

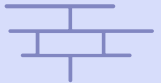


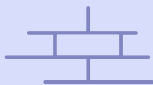
MGT 153

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ER Game

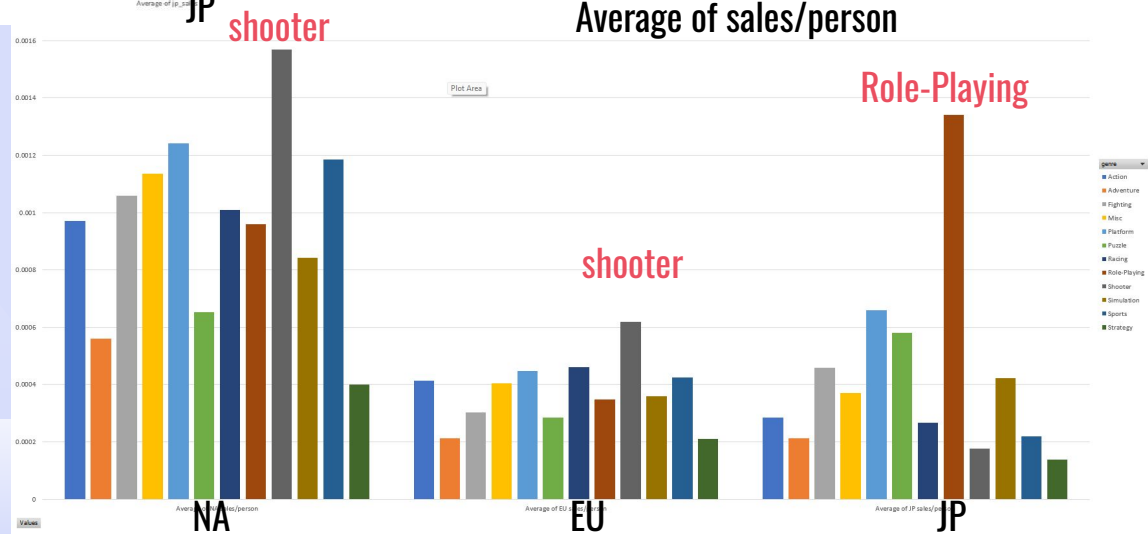
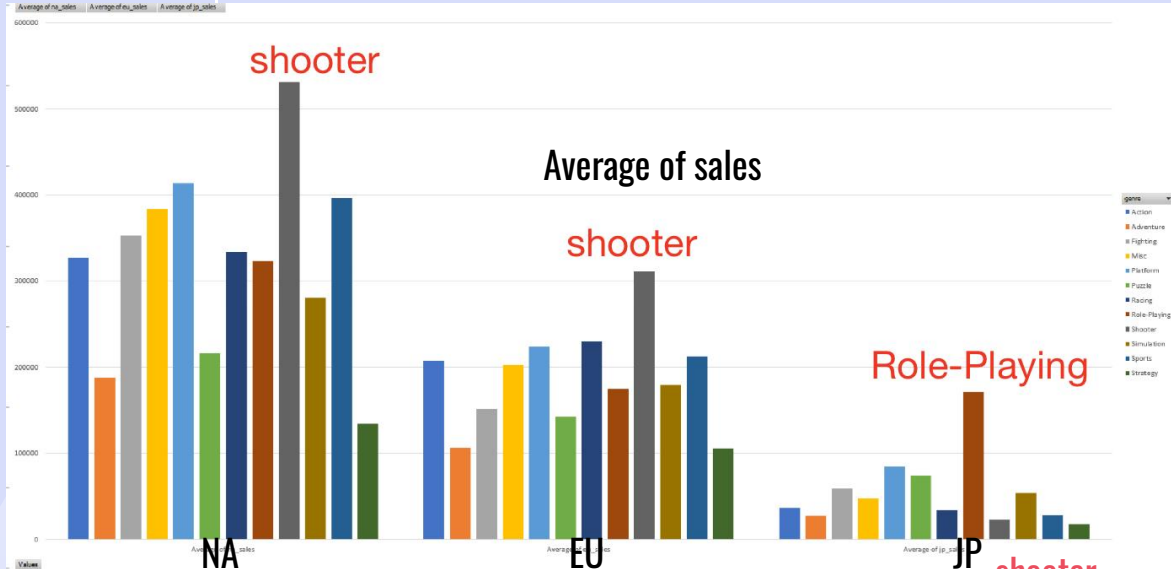
Cristina Lin, Demeng Zhang, Huijie Qin,
Kaihua Chen, Yan Yan, Yihan Yang





Trend of the industry

Column Labels ▾													
Values	Action	Adventure	Fighting	Misc	Platform	Puzzle	Racing	Role-Playing	Shooter	Simulation	Sports	Strategy	Grand Total
Average of na_sales	327236.8421	187491.961	352774.725	383184.524	413126.294	216650.718	333598.82	323366.013	531793.02	280620.843	396280.675	133991.935	353879.449
Average of eu_sales	207173.6842	106109.325	151456.044	202425.595	223706.004	142296.651	229778.761	174509.804	311227.437	179201.774	212653.374	105604.839	206016.371
Average of jp_sales	36342.10526	27234.7267	58571.4286	47395.8333	84140.7867	74210.5263	34100.295	171192.81	22587.2443	53991.1308	28044.4785	17580.6452	49458.0181
max	327236.8421	187491.961	352774.725	383184.524	413126.294	216650.718	333598.82	323366.013	531793.02	280620.843	396280.675	133991.935	353879.449
region	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Column Labels ▾													
Values	Action	Adventure	Fighting	Misc	Platform	Puzzle	Racing	Role-Playing	Shooter	Simulation	Sports	Strategy	Grand Total
Average of NA sales/per	0.000970718	0.00055964	0.00105874	0.00113603	0.0012429	0.0006522	0.00100937	0.00096027	0.00156909	0.00084222	0.00118441	0.00040018	0.00105461
Average of EU sales/per	0.000413061	0.00021225	0.00030331	0.00040434	0.00044824	0.00028514	0.00046062	0.00034814	0.00061936	0.00035849	0.00042475	0.00021073	0.00041137
Average of JP sales/per	0.000284716	0.00021322	0.00045869	0.00037083	0.00065865	0.00058057	0.00026705	0.00134002	0.00017697	0.00042288	0.00021941	0.00013787	0.00038722
max	0.000970718	0.00055964	0.00105874	0.00113603	0.0012429	0.0006522	0.00100937	0.00134002	0.00156909	0.00084222	0.00118441	0.00040018	0.00105461
region	NA	NA	NA	NA	NA	NA	NA	JP	NA	NA	NA	NA	NA
Column Labels ▾													
Values	Action	Adventure	Fighting	Misc	Platform	Puzzle	Racing	Role-Playing	Shooter	Simulation	Sports	Strategy	Grand Total
Average of critic_score	6.718505124	6.56756757	6.8962536	6.72304038	6.87850467	6.75776398	6.92830821	7.31001727	7.20696774	6.96462094	7.29428304	7.32352941	6.98018952
Average of user_score	7.060459342	7.14858491	7.24674556	6.78760563	7.34297082	7.10873786	7.08030303	7.60153846	7.08589909	7.14946996	7.01606426	7.30567686	7.13558685



Trend of the industry



Role-Playing	Shooter
323366.013	531793.02
174509.804	311227.437
171192.81	22587.2443
323366.013	531793.02
NA	NA

Average Sales

Role-Playing	Shooter
0.00096027	0.00156909
0.00034814	0.00061936
0.00134002	0.00017697
0.00134002	0.00156909
JP	NA

Average Sales/Person

sales of three regions
VS
sales per person of three
regions (KPI)

We think **Sales per person** is a more representative measurement than **Total Sales** because total sales in a region could be relatively high because this region has a high population

Higher Sales per person means each individuals in this region contribute more in sales





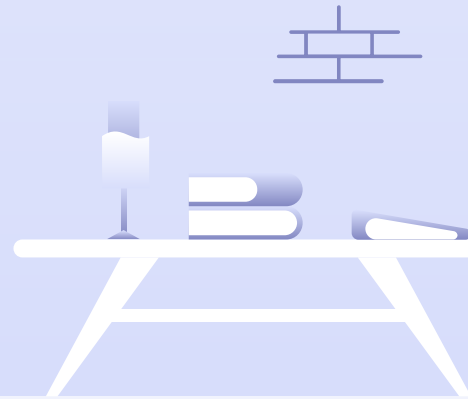
Trend of the industry



Sales per person

Vertically: JA has the highest sales only in role-playing game, while NA dominates the sales of other genres

Horizontally: Most popular genre in NA and EU is shooter game; while most popular genre in Japan is role-playing game.





Market Targeting

A/B Testing



Values	Column Labels Puzzle	Role-Playing	Grand Total
Average of na_sales	216650.7177	323366.013	296199.756
Var of na_sales	1.53169E+11	3.2523E+11	2.8335E+11
Count of na_sales	209	612	821
Use puzzle and role-playing together			
	US vs Japan		US vs EU
diff	-149695.4933		-129890.38
z	-6.313834346		-5.4034003
p		1	0.99999997
conclusion	stay with V1		stay with V1
Use Sales per person as measurement			
Values	Column Labels Puzzle	Role-Playing	Grand Total
Average of NA sales/	0.000652203	0.00096027	0.00088184
Var of NA sales/pers	1.41306E-06	2.8757E-06	2.5192E-06
Count of NA sales/pers	209	612	821
Use puzzle and role-playing together			
	US vs Japan		US vs EU
diff	0.000264848		-0.0005497
z	2.071304755		-8.6900475
p	0.019165163		1
conclusion	choose V2 under $\alpha=0.05$		choose V1

Values	Column Labels Puzzle	Role-Playing	Grand Total
Average of jp_sales	74210.52632	171192.81	146504.263
Var of jp_sales	1.60685E+11	1.8199E+11	1.7815E+11
Count of jp_sales	209	612	821
use role playing			
	US vs Japan		US vs EU
diff	-152173.2026		-148856.21
z	-5.285863386		-5.1823575
p	0.999999937		0.999999989
conclusion	stay with V1		stay with V1

Values	Column Labels Puzzle	Role-Playing	Grand Total
Average of eu_sales	142296.6507	174509.804	166309.379
Var of eu_sales	2.24603E+11	1.797E+11	1.9107E+11
Count of eu_sales	209	612	821
use role playing			
	US vs Japan		US vs EU
diff	-152173.2026		-148856.21
z	-5.285863386		-5.1823575
p	0.999999937		0.999999989
conclusion	stay with V1		stay with V1

Values	Column Labels Puzzle	Role-Playing	Grand Total
Average of EU sales/	0.000285141	0.00034814	0.0003321
Var of EU sales/pers	9.06821E-07	7.1879E-07	7.6636E-07
Count of EU sales/pers	209	612	821
use role playing			
	US vs Japan		US vs EU
diff	0.000379758		-0.0006121
z	2.509683268		-7.987228
p	0.006041975		1
conclusion	choose V2 under $\alpha=0.05$		choose V1



Market Targeting

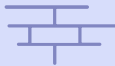
A/B Testing

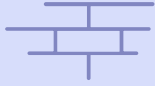


- V1: release game internationally, without using a phased approach
- V2: release game in **Asia** (Japan) market first
- V3: release game in **Europe** market first

Use puzzle and role-playing together			use role playing		
	US vs Japan	US vs EU		US vs Japan	US vs EU
diff	0.000264848	-0.000549739	diff	0.000379758	-0.000612123
z	2.071304755	-8.690047524	z	2.509683268	-7.987228021
p	0.019165163	1	p	0.006041975	1
conclusion	choose V2 under $\alpha=0.05$	choose V1		choose V2 under $\alpha=0.05$	choose V1

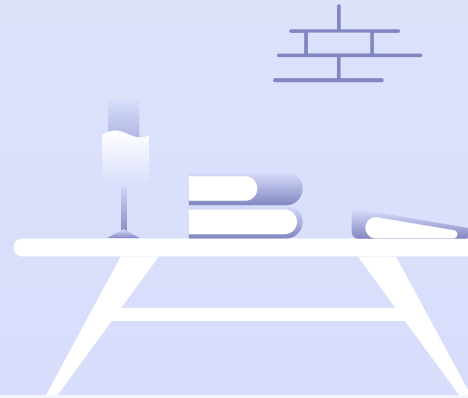
Conclusion: ER Game should target at Japan Market based on A/B Testing

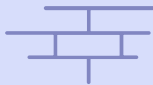




Impact of changing preferences and demographics

- Pivot table shows “Top selling genre per year”

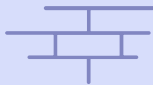




Average of NA_Sales

Average of na_sales													
Column Labels													
Row Labels	Action	Adventure	Fighting	Misc	Platform	Puzzle	Racing	Role-Playing	Shooter	Simulation	Sports	Strategy	Grand Total
2000	564166.6667	105000	392500	1096666.67	420000	155000	361176.471	146666.667	147142.857	130000	507407.407	132000	366666.667
2001	692424.2424	211000	847500	640000	673809.524	634285.714	534200	371176.471	573333.333	576153.846	377857.143	352500	520074.906
2002	450337.0787	173913.043	333125	203157.895	352444.444	271666.667	214852.941	426363.636	501555.556	464166.667	203133.333	140000	306238.185
2003	281730.7692	94285.7143	393703.704	259130.435	313571.429	66666.6667	229041.096	393846.154	259827.586	364666.667	313181.818	109230.769	283454.894
2004	348679.2453	189523.81	283750	254687.5	365555.556	195000	370000	362000	448888.889	219333.333	447272.727	106666.667	345992.218
2005	258200	117777.778	306071.429	299811.321	221186.441	255714.286	478947.368	211162.791	327500	371250	328876.404	128125	292160.883
2006	271544.7154	160800	334062.5	703571.429	494782.609	167391.304	317419.355	279833.333	398596.491	260750	730736.842	54285.7143	379612.278
2007	309865.7718	373870.968	294761.905	637049.18	569285.714	174117.647	276333.333	319607.843	506351.351	420350.877	373644.86	81515.1515	370609.065
2008	416967.7419	211162.791	616666.667	389534.884	363658.537	185000	724285.714	382950.82	559824.561	303285.714	337142.857	195000	393187.831
2009	309281.768	175681.818	483714.286	272772.277	789166.667	304074.074	240000	297346.939	582166.667	176585.366	557087.379	131724.138	346615.97
2010	324220.7792	155517.241	323333.333	563333.333	678500	286875	315000	439148.936	718181.818	216666.667	384955.752	292500	402057.416
2011	307243.5897	224500	334516.129	281684.211	438518.519	30000	283255.814	616896.552	659142.857	160344.828	331285.714	145833.333	349410.774
2012	358943.0894	98333.3333	197368.421	503809.524	830000	45000	119047.619	420645.161	888717.949	297000	405897.436	290000	421335.404
2013	521648.3516	170000	256666.667	411666.667	340800	60000	292142.857	169629.63	705609.756	151428.571	505277.778	191666.667	435774.648
2014	289905.6604	61111.1111	55000	220625	334444.444	295000	302105.263	164000	670217.391	500000	458780.488	70000	333236.246
2015	196176.4706	197500	267692.308	230555.556	280000	0	225000	362142.857	676666.667	93333.3333	443333.333	110000	299761.905
2016	100909.0909	48000	192222.222	27500	56923.0769	0	55000	72380.9524	395263.158	23333.3333	240645.161	48000	154778.761
Grand Total	327236.8421	187491.961	352774.725	383184.524	413126.294	216650.718	333598.82	323366.013	531793.02	280620.843	396280.675	133991.935	353879.449

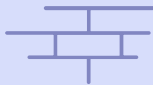
Shooter game has higher average sales (more popular) in recent years



Average of EU sales

Average of eu_sales														Column Labels
Row Labels	Action	Adventure	Fighting	Misc	Platform	Puzzle	Racing	Role-Playing	Shooter	Simulation	Sports	Strategy	Grand Total	
2000	440000	72500	318750	896666.667	322500	120000	251176.471	96666.6667	108571.429	103333.333	209629.63	118000	236666.667	
2001	469090.9091	269000	261250	192000	345238.095	227142.857	303800	195294.118	273750	246923.077	174000	145000	269925.094	
2002	263258.427	95652.1739	124375	78421.0526	142444.444	113333.333	97352.9412	192272.727	268000	272500	109866.667	43333.3333	155103.97	
2003	162596.1538	57142.8571	151851.852	212608.696	160357.143	16666.6667	126438.356	170384.615	137068.966	199666.667	131477.273	81923.0769	147082.534	
2004	139245.283	81904.7619	118125	115000	168000	47857.1429	219583.333	312750	183650.794	188666.667	176103.896	61904.7619	164357.977	
2005	121933.3333	58333.3333	113928.571	290188.679	77118.6441	280476.19	260000	69534.8837	103947.368	210833.333	127528.09	56250	144116.719	
2006	110487.8049	80400	84375	500714.286	255652.174	74782.6087	126290.323	51166.6667	151754.386	151000	373894.737	35714.2857	174329.564	
2007	137315.4362	166451.613	132380.952	302786.885	251785.714	199411.765	194166.667	125098.039	285945.946	236666.667	176355.14	38484.8485	189121.813	
2008	235677.4194	83953.4884	244814.815	156046.512	206097.561	161428.571	533571.429	169016.393	258596.491	160142.857	140714.286	145500	201653.439	
2009	170662.9834	77045.4545	206000	137821.782	451250	138148.148	195555.556	138979.592	315500	129634.146	339902.913	139310.345	197655.26	
2010	178896.1039	121724.138	188571.429	265000	364500	110000	323888.889	188936.17	385272.727	149285.714	234690.265	261875	228819.777	
2011	235769.2308	176000	156129.032	110000	298518.519	43333.3333	256976.744	447931.034	460142.857	93103.4483	110714.286	179166.667	223939.394	
2012	298943.0894	65000	107894.737	286190.476	702500	20000	188095.238	288387.097	646410.256	360000	154615.385	266666.667	308726.708	
2013	409890.1099	177142.857	161111.111	300000	233600	160000	423571.429	96666.6667	498048.78	171428.571	396388.889	202500	340739.437	
2014	302452.8302	37777.7778	38333.3333	134375	400000	190000	388421.053	139555.556	547826.087	980000	435121.951	110000	316731.392	
2015	186176.4706	225000	160000	154444.444	202500	0	387500	356785.714	444761.905	265000	361904.762	172500	256865.079	
2016	129696.9697	56000	144444.444	30625	46153.8462	10000	115000	76666.6667	388684.211	191666.667	379354.839	94000	187743.363	
Grand Total	207173.6842	106109.325	151456.044	202425.595	223706.004	142296.651	229778.761	174509.804	311227.437	179201.774	212653.374	105604.839	206016.371	

Shooter game is relatively popular in EU market recent years



Average of JP sales

Average of jp_sales		Column Labels												
Row Labels	Action	Adventure	Fighting	Misc	Platform	Puzzle	Racing	Role-Playing	Shooter	Simulation	Sports	Strategy	Grand Total	
2000	150000	25000	71250	63333.3333	25000	95000	35294.1176	170666.667	7142.85714	98333.3333	11481.4815	114000	67807.0175	
2001	127272.7273	21000	251250	5000	108571.429	57142.8571	71200	241764.706	22083.3333	177692.308	21714.2857	190000	82172.2846	
2002	39775.2809	84347.8261	50312.5	48421.0526	63777.7778	5000	2058.82353	186818.182	12666.6667	1666.66667	11800	29166.6667	33837.4291	
2003	34711.53846	10000	45555.5556	60434.7826	11607.1429	0	9041.09589	193076.923	3620.68966	34000	17386.3636	20769.2308	30575.8157	
2004	42452.83019	22857.1429	28125	18750	58444.4444	67142.8571	41250	179250	5238.09524	0	29480.5195	44761.9048	44241.2451	
2005	30066.66667	29444.4444	50000	124339.623	15254.2373	270000	76140.3509	146279.07	7236.84211	272916.667	19325.8427	11875	61892.7445	
2006	26178.86179	38400	31875	180357.143	195434.783	120000	8225.80645	166166.667	22807.0175	39500	67157.8947	1428.57143	67495.9612	
2007	26375.83893	49354.8387	60000	87377.0492	85000	76176.4706	14166.6667	157254.902	18513.5135	35614.0351	57570.0935	13636.3636	50849.8584	
2008	22967.74194	4651.16279	160000	29069.7674	43658.5366	32500	97380.9524	239836.066	10877.193	36857.1429	13095.2381	3500	48835.9788	
2009	27624.30939	16818.1818	43142.8571	3564.35644	197500	34444.4444	3333.33333	236938.776	16166.6667	2560.97561	66601.9417	2413.7931	42053.2319	
2010	28376.62338	12758.6207	20952.381	39871.7949	114000	30625	28611.1111	178085.106	30545.4545	4285.71429	17876.1062	1875	38867.6236	
2011	34230.76923	26000	38709.6774	10315.7895	127777.778	5000	72093.0233	135517.241	36142.8571	9310.34483	11285.7143	4166.66667	37407.4074	
2012	46666.66667	10000	71578.9474	79047.619	475000	0	4761.90476	153548.387	60000	532000	37179.4872	0	82577.6398	
2013	75164.83516	88571.4286	80000	144166.667	46000	83333.3333	38571.4286	130370.37	37804.878	2857.14286	12777.7778	24166.6667	62288.7324	
2014	33490.56604	8888.88889	56666.6667	35625	140000	95000	72631.5789	121777.778	23478.2609	135000	18292.6829	0	49482.2006	
2015	42450.98039	5000	42307.6923	33333.3333	150000	35000	15000	136785.714	97619.0476	233333.333	14047.619	2500	58373.0159	
2016	15303.0303	4000	60000	13750	5384.61538	0	0	66190.4762	27368.4211	0	10967.7419	0	20575.2212	
Grand Total	36342.10526	27234.7267	58571.4286	47395.8333	84140.7867	74210.5263	34100.295	171192.81	22587.2443	53991.1308	28044.4785	17580.6452	49458.0181	

Role-playing game has been historically popular in Japan market

Average of na_sak Column Lab-T			Average of eu Column Lab-T			Average of jp Column Lab-T		
Row Labels	Role-Playing	Grand Total	Row Labels	Role-Playing	Grand Total	Row Labels	Role-Playing	Grand Total
505 Games	54444.44444	54444.44444	505 Games	30000	30000	505 Games	21111.11111	21111.11111
Acclaim Entertainm	190000	190000	Acclaim Enterti	60000	60000	Acclaim Enterti	0	0
Activision	638333.3333	638333.3333	Activision	456111.1111	456111.1111	Activision	7222.222222	7222.222222
Atari	143478.2609	143478.2609	Atari	76086.95652	76086.95652	Atari	70434.78261	70434.78261
Atlus	134705.8824	134705.8824	Atlus	24117.64706	24117.64706	Atlus	140588.2353	140588.2353
Bethesda Softwork	1625000	1625000	Bethesda Softv	1201875	1201875	Bethesda Softv	56250	56250
Capcom	197692.3077	197692.3077	Capcom	147692.3077	147692.3077	Capcom	656923.0769	656923.0769
Crave Entertainme	300000	300000	Crave Entertain	200000	200000	Crave Entertain	300000	300000
D3Publisher	250000	250000	D3Publisher	0	0	D3Publisher	0	0
Deep Silver	57857.14286	57857.14286	Deep Silver	90000	90000	Deep Silver	11428.57143	11428.57143
Disney Interactive !	393333.3333	393333.3333	Disney Interact	50000	50000	Disney Interact	0	0
Eidos Interactive	121428.5714	121428.5714	Eidos Interacti	27142.85714	27142.85714	Eidos Interacti	0	0
Electronic Arts	619629.6296	619629.6296	Electronic Arts	387037.037	387037.037	Electronic Arts	95925.92593	95925.92593
Focus Home Intera	51000	51000	Focus Home In	44000	44000	Focus Home In	0	0
Idea Factory	40000	40000	Idea Factory	1428.571429	1428.571429	Idea Factory	10000	10000
Ignition Entertainm	85000	85000	Ignition Entert	15000	15000	Ignition Entert	25000	25000
Konami Digital Ente	79090.90909	79090.90909	Konami Digital	33636.36364	33636.36364	Konami Digital	105454.5455	105454.5455
LucasArts	10000	10000	LucasArts	100000	100000	LucasArts	0	0
Majesco Entertainn	45000	45000	Majesco Entert	0	0	Majesco Entert	0	0
Marvelous Interact	111428.5714	111428.5714	Marvelous Inte	10000	10000	Marvelous Inte	47142.85714	47142.85714
Microsoft Game Sti	836666.6667	836666.6667	Microsoft Gam	350000	350000	Microsoft Gam	38666.66667	38666.66667
Midway Games	137500	137500	Midway Game	87500	87500	Midway Game	25000	25000
Namco Bandai Garr	202363.6364	202363.6364	Namco Bandai	151818.1818	151818.1818	Namco Bandai	173454.5455	173454.5455
Ninti	567400	567400	Ninti	248400	248400	Ninti	542200	542200
Nippon Ichi Softwa	66304.34783	66304.34783	Nippon Ichi Sof	20217.3913	20217.3913	Nippon Ichi Sof	67391.30435	67391.30435
Rising Star Games	141304.3478	141304.3478	Rising Star Gan	30434.78261	30434.78261	Rising Star Gan	50869.56522	50869.56522
Sega	116333.3333	116333.3333	Sega	59000	59000	Sega	126000	126000
Sony Computer Ent	493000	493000	Sony Compute	246500	246500	Sony Compute	328000	328000
Square Enix	332470.5882	332470.5882	Square Enix	142705.8824	142705.8824	Square Enix	364000	364000
Take-Two Interacti	986666.6667	986666.6667	Take-Two Inte	416666.6667	416666.6667	Take-Two Inte	43333.33333	43333.33333
Tecmo Koei	88260.86957	88260.86957	Tecmo Koei	40434.78261	40434.78261	Tecmo Koei	47826.08696	47826.08696
THQ	86666.66667	86666.66667	THQ	61666.66667	61666.66667	THQ	0	0
Ubisoft	254705.8824	254705.8824	Ubisoft	106764.7059	106764.7059	Ubisoft	54117.64706	54117.64706
Unknown	161250	161250	Unknown	55000	55000	Unknown	32500	32500
Vivendi Games	1030000	1030000	Vivendi Games	20000	20000	Vivendi Games	0	0
Grand Total	323366.0131	323366.0131	Grand Total	174509.8039	174509.8039	Grand Total	171192.8105	171192.8105
1625000			1201875			656923.0769		



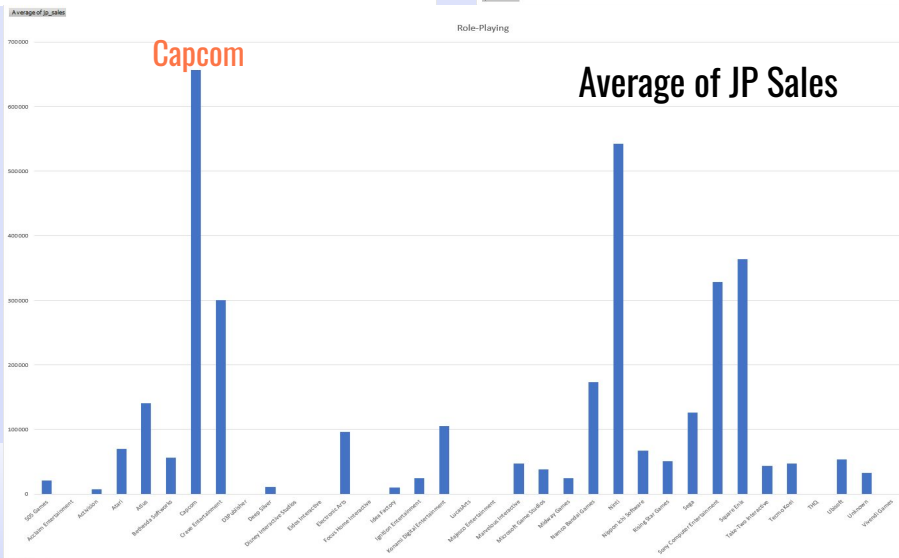
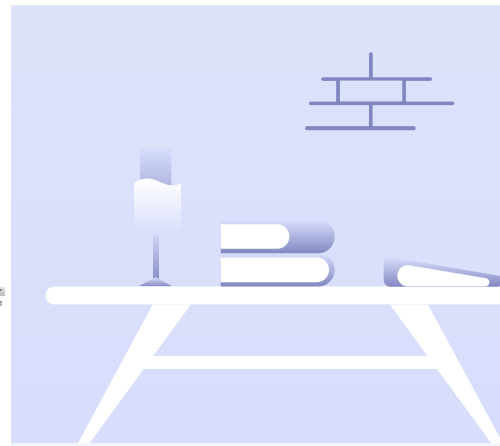
The Biggest Competitor:

NA: Bethesda Softwork

EU: Bethesda Softwork


JP: Capcom





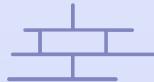


Conclusion:

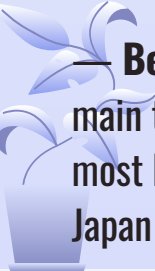



—**Role-playing games** have been historically popular in **Japan market**, while NA and EU markets prefer **Shooter games** in general

—In current trend, we recommend ER Game to efficiently advertise RPG genre to Japan (Asian), but in future ER Game can incorporate more genres, especially shooter, in a game and target such game at NA and EU markets



— Among different ratings, “M” (appropriate for adults only) type is the most popular in all three regions. In future ER Game should devise their games not only based on the genre of RPG but also consider add some elements that can be attractive to mature adults players.



— **Bethesda Softworks** is a great competitor in NA and EU markets, but since right now ER Game’s main target market is Japan, it would primarily compete with **Capcom**. Luckily, Capcom didn’t have the most high scale of sales to monopolize the Japanese market, so ER Game still have a chance to enter the Japan market.

THANKS!

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