,624.00

Final weighted average (1/3 web show + 2/3 trade show) profits, sorted from highest to lowest:

Unit	\$ 46,068.17
QUB	\$ 37,572.22
Elevate	\$ 35,141.15
EmBed	\$ 31,577.27
Flightstand	\$ 30,264.93
Snap Rack	\$ 27,721.40
EZA	\$ 27,661.96
Treads	\$ 24,348.25

What explains these results? In previous years margin was a key driver of final results. With high margins you can withstand lower demand and still do well. This year margins mattered (they always do) but were not the only primary driver. A plot of product margins vs final profits is as follows:



There is an upward trend to a point, and then an ambiguous relationship. The linear correlation between margins and profits was a modest .48.

In fact, a linear regression of final profits vs the independent variables of price, assembly time, margin and sales/customer has very little predictive power. That is, different teams did well with different approaches, and we need to look at individual product strategies to understand these results. While we can't see within the minds of consumers, here is one possible interpretation:

Product	Weighted Avg Margin (\$)	Weighted avg assembly time	Weighted Avg price (\$)	Weighted Avg Sales/customer	Final team profit (\$)	
Unit	42.00	7	100.00	0.366	46068.17	A
QUB	39.01	60	86.66	0.317	37572.22	
Elevate	38.65	53.33	80.00	0.303	35141.15	C
EmBed	39.92	35	61.67	0.261	31577.27	
Flightstand	29.84	70	49.66	0.338	30264.93	
Snap Rack	52.89	100	123.32	0.178	27721.4	D
EZA	21.75	5	33.33	0.418	27661.96	
Treads	12.65	12	24.95	0.642	24348.25	

Notes:

A (Unit and QUB): Clearly the seat/storage product class did very well this year (combined sales per customer of .683). QUB offered a swivel feature and colored fabric, but Unit's bundle pricing strategy ( 3-for-\$100 ) was apparently very effective.

B (Elevate and Snap Rack): These two products both provided value by using vertical space, and divided that “vertical” market segment between them. Both had design features to recommend them, and we can’t unambiguously infer from these data alone how customers responded to those differences. Snap Rack’s high variable cost suggested high pricing to maintain decent margins, but its price in the web show (\$129.99) imposed a high opportunity cost on customers (buying one Snap Rack meant that several other products were then out of reach), partially explaining a significant advantage for Elevate (.321 sales per customer vs .123). Snap Rack reduced its price by \$10 in the physical trade show, and was able to compete more closely with Elevate (.21 vs .29 sales/customer), but could not make up the web show deficit.

C (Embed and Flightstand): The “bed desk” product class was an attractive option for customers (combined sales/customer of .6). These two products ended up in essentially a dead heat. Embed had higher margins but lower sales/customer, and Flightstand the reverse of this. This is a classic trade off in product strategies, and clearly one can do well either way.

D (EZA and Treads): These two niche products were different in many ways, but shared a role as potential residual claimants to left over cash after customers purchased larger items. They had the two highest sales/customer among all individual products (.418 and .642 respectively). Their low margins, particularly for Treads, meant that they could not translate high unit sales into high profits.