WEEKLY COHORT ANALYSIS FOR 12 WEEKS

Dataset : 2020-11-01 - 2021-01-31

User_pseudo_Id are grouped by their first interaction week into cohorts. Then their average purchase revenue is calculated.

The dataset is too small to get significant insights

	cohort_week	week_00	week_01	week_02	week_03	week_04	week_05	week_06	week_07	week_08	week_09	week_10	week_11	week_12
	2020-11-01	0,938	0,326	0,267	0,262	0,160	0,153	0,165	0,025	0,008	**0,014**	0,023	0,015	0,018
	2020-11-08	1,192	0,381	0,281	0,229	0,277	0,104	0,039	0,069		0,012	0,035	0,021	
	2020-11-15	1,382	0,297	0,219	0,228	0,167	0,026	0,029	**0,022**	0,021	0,006	0,004		
Balck Friday	2020-11-22	1,647	0,236	0,225	0,119	0,037	0,013	**0,006**	0,011	0,035	0,004			
	2020-11-29	1,319	0,363	0,243	0,048	0,012	**0,022**	0,006	0,012	0,005				
	2020-12-06	1,203	0,329	0,081	0,034	**0,021**	0,027	0,024	0,002					
	2020-12-13	1,008	0,108	0,040	**0,030**	0,041	0,030	0,000						
Christmas	2020-12-20	0,369	0,054	**0,021**	0,023	0,018	0,008							
Christmas	2020-12-27	0,339	**0,051**	0,005	0,020	0,006								
Christmas	2021-01-03	**0,228**	0,064	0,027	0,005									
	2021-01-10	0,399	0,059	0,012										
???	2021-01-17	0,903	0,122											
	2021-01-24	0,192												
	Column average	0,855	0,199	0,129	0,100	0,082	0,048	0,039	0,024	0,017	**0,009**	0,021	0,018	0,018

The biggest Average revenue per client is achieved in THe Black Friday week (2020-11-22 cohort). But this cohort does not show any better results in long term: it reaches the plateau phase in week_05 already. As the average plateau phase is reached in week_07.

At the beginning of and during Christmas and New Year period - Average revenue drops to 0,334$ (from previuosly held 1,241$). This period cohort users do not spend much and reaches significant drop very fast - in two or three week time.

I have maked diagonally the Christmas time weeks. It is significant that festive time gives bigger drop in revenue through all the cohorts. So our sales is sensitive to festive seasons. dataset is very small we can not derive very strong conclusions about this topic, but it looks like it is sensitive. I would recommend to look into the data of longer period - to compare other festive seasons, as well as the last and previuos years the same periods.

As for the all 12 week period on all of our cohorts: the plateau phase is reached by the week_07 (0.024$) , and the biggest drop is achieved in week_09 (0.009$), which is followed by slight rise afterwards.

What was done differently for the 2021-01-17 cohorts? It differs in its average revenue amount from the cohorts before and after. What marketing actions were taken?

What happened to 2020-11-08 cohorts week_08 data? Why is it missing?

CUMULATIVE Average Revenue

cohort_week	week_00	week_01	week_02	week_03	week_04	week_05	week_06	week_07	week_08	week_09	week_10	week_11	week_12
2020-11-01	0,938	1,264	1,532	1,793	1,953	2,106	2,272	2,297	2,305	2,318	2,341	2,356	2,375
2020-11-08	1,192	1,573	1,854	2,084	2,360	2,465	2,504	2,574	2,574	2,586	2,621	2,642	
2020-11-15	1,382	1,679	1,897	2,125	2,292	2,318	2,346	2,368	2,389	2,396	2,400		
2020-11-22	1,647	1,883	2,108	2,228	2,265	2,278	2,285	2,295	2,330	2,333			
2020-11-29	1,319	1,683	1,926	1,974	1,987	2,009	2,015	2,027	2,032				
2020-12-06	1,203	1,532	1,613	1,648	1,669	1,696	1,720	1,722					
2020-12-13	1,008	1,116	1,156	1,186	1,227	1,257	1,258						
2020-12-20	0,369	0,423	0,443	0,467	0,485	0,493							
2020-12-27	0,339	0,390	0,394	0,415	0,421								
2021-01-03	0,228	0,293	0,320	0,325									
2021-01-10	0,399	0,458	0,470										
2021-01-17	0,903	1,025											
2021-01-24	0,192												
Cumulative column average	0,855	1,055	1,184	1,284	1,366	1,414	1,453	1,476	1,493	1,502	1,523	1,541	1,559
Cumulative growth		23,29%	12,26%	8,44%	6,39%	3,51%	2,74%	1,62%	1,16%	0,60%	1,40%	1,16%	1,18%

Cohorts till and including the Black Friday week generate bigger Cumulative value, as they begin with bigger initial moneatry value.

Balck Friday week (2020-11-22) is not the best in terms of Cumulative value, although it starts with the best starting figure.

Christmas festive season cohorts show low Cumulative value.

The lowest Cumulative growth is seen in the week_09

PREDICTIVE Average Revenue

cohort_week	week_00	week_01	week_02	week_03	week_04	week_05	week_06	week_07	week_08	week_09	week_10	week_11	week_12
2020-11-01													2,375
2020-11-08												2,642	*2,673*
2020-11-15											2,400	*2,428*	*2,457*
2020-11-22										2,333	*2,366*	*2,394*	*2,422*
2020-11-29									2,032	*2,044*	*2,073*	*2,097*	*2,122*
2020-12-06								1,722	*1,742*	*1,753*	*1,777*	*1,798*	*1,819*
2020-12-13							1,258	*1,278*	*1,293*	*1,301*	*1,319*	*1,334*	*1,350*
2020-12-20						0,493	*0,506*	*0,515*	*0,520*	*0,524*	*0,531*	*0,537*	*0,543*
2020-12-27					0,421	*0,436*	*0,448*	*0,455*	*0,460*	*0,463*	*0,469*	*0,475*	*0,480*
2021-01-03				0,325	*0,346*	*0,358*	*0,367*	*0,373*	*0,378*	*0,380*	*0,385*	*0,390*	*0,394*
2021-01-10			0,470	*0,510*	*0,543*	*0,562*	*0,577*	*0,586*	*0,593*	*0,597*	*0,605*	*0,612*	*0,619*
2021-01-17		1,025	*1,151*	*1,248*	*1,328*	*1,374*	*1,412*	*1,435*	*1,452*	*1,460*	*1,481*	*1,498*	*1,516*
2021-01-24	0,192	*0,237*	*0,266*	*0,288*	*0,307*	*0,318*	*0,326*	*0,332*	*0,335*	*0,337*	*0,342*	*0,346*	*0,350*
											AVERAGE LTV		1,471

As we calculate our predictive revenue based on small historical dataset, our received prediction is not really reliable as it lacks proofing with the historical data.

Customer Acquisition Cost CAC is 2$. From predicted table we weee the average Customer Lifetime Value CLV is equal to 1.471$. The CLV and CAC relationship is 0.7355. It is too low and the company does not do good job to acquire the right audience. THe right relationship to strive for is 3:1.

When we divide our cohorts into 2 parts: till 2020-12-13 and from 2020-12-20 we get different average CLV: 2.174$ and 0.651$. We see big differences and the results would call for quite different actions. In the first situation company's effort would be considered quite plausible. The second situation is more than alarming.

For more resons and actions to make to improve the situation you can find in the next sheet.