

# FIGURES

Figure 1: Distribution of selected quantities in the Impressionist art dataset.

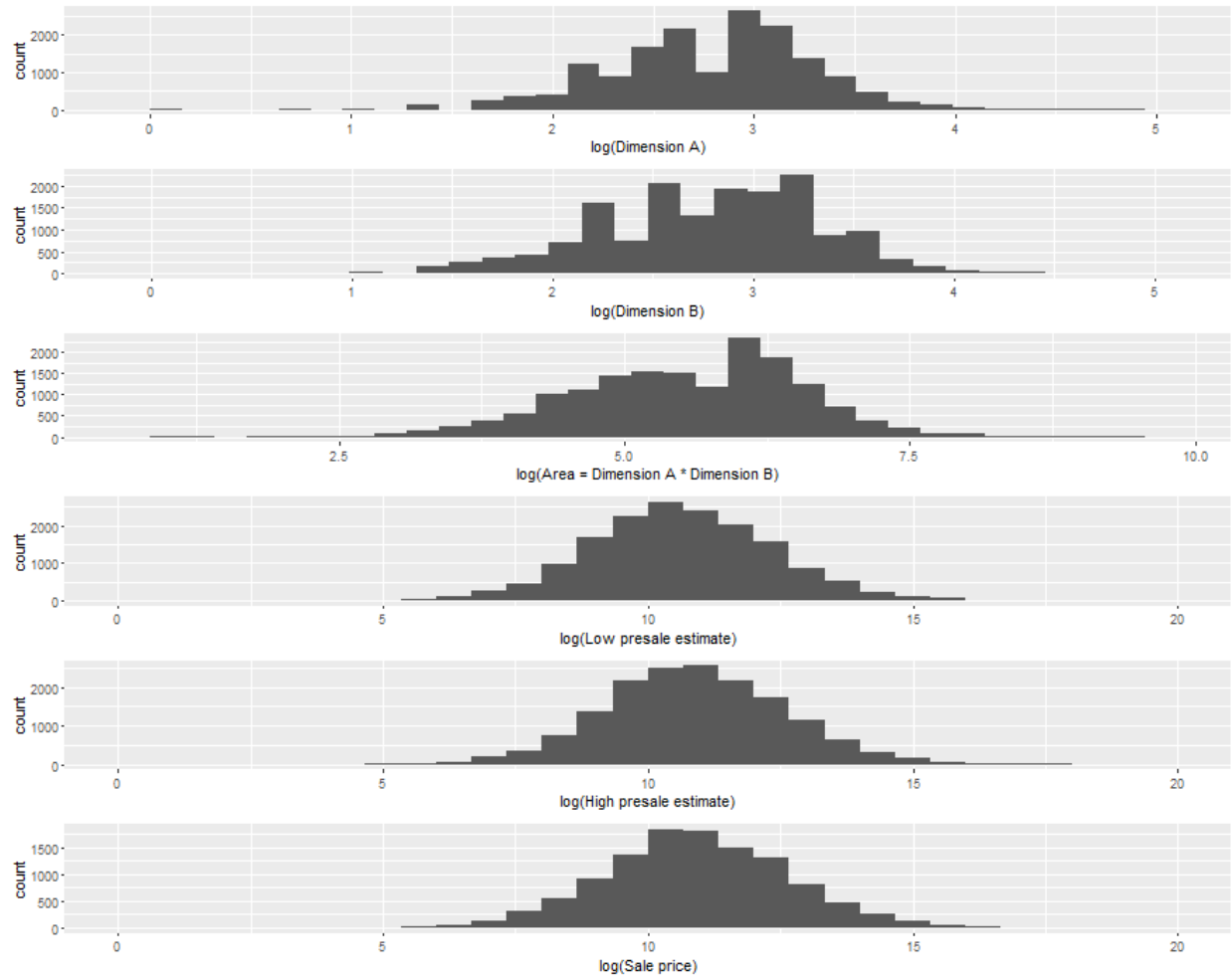


Figure 2: Comparison of painting dimensions, Impressionist art.

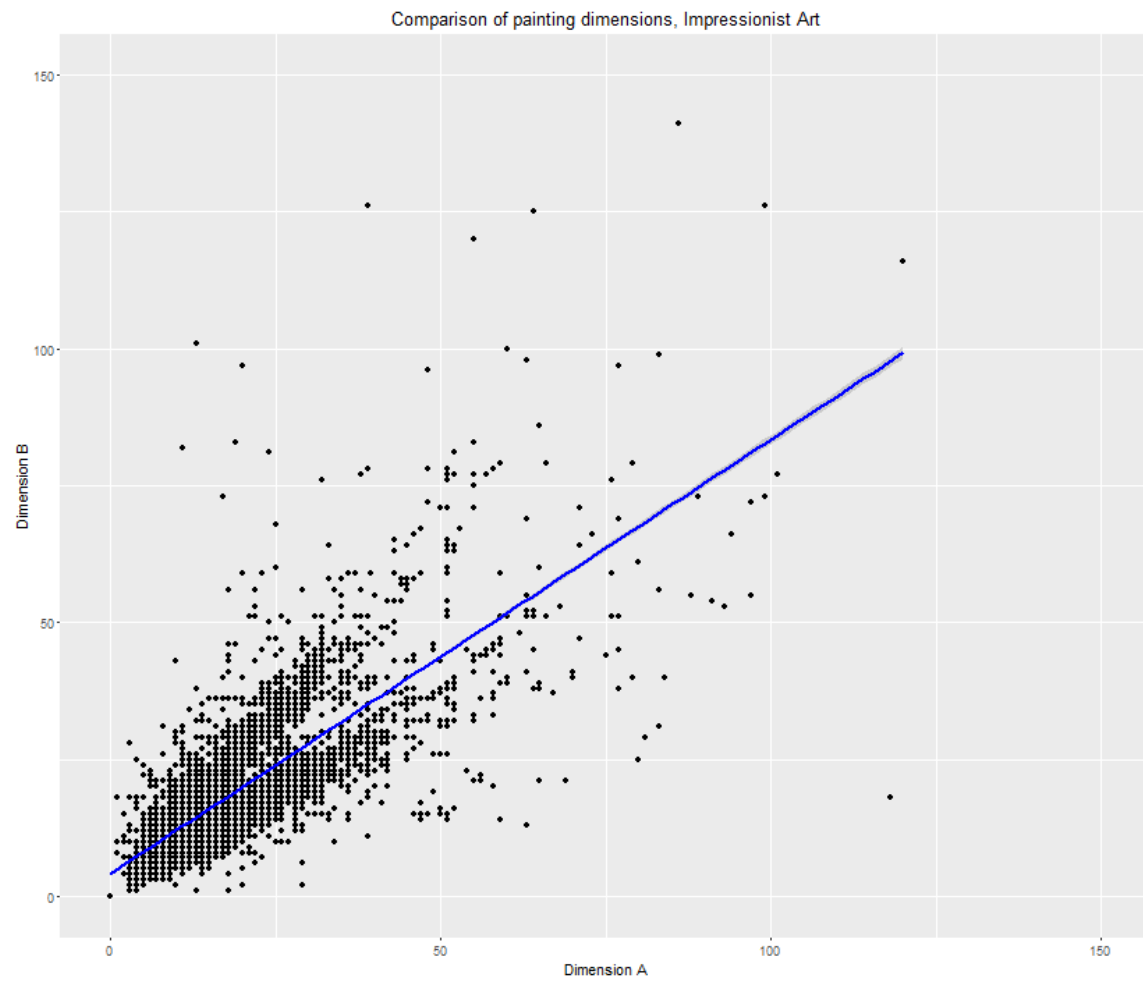


Figure 3: Impressionist art, auction sales over time.

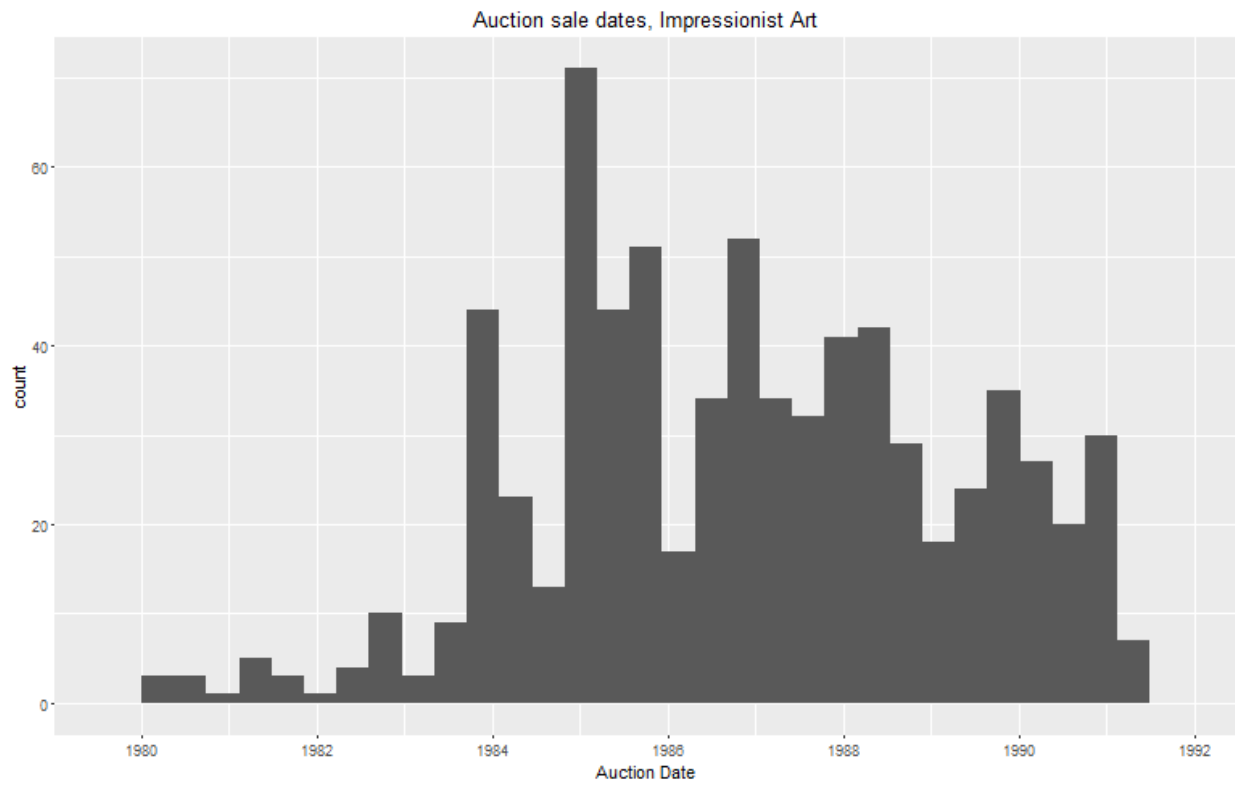


Figure 4: Distribution of selected quantities in the Contemporary art dataset.

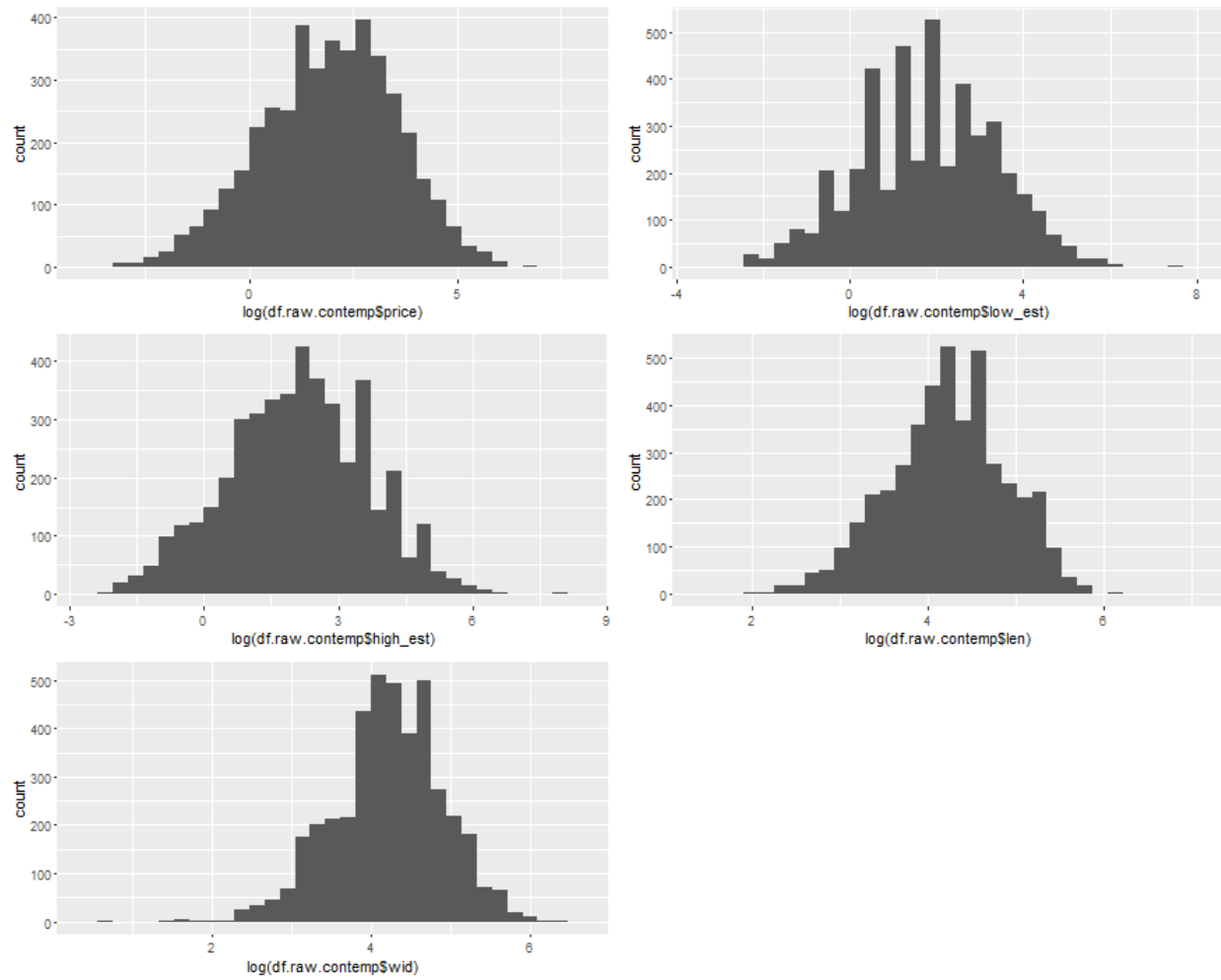


Figure 5: Auction sales over time, Contemporary art.

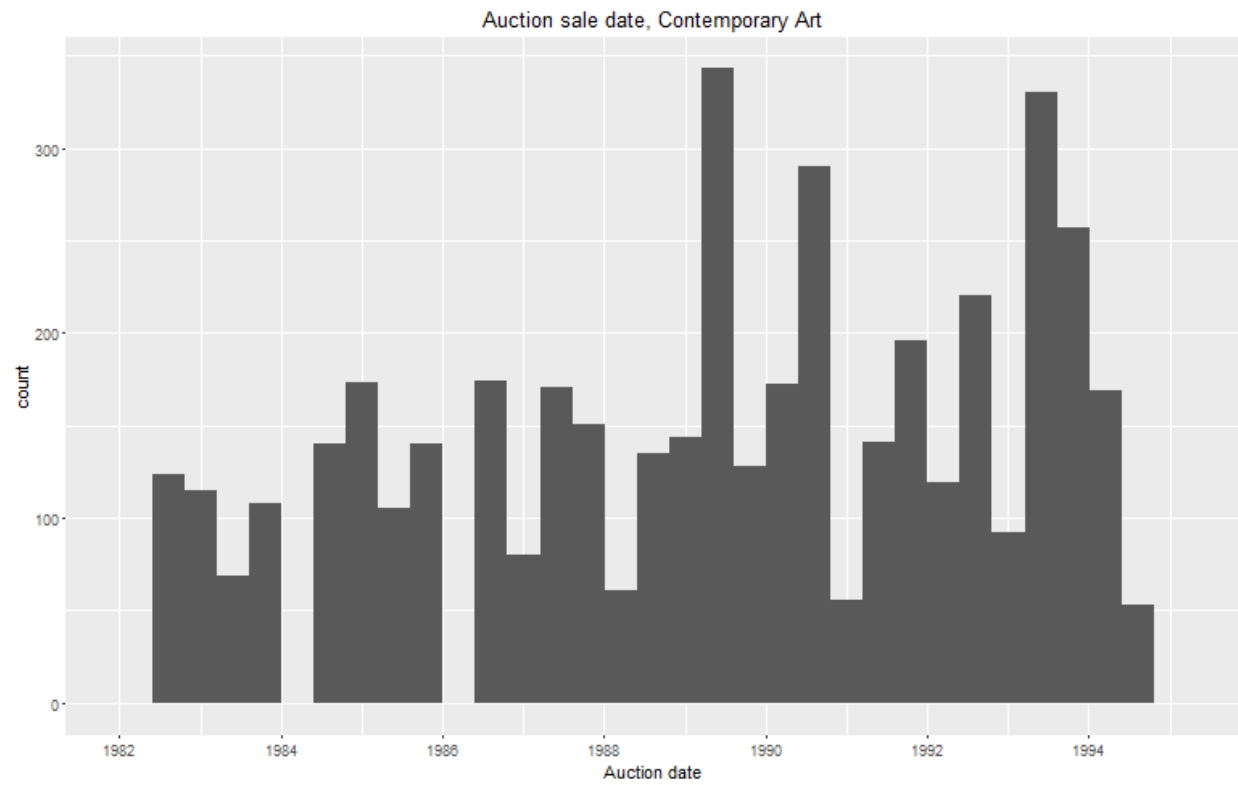


Figure 6: Comparison of log prices, Impressionist and Contemporary art.

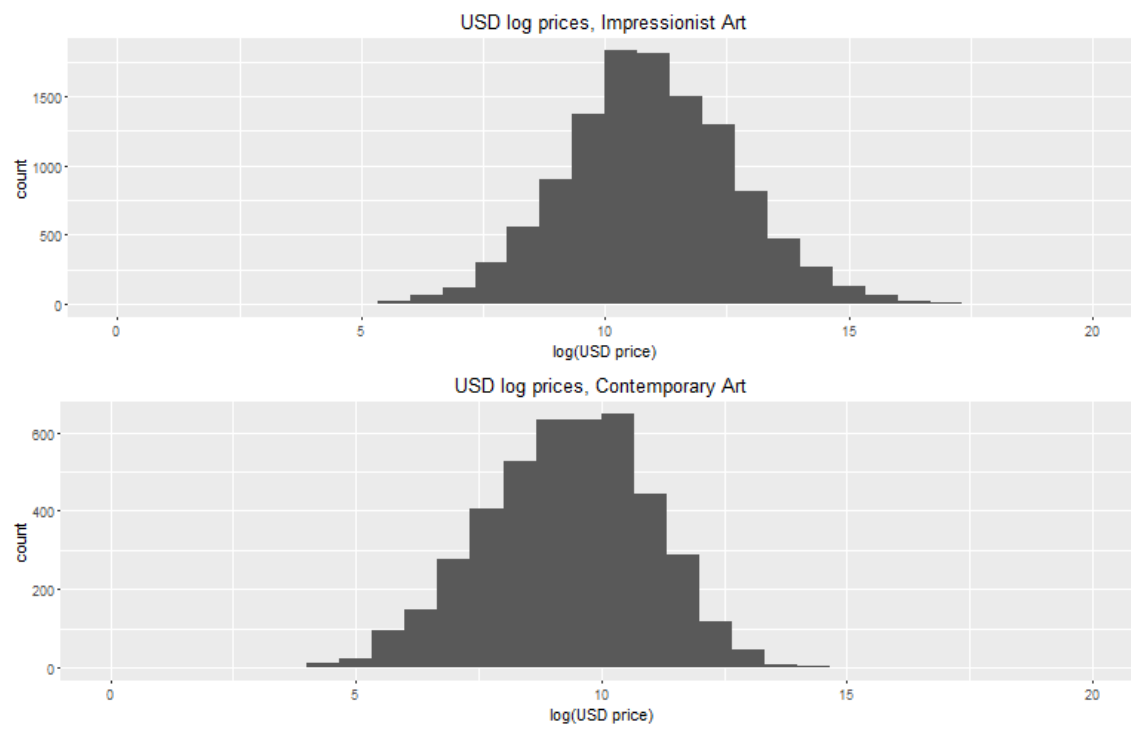


Figure 7: Comparison of log area, Impressionist and Contemporary art.

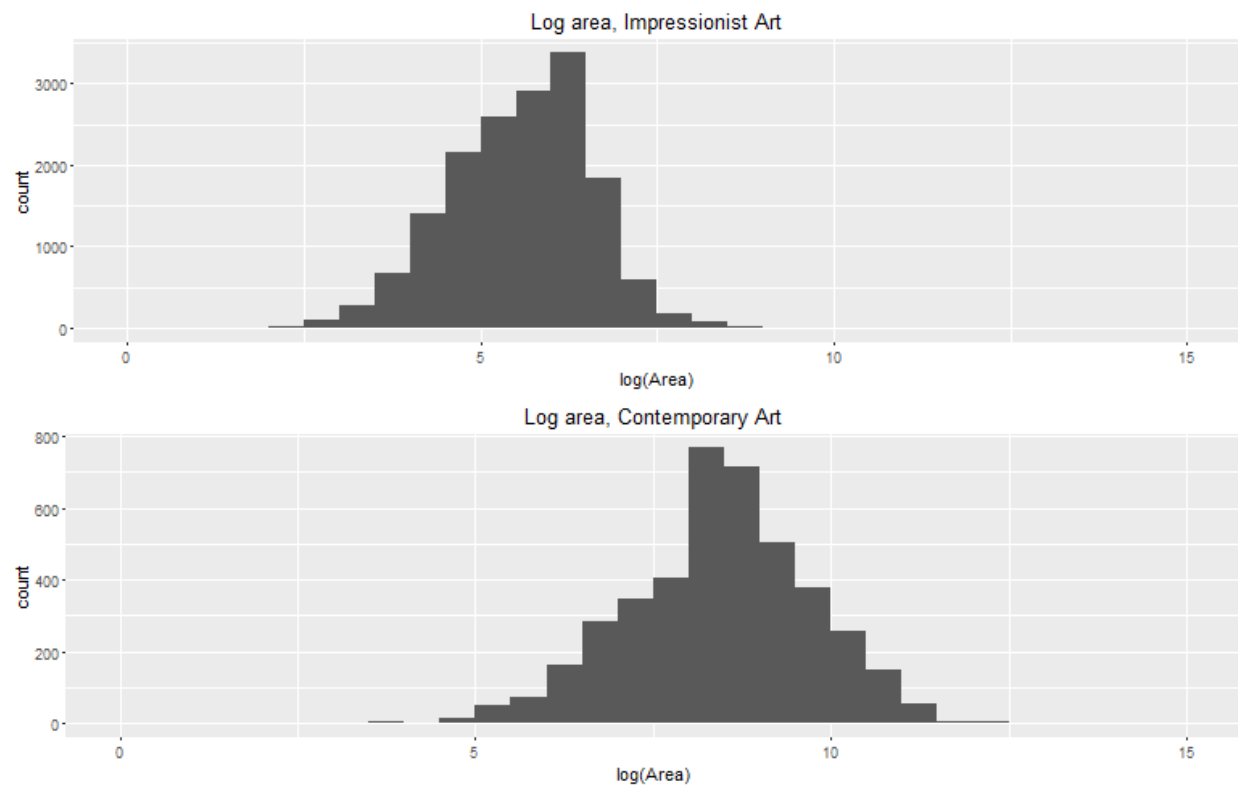
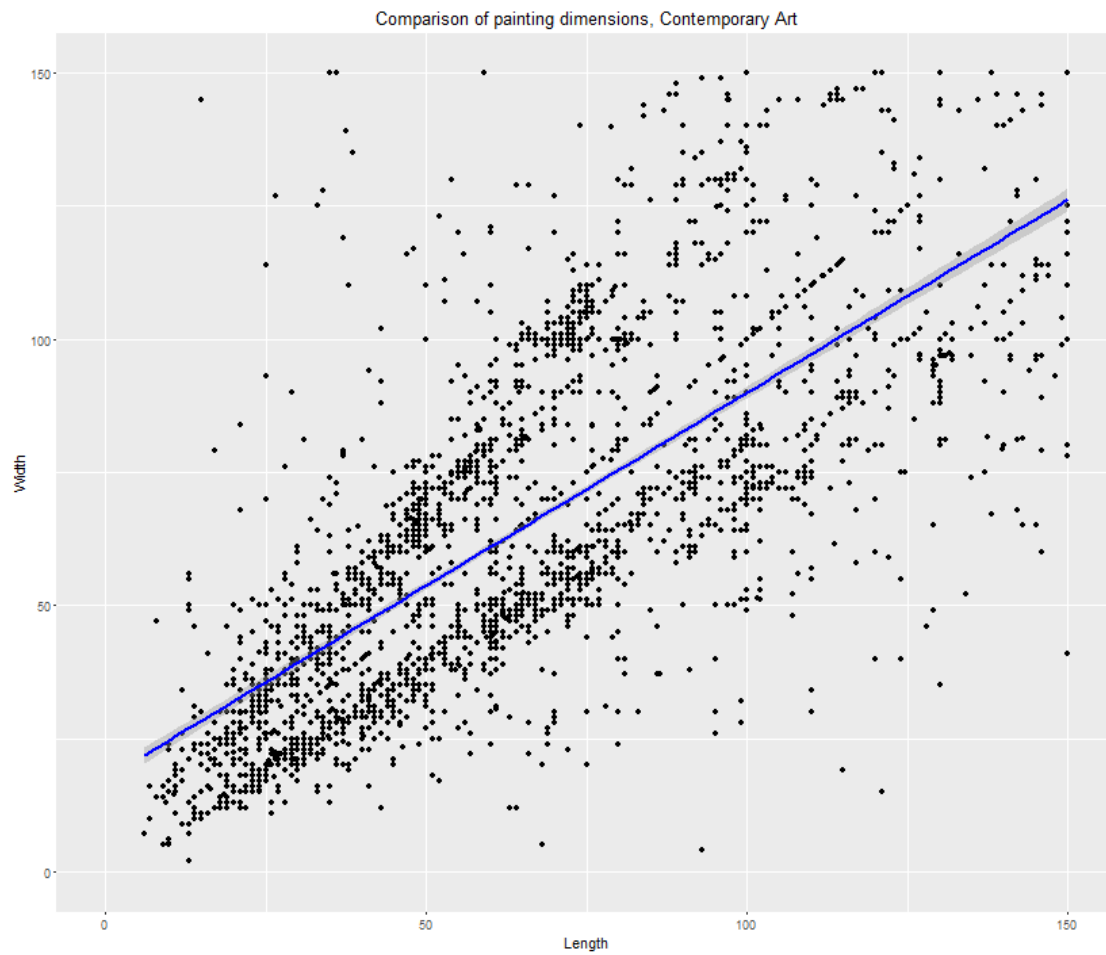
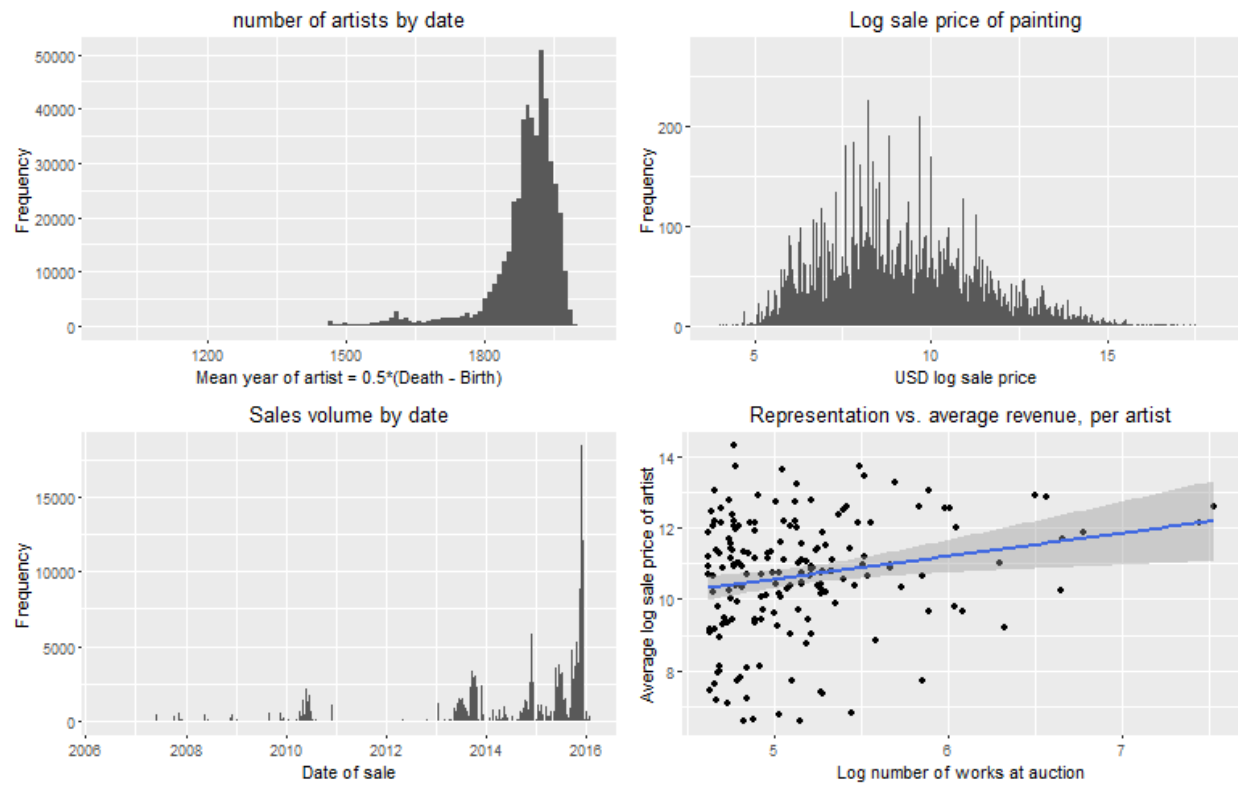


Figure 8: Comparison of painting dimensions, Contemporary art.





Figures 9-12: Plots for recent assorted art dataset.



# TABLES

## SUMMARY STATISTICS

Table 1: Impressionist art, summary statistics for continuous features.

DIM_A		LOW_EST	HIGH_EST
Min. :	0.00	Min. : 102	Min. : 128
1st Qu. :	11.00	1st Qu. : 14000	1st Qu. : 18000
Median :	17.00	Median : 40000	Median : 50000
Mean :	18.31	Mean : 196023	Mean : 257967
3rd Qu. :	23.00	3rd Qu. : 132800	3rd Qu. : 168300
Max. :	120.00	Max. : 40000000	Max. : 50000000
		NA's : 37	
S_PRICE		CNV_RATE	DATE_PTG
Min. :	126	Min. : 0.0000	Min. : 1823
1st Qu. :	18700	1st Qu. : 0.0000	1st Qu. : 1902
Median :	53856	Median : 1.2400	Median : 1922
Mean :	285428	Mean : 0.8639	Mean : 1921
3rd Qu. :	176000	3rd Qu. : 1.6800	3rd Qu. : 1938
Max. :	82500000	Max. : 2.3610	Max. : 1983
NA's :	4696		NA's : 3950
DATE_FLG		DIM_B	DIAM
Min. :	0.0000	Min. : 0.00	Min. : 1.00
1st Qu. :	0.0000	1st Qu. : 11.00	1st Qu. : 6.75
Median :	0.0000	Median : 18.00	Median : 11.50
Mean :	0.3538	Mean : 18.69	Mean : 15.10
3rd Qu. :	1.0000	3rd Qu. : 24.00	3rd Qu. : 24.50
Max. :	1.0000	Max. : 141.00	Max. : 36.00
NA's :	37	NA's : 16243	
		PND_FLG	
		Min. :	0.0000
		1st Qu. :	0.0000
		Median :	1.0000
		Mean :	0.5127
		3rd Qu. :	1.0000
		Max. :	2.0000
		NA's :	4

Table 2: Contemporary art, summary statistics.

Auction_date		mdate		ddate		ydate	
Min.	:1982-06-29	Min.	: 2.000	Min.	: 1.00	Min.	:1982
1st Qu.:	:1986-06-26	1st Qu.:	: 6.000	1st Qu.:	: 5.00	1st Qu.:	:1986
Median	:1989-06-29	Median	: 6.000	Median	:22.00	Median	:1989
Mean	:1989-05-15	Mean	: 7.831	Mean	:17.07	Mean	:1989
3rd Qu.:	:1992-07-02	3rd Qu.:	:12.000	3rd Qu.:	:26.00	3rd Qu.:	:1992
Max.	:1994-06-30	Max.	:12.000	Max.	:30.00	Max.	:1994
lot		sold		price		low_est	
Min.	: 1.0	Min.	:0.0000	Min.	: 0.00	Min.	: 0.05
1st Qu.:	: 87.0	1st Qu.:	:1.0000	1st Qu.:	: 1.90	1st Qu.:	: 2.00
Median	: 423.0	Median	:1.0000	Median	: 7.00	Median	: 6.00
Mean	: 397.7	Mean	:0.7745	Mean	: 21.23	Mean	: 19.53
3rd Qu.:	: 601.0	3rd Qu.:	:1.0000	3rd Qu.:	: 20.00	3rd Qu.:	: 20.00
Max.	:1164.0	Max.	:1.0000	Max.	:1700.00	Max.	:1800.00
		NA's :2		NA's :45			
high_est		date_ptg		len		wid	
Min.	: 0.1	Min.	:26.00	Min.	: 5.40	Min.	: 2.00
1st Qu.:	: 3.0	1st Qu.:	:60.00	1st Qu.:	:44.50	1st Qu.:	: 46.00
Median	: 8.0	Median	:67.00	Median	: 70.00	Median	: 70.00
Mean	: 26.1	Mean	:68.24	Mean	: 84.53	Mean	: 84.71
3rd Qu.:	: 25.0	3rd Qu.:	:77.00	3rd Qu.:	:105.00	3rd Qu.:	:105.00
Max.	:2600.0	Max.	:91.00	Max.	:957.00	Max.	:602.00
NA's :45		NA's :449		NA's :73		NA's :293	
artist		medium		CNV_RATE		ukcpi	
Length:4456		Length:4456		Min. :1.210		Min. :239.6	
Class :character		Class :character		1st Qu.:1.482		1st Qu.:286.4	
Mode :character		Mode :character		Median :1.610		Median :339.3	
		Mean :1.609		Mean :342.9			
		3rd Qu.:1.722		3rd Qu.:407.1			
		Max. :1.954		Max. :423.0			
ukinf		uktb		uscpi		usinf	
Min.	: 1.270	Min.	: 4.900	Min.	:181.6	Min.	:1.280
1st Qu.:	: 3.050	1st Qu.:	: 8.800	1st Qu.:	:204.1	1st Qu.:	:3.050
Median	: 4.710	Median	: 9.630	Median	:231.7	Median	:3.920
Mean	: 5.061	Mean	: 9.832	Mean	:232.7	Mean	:3.848
3rd Qu.:	: 6.520	3rd Qu.:	:11.990	3rd Qu.:	:261.9	3rd Qu.:	:4.600
Max.	:10.430	Max.	:14.540	Max.	:276.8	Max.	:6.220
ustb		japcpi		dj		ftse	
Min.	: 2.970	Min.	:149.3	Min.	: 812.2	Min.	: 736.2
1st Qu.:	: 3.990	1st Qu.:	:160.6	1st Qu.:	:1776.5	1st Qu.:	:1588.4
Median	: 6.990	Median	:168.2	Median	:2458.3	Median	:2182.0
Mean	: 6.157	Mean	:169.9	Mean	:2438.5	Mean	:2078.3
3rd Qu.:	: 7.760	3rd Qu.:	:182.3	3rd Qu.:	:3174.7	3rd Qu.:	:2546.6
Max.	:10.320	Max.	:185.4	Max.	:3753.5	Max.	:3223.9

Table 3: Assorted art, summary statistics.

height		width		area.inches		artist.startdate	
Min. :	0	Min. :	0	Min. :	0.000e+00	Min. :	1000
1st Qu.:	12	1st Qu.:	12	1st Qu.:	1.520e+02	1st Qu.:	1869
Median :	19	Median :	20	Median :	3.920e+02	Median :	1904
Mean :	64	Mean :	78	Mean :	2.270e+08	Mean :	1886
3rd Qu.:	29	3rd Qu.:	29	3rd Qu.:	8.160e+02	3rd Qu.:	1932
Max. :	7700281	Max. :	10197670	Max. :	7.852e+13	Max. :	2015
NA's :	4000	NA's :	31325	NA's :	86729	NA's :	19411

artist.enddate		lot.number		sale.date		usd.sale.price	
Min. :	1016	Min. :	0	Min. :	2006-06-09	Min. :	1
1st Qu.:	1930	1st Qu.:	81	1st Qu.:	2013-10-15	1st Qu.:	905
Median :	1956	Median :	205	Median :	2015-06-02	Median :	3009
Mean :	1941	Mean :	1195	Mean :	2014-08-27	Mean :	50275
3rd Qu.:	1983	3rd Qu.:	599	3rd Qu.:	2015-11-11	3rd Qu.:	12188
Max. :	2015	Max. :	221186	Max. :	2016-02-04	Max. :	70530000
NA's :	19411	NA's :	275	NA's :	275	NA's :	209591

## HEDONIC REGRESSION

Table 4: Hedonic predictions, Impressionist Art (London). Half-year time dummies omitted for brevity.

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	10.667134	6.703545	1.591	0.112783
DATE_PTG	-0.002122	0.003513	-0.604	0.546317
DIM_A	0.026975	0.007665	3.519	0.000512 ***
DIM_B	0.016575	0.006388	2.595	0.010018 *
SIGNED1	0.266633	0.350862	0.760	0.447990
SIGNED2	-0.064880	0.434096	-0.149	0.881308
SIGNED3	-0.429974	0.413009	-1.041	0.298822
ART_MED6	1.779714	0.677907	2.625	0.009178 **
ART_MED9	0.348789	0.684150	0.510	0.610622
ART_MED12	2.270866	0.674249	3.368	0.000874 ***
ART_MED15	1.473253	0.698082	2.110	0.035791 *
ART_MED18	2.952254	0.642515	4.595	6.80e-06 ***
ART_MED24	1.457382	0.771532	1.889	0.060030 .
ART_MED27	1.093956	0.661039	1.655	0.099170 .
ART_MED30	0.490681	0.658584	0.745	0.456923
ART_MED33	1.278982	0.846104	1.512	0.131866
ART_MED39	1.767484	0.660349	2.677	0.007918 **
R^2:				0.8664
Adjusted R^2:				0.8251
F-statistic:	21.01 on 79 and 256 DF,			p-value: < 2.2e-16

Table 5: Hedonic predictions, Impressionist Art (NYC). Half-year time dummies omitted for brevity.

	Estimate	Std. Error	t value	Pr(> t )	
(Intercept)	20.536155	5.799675	3.541	0.000458	***
DATE_PTG	-0.006033	0.002998	-2.013	0.044995	*
DIM_A	0.040589	0.007452	5.447	1.03e-07	***
DIM_B	0.012602	0.007114	1.771	0.077433	.
SIGNED1	1.059125	0.156739	6.757	6.69e-11	***
SIGNED2	0.301338	0.245387	1.228	0.220348	
SIGNED3	0.203128	0.217131	0.936	0.350234	
ART_MED6	-0.364772	0.687000	-0.531	0.595814	
ART_MED9	-0.060186	0.642117	-0.094	0.925382	
ART_MED12	1.014323	0.618434	1.640	0.101960	
ART_MED15	-0.131242	0.665053	-0.197	0.843687	
ART_MED18	1.248101	0.615153	2.029	0.043296	*
ART_MED21	0.773179	0.877041	0.882	0.378669	
ART_MED24	0.361094	0.661262	0.546	0.585401	
ART_MED27	-0.342484	0.656519	-0.522	0.602264	
ART_MED30	-0.075431	0.646362	-0.117	0.907170	
ART_MED38	-0.404069	0.807695	-0.500	0.617227	
ART_MED39	0.645365	0.630585	1.023	0.306876	
R <sup>2</sup> :				0.8377	
Adjusted R <sup>2</sup> :				0.8	
F-statistic:	22.24	on 74 and 319 DF,	p-value:	< 2.2e-16	

Table 6: Hedonic predictions, Contemporary Art. Half-year time dummies omitted for brevity.

	Estimate	Std. Error	t value	Pr(> t )	
(Intercept)	-1.54229	1.91849	-0.804	0.422029	
log(date_ptg)	-0.67160	0.42660	-1.574	0.116371	
log(len)	0.59158	0.11574	5.111	5.42e-07	***
log(wid)	0.61585	0.11764	5.235	2.94e-07	***
mediuma	0.37892	0.36754	1.031	0.303314	
mediumbr	-1.00407	0.47045	-2.134	0.033555	*
mediumchk	-0.51240	0.50577	-1.013	0.311749	
mediumcol	-2.01051	0.54342	-3.700	0.000253	***
mediumcr	-0.85626	0.37571	-2.279	0.023304	*
mediumf	-1.19646	0.49004	-2.442	0.015148	*
mediumg	-0.92343	0.40669	-2.271	0.023817	*
mediumik	-0.66618	0.38336	-1.738	0.083193	.
mediumo	0.33903	0.31500	1.076	0.282582	
mediumpas	-0.76427	0.55061	-1.388	0.166063	
mediumpg	3.84267	0.64429	5.964	6.33e-09	***
mediumph	-2.97383	0.71974	-4.132	4.57e-05	***
mediumpl	1.43608	0.66003	2.176	0.030281	*
mediumpn	0.73305	0.79588	0.921	0.357696	
mediums	-0.30325	0.49084	-0.618	0.537122	
mediumsk	2.78109	0.57888	4.804	2.36e-06	***
mediumt	-0.77276	0.39024	-1.980	0.048510	*
mediumtp	0.25322	0.55431	0.457	0.648099	
mediumw	-0.41915	0.36663	-1.143	0.253758	
R <sup>2</sup>				0.9232	
Adjusted R <sup>2</sup>				0.8892	
F-statistic:	27.17	on 146 and 330 DF,	p-value:	< 2.2e-16	

Table 7: Hedonic predictions, assorted art. Half-year time dummies omitted for brevity. Artist and medium were omitted due to computational constraints.

	Estimate	Std. Error	t value	Pr(> t )	
(Intercept)	6.224144	0.018000	345.782	<2e-16	***
log(height)	0.614017	0.008031	76.454	<2e-16	***
log(width)	0.230060	0.008092	28.431	<2e-16	***
signed	-0.634735	0.008009	-79.255	<2e-16	***
monogrammed	-0.203214	0.022359	-9.089	<2e-16	***
stamped	0.086423	0.016030	5.391	7e-08	***
R <sup>2</sup>				0.1006	
Adjusted R <sup>2</sup>				0.1006	
F-statistic:	5907 on 5 and 264109 DF, p-value: < 2.2e-16				

## ANCHORING EFFECTS (REPLICATION)

Table 8: Replicated anchoring effects, Impressionist Art

	Estimate	Std. Error	t value	Pr(> t )	
(Intercept)	-0.338390	0.192857	-1.755	0.0802	.
curr_hed_pred	1.018156	0.019093	53.327	< 2e-16	***
anchoring	0.174402	0.072377	2.410	0.0165	*
past_control	0.503147	0.077019	6.533	2.29e-10	***
months_since_last_sale	0.007903	0.001873	4.219	3.13e-05	***
R <sup>2</sup>				0.9231	
Adjusted R <sup>2</sup>				0.9222	
F-statistic:	1047 on 4 and 349 DF, p-value: < 2.2e-16				

Table 9: Replicated anchoring effects, Contemporary Art

	Estimate	Std. Error	t value	Pr(> t )	
(Intercept)	-0.1152982	0.0499920	-2.306	0.0223	*
curr_hed_pred	1.0344742	0.0203640	50.799	<2e-16	***
anchoring	0.1312881	0.0740504	1.773	0.0780	.
past_control	0.1914626	0.0952936	2.009	0.0460	*
months_since_last_sale	-0.0009164	0.0026884	-0.341	0.7336	
R <sup>2</sup>				0.9407	
Adjusted R <sup>2</sup>				0.9394	
F-statistic:	698 on 4 and 176 DF, p-value: < 2.2e-16				

Table 10: Anchoring effects, assorted art (original regression from Beggs & Graddy (2009))

	Estimate	Std. Error	t value	Pr(> t )	
(Intercept)	-1.598781	0.096913	-16.497	<2e-16	***
log_hed_pred	1.147787	0.011706	98.054	<2e-16	***
anchoring	0.590709	0.011442	51.626	<2e-16	***
sub_price_hed_pred	-0.020331	0.012078	-1.683	0.0923	.
avg_mon_subdiff	-0.042259	0.004782	-8.837	<2e-16	***
R <sup>2</sup>				0.4144	
Adjusted R <sup>2</sup>				0.4144	
F-statistic:	3.046e+04 on 4 and 172189 DF, p-value: < 2.2e-16				

## ANCHORING CROSS-EFFECTS (Q1)

Table 11: Anchoring cross-effects( $Q_1$ ) for Impressionist art.

```
Call:
lm(formula = log_sale_price ~ log_hed_pred + anchoring + sub_price_hed_pred +
    substitute_measure + avg_months_since_sub_sale, data = df.anchor.sub.impress)

Residuals:
    Min       1Q   Median       3Q      Max
-5.2368 -0.4767  0.0007  0.4753  3.2939

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   -0.1049942   0.0673771   -1.558   0.1192
log_hed_pred    1.0203528   0.0120905   84.393 <2e-16 ***
anchoring       0.0342261   0.0141471    2.419   0.0156 *
sub_price_hed_pred 0.2836732   0.0211621   13.405 <2e-16 ***
substitute_measure 0.0084785   0.0041261    2.055   0.0399 *
avg_months_since_sub_sale -0.0006209   0.0006000   -1.035   0.3008
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.773 on 11608 degrees of freedom
Multiple R-squared:  0.7752,    Adjusted R-squared:  0.7751
F-statistic: 8004 on 5 and 11608 DF,  p-value: < 2.2e-16
```

Table 12: Anchoring cross-effects( $Q_1$ ) for Contemporary art.

```
Call:
lm(formula = log_sale_price ~ log_hed_pred + anchoring + sub_price_hed_pred +
    substitute_measure + avg_months_since_sub_sale, data = df.reg.sub)

Residuals:
    Min       1Q   Median       3Q      Max
-2.96495 -0.33364  0.02062  0.35064  1.66091

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   0.059521   0.090352   0.659 0.510202
log_hed_pred    1.034162   0.024752  41.781 < 2e-16 ***
anchoring     -0.030017   0.028887  -1.039 0.299009
sub_price_hed_pred 0.298056   0.043888   6.791 1.95e-11 ***
substitute_measure -0.013093   0.008939  -1.465 0.143340
avg_months_since_sub_sale -0.050238   0.014234  -3.529 0.000436 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.5653 on 952 degrees of freedom
Multiple R-squared:  0.8313,    Adjusted R-squared:  0.8304
F-statistic: 938 on 5 and 952 DF,  p-value: < 2.2e-16
```

Table 13: Anchoring cross-effects ( $Q_1$ ) for assorted art.

```
Call:
lm(formula = log_sale_price ~ ., data = df.anchoring[complete.cases(df.anchoring),
])

Residuals:
    Min       1Q   Median       3Q      Max
-7.3357 -1.1534 -0.0891  1.0304  7.7630

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   -1.994594   0.220561  -9.043 < 2e-16 ***
log_hed_pred    1.240644   0.025869  47.959 < 2e-16 ***
anchoring       0.661090   0.025028  26.414 < 2e-16 ***
sub_price_hed_pred -0.102460  0.026481  -3.869  0.00011 ***
substitute_measure  0.026968  0.005026   5.366 8.16e-08 ***
avg_mon_subdiff  -0.088799  0.015873  -5.594 2.25e-08 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.616 on 17693 degrees of freedom
Multiple R-squared:  0.4613,    Adjusted R-squared:  0.4611
F-statistic: 3030 on 5 and 17693 DF,  p-value: < 2.2e-16
```

## ANCHORING CROSS-EFFECTS (Q2)

Table 14: Anchoring cross-effects ( $Q_2$ ) for Impressionist art.

```
Call:
lm(formula = log_sale_price ~ log_hed_pred + anchoring + sub_price_hed_pred +
  substitute_measure + avg_months_since_sub_sale, data = df.anchor.sub.impress)

Residuals:
    Min       1Q   Median       3Q      Max
-5.2351 -0.4763  0.0000  0.4755  3.2843

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   0.0085722  0.0741016   0.116  0.9079
log_hed_pred   0.9988786  0.0061643 162.044 <2e-16 ***
anchoring      0.0262716  0.0133724   1.965  0.0495 *
sub_price_hed_pred 0.2861356  0.0210827 13.572 <2e-16 ***
substitute_measure 0.0150060  0.0080184   1.871  0.0613 .
avg_months_since_sub_sale -0.0001465  0.0007528  -0.195  0.8457
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.773 on 11608 degrees of freedom
Multiple R-squared:  0.7752,    Adjusted R-squared:  0.7751
F-statistic: 8004 on 5 and 11608 DF,  p-value: < 2.2e-16
```



Table 15: Anchoring cross-effects ( $Q_2$ ) for Contemporary art.

```
Call:
lm(formula = log_sale_price ~ log_hed_pred + anchoring + sub_price_hed_pred +
    substitute_measure + avg_months_since_sub_sale, data = df.reg.sub)

Residuals:
    Min       1Q   Median       3Q      Max
-2.95880 -0.33439  0.02226  0.34534  1.67089

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   -0.091648   0.114989  -0.797  0.425642
log_hed_pred    1.055614   0.018161  58.124 < 2e-16 ***
anchoring     -0.021001   0.027097  -0.775  0.438519
sub_price_hed_pred  0.291614   0.043657   6.680 4.07e-11 ***
substitute_measure -0.011917   0.005894  -2.022 0.043486 *
avg_months_since_sub_sale -0.050393   0.014217  -3.545 0.000412 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.5647 on 952 degrees of freedom
Multiple R-squared:  0.8316,    Adjusted R-squared:  0.8307
F-statistic: 940.3 on 5 and 952 DF,  p-value: < 2.2e-16
```

Table 16: Anchoring cross-effects ( $Q_2$ ) for assorted art.

```
Call:
lm(formula = log_sale_price ~ ., data = df.anchoring[complete.cases(df.anchoring),
])

Residuals:
    Min       1Q   Median       3Q      Max
-7.1890 -1.0271  0.0846  1.0769  7.9026

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   -2.03647   0.17645 -11.541 < 2e-16 ***
log_hed_pred    1.27157   0.01920  66.215 < 2e-16 ***
anchoring      0.51926   0.02197  23.632 < 2e-16 ***
sub_price_hed_pred  0.08111   0.02262   3.586 0.000337 ***
substitute_measure  0.29640   0.01520  19.504 < 2e-16 ***
avg_mon_subdiff  0.07226   0.01019   7.093 1.34e-12 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.658 on 29784 degrees of freedom
Multiple R-squared:  0.3979,    Adjusted R-squared:  0.3978
F-statistic: 3936 on 5 and 29784 DF,  p-value: < 2.2e-16
```

Table 17: Summary of anchoring results.

	Anchoring under $Q_1$	Anchoring under $Q_2$
Impressionist Art	0.034 *	0.026 *
Contemporary Art	-0.03	-0.02
Assorted Art	0.66 ***	0.52 ***

### THREE EXPERIMENTS

Table 18: Miro vs. Dali ( $Q_1$ )

```
Call:
lm(formula = log_sale_price ~ ., data = df.anchoring[complete.cases(df.anchoring),
])

Residuals:
    Min       1Q   Median       3Q      Max
-3.2922 -1.0052 -0.1560  0.8208  8.4440

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    7.15043    2.16084   3.309 0.000959 ***
log_hed_pred    0.51936    0.27060   1.919 0.055144 .
anchoring     -0.37001    0.25243  -1.466 0.142918
sub_price_hed_pred 0.48840    0.25445   1.919 0.055125 .
substitute_measure 0.18523    0.02024   9.149 < 2e-16 ***
avg_mon_subdiff -0.08254    0.04425  -1.865 0.062339 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.483 on 1458 degrees of freedom
Multiple R-squared:  0.1255,    Adjusted R-squared:  0.1225
F-statistic: 41.84 on 5 and 1458 DF,  p-value: < 2.2e-16
```

Table 19: Miro vs. Dali ( $Q_2$ )

```
Call:
lm(formula = log_sale_price ~ ., data = df.anchoring[complete.cases(df.anchoring),
])

Residuals:
    Min       1Q   Median       3Q      Max
-3.0733 -1.0296 -0.1694  0.7886  8.2793

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    8.67695    2.23295   3.886 0.000107 ***
log_hed_pred   -0.06076    0.27531  -0.221 0.825343
anchoring     -0.97311    0.25364  -3.836 0.000130 ***
sub_price_hed_pred 1.03215    0.25775   4.005 6.53e-05 ***
substitute_measure 0.01170    0.03687   0.317 0.751092
avg_mon_subdiff -0.10641    0.04740  -2.245 0.024933 *
---

```

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.525 on 1458 degrees of freedom  
Multiple R-squared: 0.07533, Adjusted R-squared: 0.07216  
F-statistic: 23.76 on 5 and 1458 DF, p-value: < 2.2e-16

Table 20: Picasso vs. Chagall ( $Q_1$ )

Call:  
lm(formula = log\_sale\_price ~ ., data = df.anchoring[complete.cases(df.anchoring),  
])

Residuals:  
Min 1Q Median 3Q Max  
-4.6215 -1.0532 -0.1586 0.8661 7.3545

Coefficients:  
Estimate Std. Error t value Pr(>|t|)  
(Intercept) -2.88027 3.35265 -0.859 0.390372  
log\_hed\_pred 2.02669 0.34011 5.959 2.92e-09 \*\*\*  
anchoring 1.54597 0.32518 4.754 2.11e-06 \*\*\*  
sub\_price\_hed\_pred -1.12558 0.32794 -3.432 0.000609 \*\*\*  
substitute\_measure 0.36201 0.02246 16.116 < 2e-16 \*\*\*  
avg\_mon\_subdiff -0.05674 0.03661 -1.550 0.121289  
---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.686 on 2359 degrees of freedom  
Multiple R-squared: 0.179, Adjusted R-squared: 0.1773  
F-statistic: 102.9 on 5 and 2359 DF, p-value: < 2.2e-16

Table 21: Picasso vs. Chagall ( $Q_2$ )

Call:  
lm(formula = log\_sale\_price ~ ., data = df.anchoring[complete.cases(df.anchoring),  
])

Residuals:  
Min 1Q Median 3Q Max  
-4.7629 -1.0573 -0.2084 0.8451 8.3682

Coefficients:  
Estimate Std. Error t value Pr(>|t|)  
(Intercept) -21.89473 3.22978 -6.779 1.52e-11 \*\*\*  
log\_hed\_pred 3.47944 0.34053 10.218 < 2e-16 \*\*\*  
anchoring 2.53673 0.33207 7.639 3.16e-14 \*\*\*  
sub\_price\_hed\_pred -2.24188 0.33296 -6.733 2.08e-11 \*\*\*  
substitute\_measure 0.55122 0.08374 6.582 5.69e-11 \*\*\*  
avg\_mon\_subdiff 0.20532 0.05785 3.549 0.000394 \*\*\*  
---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.76 on 2359 degrees of freedom  
Multiple R-squared: 0.1051, Adjusted R-squared: 0.1032  
F-statistic: 55.39 on 5 and 2359 DF, p-value: < 2.2e-16

Table 22: Munch vs. Toulouse-Lautrec ( $Q_1$ )

```
Call:
lm(formula = log_sale_price ~ ., data = df.anchoring[complete.cases(df.anchoring),
])

Residuals:
    Min       1Q   Median       3Q      Max
-5.2478 -0.9364 -0.0661  1.0238  7.1826

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    2.21191    2.30155   0.961   0.337
log_hed_pred    0.85602    0.20483   4.179 3.83e-05 ***
anchoring     -0.21898    0.19898  -1.101   0.272
sub_price_hed_pred 0.14003    0.21334   0.656   0.512
substitute_measure 0.04258    0.04577   0.930   0.353
avg_mon_subdiff  0.05321    0.07060   0.754   0.452
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.567 on 305 degrees of freedom
Multiple R-squared:  0.2927,    Adjusted R-squared:  0.2811
F-statistic: 25.24 on 5 and 305 DF,  p-value: < 2.2e-16
```

Table 23: Munch vs. Toulouse-Lautrec ( $Q_2$ )

```
Call:
lm(formula = log_sale_price ~ ., data = df.anchoring[complete.cases(df.anchoring),
])

Residuals:
    Min       1Q   Median       3Q      Max
-5.2282 -0.9288 -0.0752  0.9997  7.0301

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    2.7240    2.1874   1.245   0.2140
log_hed_pred    0.8145    0.2060   3.953 9.59e-05 ***
anchoring     -0.2728    0.2016  -1.353   0.1770
sub_price_hed_pred 0.1956    0.2151   0.909   0.3639
substitute_measure 0.3686    0.2114   1.744   0.0822 .
avg_mon_subdiff  0.2615    0.1351   1.936   0.0538 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.562 on 305 degrees of freedom
Multiple R-squared:  0.2977,    Adjusted R-squared:  0.2862
F-statistic: 25.86 on 5 and 305 DF,  p-value: < 2.2e-16
```