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name: <unnamed>
log: D:\Jason\workshop\Stata workshop\Stata presentation\stata presentation5_part3.log
log type: text
opened on: 26 Jun 2023, 10:40:06
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. *****
. * Aim #3. Shows how to use -graph- commands to generate and customize graphs
. *****
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. *****
. * Bar Chart
. *****
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```
. use https://www.stata-press.com/data/r17/nlsw88, clear
(NLSW, 1988 extract)
```

```
. sum
```

Variable	Obs	Mean	Std. dev.	Min	Max
idcode	2,246	2612.654	1480.864	1	5159
age	2,246	39.15316	3.060002	34	46
race	2,246	1.282725	.4754413	1	3
married	2,246	.6420303	.4795099	0	1
never_marr~d	2,246	.1041852	.3055687	0	1
grade	2,244	13.09893	2.521246	0	18
collgrad	2,246	.2368655	.4252538	0	1
south	2,246	.4194123	.4935728	0	1
smsa	2,246	.7039181	.4566292	0	1
c_city	2,246	.2916296	.4546139	0	1
industry	2,232	8.189516	3.010875	1	12
occupation	2,237	4.642825	3.408897	1	13
union	1,878	.2454739	.4304825	0	1
wage	2,246	7.766949	5.755523	1.004952	40.74659
hours	2,242	37.21811	10.50914	1	80
t1l_exp	2,246	12.53498	4.610208	.1153846	28.88461
tenure	2,231	5.97785	5.510331	0	25.91667

```
. tab2 wage race
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```
-> tabulation of wage by race
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Hourly wage	White	Race Black	Other	Total
1.004952	1	0	0	1
1.032247	1	0	0	1
1.151368	0	1	0	1
1.344605	0	1	0	1
1.392914	1	0	0	1
1.501798	1	0	0	1
1.545893	1	0	0	1
1.561996	0	1	0	1
1.571983	1	0	0	1
1.59261	0	1	0	1
1.610306	0	1	0	1
1.680601	1	0	0	1
1.723027	1	0	0	1
1.797659	0	1	0	1

1.80602	0	0	1	1
1.811594	0	2	0	2
1.837627	1	0	0	1
1.859903	1	1	0	2
1.867955	0	1	0	1
1.892108	1	0	0	1
1.930993	0	1	0	1
1.932367	0	1	0	1
1.972624	1	0	0	1
1.985786	0	1	0	1
2.012882	3	1	0	4
2.053139	1	0	0	1
2.090301	1	1	0	2
2.093397	1	0	0	1
2.157809	0	1	0	1
2.214171	1	0	0	1
2.222221	0	1	0	1
2.232711	1	0	0	1
2.294685	1	0	0	1
2.302737	1	0	0	1
2.310788	1	0	0	1
2.326892	3	0	0	3
2.383252	0	1	0	1
2.415459	3	3	0	6
2.447664	0	1	0	1
2.4793	0	1	0	1
2.479871	2	0	0	2
2.491696	1	0	0	1
2.508361	0	1	0	1
2.520128	1	1	0	2
2.568437	1	0	0	1
2.58454	1	0	0	1
2.608696	1	0	0	1
2.612876	0	1	0	1
2.616747	2	0	0	2
2.628296	1	0	0	1
2.632849	1	0	0	1
2.648529	1	0	0	1
2.657004	1	0	0	1
2.681159	3	1	0	4
2.683842	1	0	0	1
2.697261	5	9	1	15
2.703391	1	0	0	1
2.717391	1	1	0	2
2.73752	1	1	0	2
2.759197	1	0	0	1
2.761673	1	0	0	1
2.769725	1	1	0	2
2.777777	3	2	0	5
2.785829	2	2	0	4
2.787067	1	2	0	3
2.789213	1	0	0	1
2.801002	10	5	0	15
2.801932	0	1	0	1
2.818035	3	5	0	8
2.858293	3	1	0	4
2.874396	1	1	0	2
2.875546	1	0	0	1
2.884614	0	1	0	1
2.896181	0	1	0	1
2.898549	1	4	1	6
2.926421	4	1	1	6
2.930756	1	0	0	1
2.938808	2	4	0	6
2.94686	0	1	0	1
2.962962	1	0	0	1
2.979065	2	1	0	3

2.98495	1	0	0	1
2.987117	2	0	0	2
3.001791	2	1	0	3
3.010032	1	0	0	1
3.011272	1	0	0	1
3.019324	4	4	0	8
3.043478	1	1	0	2
3.046594	1	0	0	1
3.051529	1	0	0	1
3.051839	7	1	0	8
3.059581	0	1	0	1
3.065774	1	0	0	1
3.075684	1	0	0	1
3.083194	0	1	0	1
3.091786	0	1	0	1
3.099125	3	0	0	3
3.099838	5	0	0	5
3.10789	1	1	0	2
3.135451	0	1	0	1
3.1362	0	1	0	1
3.140096	2	1	0	3
3.156198	0	1	0	1
3.172302	1	0	0	1
3.177257	1	0	0	1
3.180353	1	0	0	1
3.205127	0	1	0	1
3.218058	1	0	0	1
3.220612	16	6	1	23
3.239966	0	1	0	1
3.252816	0	1	0	1
3.260869	4	2	0	6
3.268919	1	0	0	1
3.285022	0	1	0	1
3.293073	0	2	0	2
3.301126	3	2	0	5
3.309176	2	0	0	2
3.310275	1	0	0	1
3.31723	1	0	0	1
3.341383	3	1	0	4
3.344482	18	4	0	22
3.349436	1	0	0	1
3.357486	3	2	0	5
3.360215	0	1	0	1
3.37359	0	1	0	1
3.397743	1	1	0	2
3.405797	1	0	0	1
3.4219	4	3	0	7
3.428092	1	0	0	1
3.446084	1	0	0	1
3.454104	1	2	0	3
3.478261	1	0	0	1
3.486311	1	2	0	3
3.486621	1	0	0	1
3.502414	4	2	0	6
3.510896	2	0	0	2
3.526568	1	4	0	5
3.542671	2	1	0	3
3.553512	2	2	0	4
3.566825	1	0	0	1
3.574878	2	0	0	2
3.582928	1	1	0	2
3.584229	1	0	0	1
3.623188	12	5	0	17
3.637123	2	0	0	2
3.647342	1	0	0	1
3.663445	3	2	0	5
3.663726	1	0	0	1

3.679549	0	1	0	1
3.692863	1	0	0	1
3.703702	2	1	0	3
3.711753	2	0	0	2
3.718949	3	0	0	3
3.719806	3	1	0	4
3.743959	1	2	0	3
3.762542	5	4	0	9
3.768113	1	0	0	1
3.784217	2	0	0	2
3.79227	1	0	0	1
3.808373	1	2	0	3
3.824476	3	0	0	3
3.832527	1	0	0	1
3.84863	0	1	0	1
3.861985	4	0	0	4
3.864734	0	2	0	2
3.872784	4	0	0	4
3.873905	1	0	0	1
3.887958	1	1	0	2
3.904991	3	0	0	3
3.919314	1	0	0	1
3.929144	0	1	0	1
3.937198	1	0	0	1
3.938519	1	0	0	1
3.945248	0	2	0	2
3.961351	1	1	0	2
3.969401	1	0	0	1
3.985505	2	2	0	4
4.025765	33	15	0	48
4.033815	1	0	0	1
4.055183	0	1	0	1
4.066022	1	1	0	2
4.071905	0	1	0	1
4.074072	0	2	0	2
4.090176	0	1	0	1
4.096988	1	0	0	1
4.105351	1	0	0	1
4.114329	1	0	0	1
4.122383	1	0	0	1
4.130433	1	0	0	1
4.138486	2	0	0	2
4.146536	2	0	0	2
4.163879	0	1	0	1
4.17069	1	0	0	1
4.178743	0	1	0	1
4.180602	14	5	0	19
4.186793	3	2	0	5
4.202897	1	0	0	1
4.21095	1	1	0	2
4.219	1	1	0	2
4.222408	1	0	0	1
4.227053	10	8	0	18
4.235104	1	0	0	1
4.251207	1	0	0	1
4.259257	2	3	0	5
4.267311	1	1	0	2
4.283414	0	1	0	1
4.289296	0	1	0	1
4.307567	1	2	0	3
4.315618	2	0	0	2
4.322766	0	1	0	1
4.331721	1	0	0	1
4.339774	3	1	0	4
4.344736	1	0	0	1
4.347824	1	0	0	1
4.347824	0	1	0	1

4.354793	0	1	0	1
4.355878	2	1	0	3
4.388082	1	1	0	2
4.388621	1	0	0	1
4.389632	5	1	0	6
4.396134	2	0	0	2
4.404185	1	0	0	1
4.412238	1	1	0	2
4.413701	1	1	0	2
4.420288	4	0	0	4
4.421789	1	0	0	1
4.428341	9	1	0	10
4.431437	1	0	0	1
4.452495	0	1	0	1
4.460545	1	0	0	1
4.476648	1	0	0	1
4.479214	1	0	0	1
4.484702	1	0	0	1
4.492752	1	0	0	1
4.508855	7	1	0	8
4.516906	2	0	0	2
4.53301	2	3	0	5
4.549112	1	1	0	2
4.58132	1	0	0	1
4.58937	2	0	0	2
4.597423	0	1	0	1
4.598662	2	0	0	2
4.613526	1	0	0	1
4.621576	1	1	0	2
4.62963	3	3	0	6
4.634385	1	0	0	1
4.63768	1	0	0	1
4.645112	1	0	0	1
4.64573	6	1	0	7
4.648688	4	0	0	4
4.661833	1	0	0	1
4.669887	3	0	0	3
4.68599	1	0	0	1
4.694041	1	1	0	2
4.703177	0	1	0	1
4.710144	2	2	0	4
4.724079	1	0	0	1
4.726247	1	0	0	1
4.734297	1	1	0	2
4.742351	0	1	0	1
4.750401	2	2	0	4
4.758454	1	0	0	1
4.765884	1	0	0	1
4.774554	1	0	0	1
4.777829	1	0	0	1
4.782608	1	0	0	1
4.790658	2	1	0	3
4.798711	0	1	0	1
4.827484	9	0	1	10
4.830918	20	5	0	25
4.838707	0	1	0	1
4.838968	0	2	0	2
4.845827	0	1	0	1
4.849998	1	0	0	1
4.852005	0	1	0	1
4.863122	1	0	0	1
4.871175	0	1	0	1
4.879225	2	0	0	2
4.887279	1	1	0	2
4.895329	1	1	0	2
4.903378	1	0	0	1
4.911432	2	0	0	2

4.919482	1	0	0	1
4.935585	0	1	0	1
4.951689	1	0	0	1
4.959742	1	0	0	1
4.975842	0	1	0	1
4.991946	0	1	0	1
5	1	0	0	1
5.016103	1	0	1	2
5.016723	8	2	0	10
5.022486	0	1	0	1
5.024153	2	0	0	2
5.032206	22	14	0	36
5.048307	0	1	0	1
5.06441	2	1	0	3
5.072463	3	1	0	4
5.080513	0	1	0	1
5.096617	1	1	0	2
5.104667	1	0	0	1
5.11272	2	0	0	2
5.12077	1	0	0	1
5.145711	1	0	0	1
5.152977	2	1	0	3
5.161031	2	0	0	2
5.169081	1	0	0	1
5.17354	0	1	0	1
5.177131	1	0	0	1
5.185184	1	0	0	1
5.202526	1	0	0	1
5.217391	1	0	0	1
5.225441	2	1	0	3
5.225752	3	1	0	4
5.233495	13	4	0	17
5.241545	1	0	0	1
5.249595	2	0	0	2
5.259195	1	0	0	1
5.265698	3	0	0	3
5.273752	2	1	0	3
5.281802	1	0	0	1
5.283381	0	1	0	1
5.289855	1	0	0	1
5.297905	2	0	0	2
5.312786	1	0	0	1
5.346215	2	1	0	3
5.351169	1	0	0	1
5.354265	0	1	0	1
5.367891	1	0	0	1
5.370369	0	2	0	2
5.378419	1	0	0	1
5.394523	0	1	0	1
5.410626	1	0	0	1
5.418679	5	1	0	6
5.426729	1	0	0	1
5.434783	4	0	0	4
5.434783	3	1	0	4
5.442833	1	0	0	1
5.450883	1	0	0	1
5.458936	1	1	0	2
5.466986	2	0	0	2
5.475039	1	0	0	1
5.507244	2	0	0	2
5.515297	3	0	0	3
5.517124	1	0	0	1
5.523347	0	1	0	1
5.5314	0	1	0	1
5.53945	3	4	0	7
5.555554	1	0	0	1
5.559998	0	1	0	1

5.563607	1	0	0	1
5.571657	2	0	0	2
5.579708	4	0	0	4
5.595811	1	0	0	1
5.600358	1	0	0	1
5.611914	4	1	0	5
5.619967	2	1	0	3
5.627731	1	0	0	1
5.628018	1	0	0	1
5.636071	19	5	0	24
5.660224	1	0	0	1
5.668274	0	1	0	1
5.676328	2	0	0	2
5.684378	0	1	0	1
5.685618	0	1	0	1
5.708532	0	1	0	1
5.716585	0	2	0	2
5.724636	1	1	0	2
5.732688	1	0	0	1
5.748328	1	0	0	1
5.748792	2	1	0	3
5.763689	1	0	0	1
5.779567	0	1	0	1
5.780996	1	0	0	1
5.789049	2	0	0	2
5.797099	0	1	0	1
5.805152	8	3	0	11
5.80639	1	0	0	1
5.813202	1	0	1	2
5.828724	1	0	0	1
5.829306	2	1	0	3
5.837359	4	1	0	5
5.845409	1	0	0	1
5.852843	6	0	0	6
5.861513	4	0	0	4
5.869563	2	0	0	2
5.877616	1	0	0	1
5.885666	2	0	0	2
5.90177	2	0	0	2
5.917873	5	0	0	5
5.925924	1	0	0	1
5.936454	1	0	0	1
5.958131	1	0	0	1
5.972288	1	0	0	1
5.982284	1	1	0	2
5.990337	2	0	0	2
5.998387	4	0	0	4
6.022544	0	1	0	1
6.030594	2	1	0	3
6.038648	11	4	1	16
6.046698	3	0	0	3
6.050869	0	1	0	1
6.078904	1	1	0	2
6.086955	2	0	0	2
6.111108	1	0	0	1
6.119162	1	0	0	1
6.135265	1	0	0	1
6.159419	1	0	0	1
6.164872	1	0	0	1
6.167471	1	0	0	1
6.170566	1	0	0	1
6.175522	1	0	0	1
6.191625	13	4	0	17
6.199676	4	1	0	5
6.207728	1	0	0	1
6.223832	2	1	0	3
6.229095	1	0	0	1

6.231882	2	0	0	2
6.239936	1	1	0	2
6.247986	1	0	0	1
6.26409	1	0	0	1
6.270903	2	1	1	4
6.27214	0	2	0	2
6.272401	1	0	0	1
6.280193	5	1	0	6
6.288243	1	0	0	1
6.296296	1	0	0	1
6.32045	2	1	0	3
6.336553	1	0	0	1
6.344604	1	0	0	1
6.352657	1	2	0	3
6.360707	2	0	0	2
6.36876	1	1	0	2
6.376811	1	0	0	1
6.384861	1	0	0	1
6.400963	2	2	0	4
6.409017	1	0	0	1
6.425121	1	0	0	1
6.436645	1	0	0	1
6.441224	7	6	0	13
6.449271	3	0	0	3
6.481478	2	0	0	2
6.505631	9	0	0	9
6.513685	0	0	1	1
6.537838	0	1	0	1
6.545891	3	0	0	3
6.561992	1	0	0	1
6.563544	1	0	0	1
6.578098	3	1	0	4
6.586145	1	0	0	1
6.602252	1	1	0	2
6.610305	2	0	0	2
6.626406	0	1	0	1
6.634459	4	1	0	5
6.638795	1	0	0	1
6.642512	1	1	0	2
6.650957	0	1	0	1
6.658599	1	0	0	1
6.658612	1	0	0	1
6.682766	1	0	0	1
6.688963	6	0	0	6
6.690819	1	0	0	1
6.70692	4	1	0	5
6.714973	1	0	0	1
6.723027	1	0	0	1
6.739127	1	0	0	1
6.755233	0	1	0	1
6.76328	3	0	0	3
6.771333	2	1	0	3
6.779387	2	0	0	2
6.787434	2	0	0	2
6.793478	1	1	0	2
6.795487	1	0	0	1
6.803541	1	0	0	1
6.811594	2	0	0	2
6.814376	0	1	0	1
6.843801	9	2	0	11
6.857069	0	1	0	1
6.876001	1	0	0	1
6.884055	6	0	0	6
6.914713	1	0	0	1
6.924314	2	0	0	2
6.932361	2	0	0	2
6.964568	11	1	0	12

6.972622	6	1	0	7
6.988722	0	2	0	2
7.004828	3	0	0	3
7.020929	1	0	0	1
7.028982	1	0	0	1
7.034666	1	0	0	1
7.037035	1	1	0	2
7.045088	8	5	0	13
7.069242	2	0	0	2
7.107024	0	1	0	1
7.117549	1	0	0	1
7.125603	0	2	0	2
7.149757	2	0	0	2
7.15781	2	2	0	4
7.165856	2	0	0	2
7.178227	1	0	0	1
7.198063	1	0	0	1
7.21417	2	0	0	2
7.215716	1	0	0	1
7.230271	2	0	0	2
7.238324	2	0	0	2
7.246377	8	1	0	9
7.254424	1	0	0	1
7.262477	1	0	0	1
7.265882	1	0	0	1
7.270531	0	1	0	1
7.278577	2	0	0	2
7.286631	1	0	0	1
7.310784	1	0	0	1
7.318838	2	2	0	4
7.337156	1	0	0	1
7.342991	2	0	0	2
7.351045	1	2	0	3
7.357856	1	0	0	1
7.399352	1	0	0	1
7.407406	0	1	0	1
7.431559	2	0	0	2
7.439612	4	1	2	7
7.447664	1	2	0	3
7.455712	1	0	0	1
7.458193	1	0	0	1
7.479866	2	0	0	2
7.487919	1	0	0	1
7.495973	0	1	0	1
7.520126	1	1	0	2
7.525084	1	1	0	2
7.528179	2	0	0	2
7.536226	1	0	0	1
7.552333	1	2	0	3
7.558137	0	1	0	1
7.568433	3	0	0	3
7.584539	1	0	0	1
7.589398	1	0	0	1
7.60109	1	0	0	1
7.608693	0	1	0	1
7.616746	1	0	0	1
7.624793	2	0	0	2
7.648953	1	1	0	2
7.665055	1	0	0	1
7.681153	1	0	1	2
7.689208	1	0	0	1
7.709994	1	0	0	1
7.713361	1	0	0	1
7.734114	3	0	0	3
7.737515	1	0	0	1
7.745568	11	7	0	18
7.761675	1	0	1	2

7.777774	1	0	0	1
7.793876	1	0	0	1
7.801928	2	2	0	4
7.809981	2	0	0	2
7.826082	0	1	0	1
7.850241	1	1	0	2
7.878824	1	0	0	1
7.898549	2	0	0	2
7.901336	1	0	0	1
7.906601	2	1	0	3
7.914649	2	1	0	3
7.922703	1	0	0	1
7.930756	1	1	0	2
7.938803	2	2	0	4
7.946856	2	0	0	2
7.962963	3	0	0	3
7.979064	1	0	0	1
7.987117	1	0	0	1
8.011269	0	1	0	1
8.043473	1	0	0	1
8.05153	21	6	0	27
8.067631	2	0	0	2
8.075683	0	1	0	1
8.083731	1	0	0	1
8.091784	1	0	0	1
8.132044	2	2	0	4
8.148145	1	2	0	3
8.164251	0	1	0	1
8.193976	1	0	0	1
8.220612	1	0	0	1
8.22866	1	0	0	1
8.236711	2	0	0	2
8.260865	5	0	0	5
8.28502	1	0	0	1
8.293073	2	0	0	2
8.317226	1	0	0	1
8.34138	1	0	0	1
8.357487	2	1	0	3
8.361203	4	1	0	5
8.365539	1	1	0	2
8.373587	1	1	0	2
8.379888	0	1	0	1
8.413847	1	0	0	1
8.429946	1	0	0	1
8.446053	1	0	0	1
8.454107	4	0	0	4
8.47826	0	1	0	1
8.49436	1	0	0	1
8.518515	5	2	0	7
8.528425	1	0	0	1
8.558774	3	1	0	4
8.566828	1	0	0	1
8.570235	0	1	0	1
8.575592	1	0	0	1
8.57859	1	0	0	1
8.582928	0	1	0	1
8.593085	1	0	0	1
8.599029	2	1	0	3
8.615135	1	0	0	1
8.623189	2	0	0	2
8.655396	1	0	0	1
8.663441	1	0	0	1
8.671494	2	1	0	3
8.679548	1	0	0	1
8.687595	1	0	0	1
8.691476	1	0	0	1
8.709585	1	0	0	1

8.709587	0	1	0	1
8.711756	2	0	0	2
8.719802	1	0	0	1
8.72905	1	0	0	1
8.776163	1	0	0	1
8.779264	1	0	0	1
8.80837	2	0	0	2
8.816422	0	2	0	2
8.832524	1	0	0	1
8.848629	0	2	0	2
8.856684	7	2	0	9
8.872785	1	0	0	1
8.904991	9	4	0	13
8.929144	1	0	0	1
8.937197	0	1	0	1
8.945245	2	1	0	3
8.96135	0	1	0	1
8.977451	1	0	0	1
8.988295	1	0	0	1
9.001606	1	0	0	1
9.017712	0	1	0	1
9.033813	2	0	0	2
9.046823	1	0	0	1
9.057972	5	0	0	5
9.066018	1	1	0	2
9.090172	0	2	0	2
9.111565	1	0	0	1
9.114332	1	0	0	1
9.138485	2	0	0	2
9.186791	1	0	0	1
9.188963	1	0	0	1
9.197324	2	0	0	2
9.202893	1	0	0	1
9.227052	1	0	0	1
9.251205	1	0	0	1
9.259259	1	1	0	2
9.29146	8	2	0	10
9.299514	2	0	0	2
9.307566	0	1	0	1
9.33172	1	0	0	1
9.339773	1	0	0	1
9.355874	0	1	0	1
9.363928	1	0	0	1
9.371979	1	0	0	1
9.388082	0	1	0	1
9.406354	1	0	0	1
9.420287	1	0	0	1
9.42834	1	0	0	1
9.444442	1	0	0	1
9.460546	1	0	0	1
9.462362	1	0	0	1
9.500801	1	0	0	1
9.533008	0	1	0	1
9.565216	2	0	0	2
9.567145	1	0	0	1
9.57327	1	0	0	1
9.581316	2	0	0	2
9.597424	1	0	1	2
9.613523	1	0	0	1
9.621575	1	0	0	1
9.629628	1	0	0	1
9.637676	1	0	0	1
9.645729	0	1	0	1
9.647542	1	0	0	1
9.653782	1	0	0	1
9.661837	5	0	0	5
9.677936	12	4	0	16

9.726243	0	1	0	1
9.734298	2	0	0	2
9.758451	4	1	1	6
9.766504	1	0	0	1
9.782605	3	0	0	3
9.790657	2	0	0	2
9.806758	2	0	0	2
9.847019	2	0	0	2
9.85507	1	0	0	1
9.871171	1	0	0	1
9.891299	1	0	0	1
9.895326	1	0	0	1
9.911431	2	0	0	2
9.949827	1	0	0	1
9.959739	0	1	0	1
9.967792	1	0	0	1
9.999998	2	0	0	2
10.00805	1	0	0	1
10.01791	1	0	0	1
10.03221	0	1	0	1
10.03344	1	0	0	1
10.04831	0	1	0	1
10.05636	1	0	0	1
10.06441	13	5	1	19
10.10467	2	0	0	2
10.12882	0	1	0	1
10.15297	1	0	0	1
10.16103	1	0	0	1
10.17713	2	0	0	2
10.18518	5	1	0	6
10.19323	1	0	0	1
10.21739	5	1	0	6
10.22544	3	1	0	4
10.25765	2	0	0	2
10.2657	1	0	0	1
10.27375	1	0	0	1
10.32206	6	1	1	8
10.35426	1	0	0	1
10.40258	1	0	0	1
10.44283	1	0	0	1
10.45088	6	1	0	7
10.4515	1	1	0	2
10.46699	4	2	0	6
10.48309	2	1	0	3
10.49114	1	0	0	1
10.53139	1	0	0	1
10.53945	1	0	0	1
10.59581	0	1	0	1
10.61996	2	0	0	2
10.62802	2	0	0	2
10.63607	1	0	0	1
10.64412	1	0	0	1
10.66828	3	0	0	3
10.70853	0	1	0	1
10.71906	1	0	0	1
10.73268	1	0	0	1
10.77	0	1	0	1
10.77294	1	0	0	1
10.781	1	0	0	1
10.83736	5	3	0	8
10.84541	1	0	0	1
10.86151	2	0	0	2
10.86957	2	1	0	3
10.90982	1	0	0	1
10.91787	0	1	0	1
10.93397	1	0	0	1
10.94203	2	0	0	2

10.95813	1	0	0	1
10.96618	0	1	0	1
10.97423	0	1	0	1
10.99839	1	0	0	1
11.01449	1	0	0	1
11.03059	5	0	0	5
11.04669	2	0	0	2
11.0628	4	0	0	4
11.07085	3	3	0	6
11.07395	0	1	0	1
11.09501	1	0	0	1
11.10854	1	0	0	1
11.11916	1	0	0	1
11.14827	1	0	0	1
11.15137	2	1	0	3
11.15941	3	0	0	3
11.18357	1	0	0	1
11.19565	1	0	0	1
11.21577	1	0	0	1
11.22383	1	2	0	3
11.25418	1	0	0	1
11.26409	1	0	0	1
11.27214	2	1	0	3
11.28824	1	1	0	2
11.35266	1	1	0	2
11.40902	1	0	0	1
11.41706	1	0	0	1
11.45732	1	1	0	2
11.48517	1	0	0	1
11.49759	1	0	0	1
11.50563	2	2	0	4
11.51368	1	0	0	1
11.52979	0	1	0	1
11.53784	1	1	0	2
11.55395	1	0	0	1
11.5781	1	0	0	1
11.6103	7	9	1	17
11.61835	2	1	1	4
11.6264	1	0	0	1
11.65056	1	1	0	2
11.67	1	0	0	1
11.67472	1	0	0	1
11.69887	1	0	0	1
11.70569	1	0	0	1
11.71497	0	1	0	1
11.72303	1	0	0	1
11.73913	0	1	0	1
11.75523	0	1	0	1
11.77133	1	0	0	1
11.83575	1	0	0	1
11.85185	1	0	0	1
11.88405	1	0	0	1
11.92431	1	0	0	1
11.94847	1	0	0	1
11.96457	1	0	0	1
11.97262	0	1	0	1
11.98068	0	1	0	1
11.98873	1	0	0	1
11.99677	3	0	0	3
12.00768	1	0	0	1
12.04509	2	1	0	3
12.05685	1	0	0	1
12.0773	5	2	0	7
12.11755	0	1	0	1
12.18196	0	1	0	1
12.19512	1	0	0	1
12.20612	0	0	1	1

12.22222	1	1	0	2
12.23027	0	1	0	1
12.27858	1	0	0	1
12.28663	1	0	0	1
12.38325	9	0	0	9
12.3913	1	0	0	1
12.39935	1	0	0	1
12.43156	1	0	0	1
12.47987	1	0	0	1
12.5	0	1	0	1
12.51207	1	0	0	1
12.54181	1	0	0	1
12.56039	1	0	0	1
12.58454	3	0	0	3
12.61705	1	0	0	1
12.64895	1	0	0	1
12.68116	0	0	1	1
12.69726	2	0	0	2
12.75338	0	1	0	1
12.77777	6	1	1	8
12.82608	0	1	0	1
12.85024	2	0	0	2
12.85829	1	0	0	1
12.88245	1	0	0	1
12.9066	1	0	0	1
12.971	2	0	0	2
13.00322	2	0	0	2
13.01632	0	1	0	1
13.01932	3	0	0	3
13.08374	2	1	0	3
13.14009	1	0	0	1
13.16424	2	0	0	2
13.17229	1	0	0	1
13.26892	2	2	0	4
13.26923	1	0	0	1
13.28503	1	0	0	1
13.32527	1	0	0	1
13.37793	1	0	0	1
13.40579	1	0	0	1
13.46055	0	1	0	1
13.55072	5	0	0	5
13.56813	1	0	0	1
13.6876	1	0	0	1
13.76006	1	0	0	1
13.77616	1	0	0	1
13.85668	1	0	0	1
13.90636	1	0	0	1
13.9372	2	0	0	2
13.9694	1	0	0	1
14.00966	1	0	0	1
14.03381	1	0	0	1
14.10627	1	0	0	1
14.1214	0	1	0	1
14.13042	1	0	0	1
14.22705	1	0	0	1
14.25925	0	1	0	1
14.29146	1	0	0	1
14.32367	2	0	0	2
14.4713	1	0	0	1
14.49275	0	1	0	1
14.51443	0	1	0	1
14.51691	1	0	0	1
14.57326	0	1	0	1
14.59742	1	0	0	1
14.64572	0	1	0	1
14.71014	1	1	0	2
14.75039	0	1	0	1

14.82286	0	1	0	1
14.86312	1	0	0	1
14.91142	1	0	0	1
15.04025	0	1	0	1
15.09662	4	3	0	7
15.13687	1	0	0	1
15.20128	1	0	0	1
15.29791	2	0	0	2
15.33816	0	1	0	1
15.44283	1	0	0	1
15.48309	10	1	0	11
15.78904	1	0	0	1
15.8132	1	0	0	1
15.86956	1	0	0	1
16.17552	1	0	0	1
16.25603	4	0	0	4
16.29629	1	0	0	1
16.36875	1	0	0	1
16.47676	0	1	0	1
16.49758	0	1	0	1
16.52979	2	0	0	2
16.64251	1	0	0	1
16.72241	1	0	0	1
16.73912	1	1	0	2
16.77133	1	0	0	1
16.79548	1	0	0	1
17.02898	4	1	0	5
17.20612	3	0	0	3
17.34411	1	0	0	1
17.41545	1	1	0	2
17.52817	0	0	1	1
17.54428	1	0	0	1
17.61674	1	0	0	1
17.66505	2	0	0	2
17.69726	1	0	0	1
17.77777	1	0	0	1
18.06763	2	0	0	2
18.19645	1	0	0	1
18.23671	1	0	0	1
18.38969	1	0	0	1
18.58292	3	0	0	3
18.59098	1	0	0	1
19.35587	3	0	0	3
19.43417	1	0	0	1
19.74234	0	1	0	1
19.91143	1	0	0	1
20.12883	1	0	0	1
20.49475	0	1	0	1
20.64412	3	0	0	3
20.78905	0	1	0	1
21.38486	1	0	0	1
21.67472	1	0	0	1
22.36715	1	0	0	1
22.52012	1	0	0	1
22.58453	1	0	0	1
22.97034	1	0	0	1
23.24476	1	0	0	1
23.82447	1	0	0	1
24.00161	1	0	0	1
24.66183	1	0	0	1
25.1606	1	0	0	1
25.16103	2	0	0	2
25.33815	1	0	0	1
25.80515	2	0	1	3
26.79872	1	0	0	1
27.89049	0	1	0	1
28.15219	1	0	0	1

28.45666	1	0	0	1
28.64733	1	0	0	1
29.72623	1	0	0	1
30.19324	1	0	0	1
30.33817	0	1	0	1
30.92161	1	0	0	1
30.96618	1	0	0	1
30.96741	1	0	0	1
32.15846	2	1	0	3
33.4984	1	0	0	1
35.73162	6	0	0	6
38.70926	8	2	0	10
39.23074	0	1	0	1
40.19808	14	2	0	16
40.74659	0	1	0	1

Total	1,637	583	26	2,246

. sort race

. by race: sum wage, detail

-> race = White

Hourly wage

Percentiles		Smallest		
1%	2.090301	1.004952		
5%	2.875546	1.032247		
10%	3.344482	1.392914	Obs	1,637
25%	4.516906	1.501798	Sum of wgt.	1,637
			Mean	8.082999
50%	6.545891		Std. dev.	5.955069
		Largest		
75%	9.758451	40.19808		
90%	13.14009	40.19808	Variance	35.46285
95%	17.34411	40.19808	Skewness	3.00474
99%	38.70926	40.19808	Kurtosis	14.74577

-> race = Black

Hourly wage

Percentiles		Smallest		
1%	1.797659	1.151368		
5%	2.697261	1.344605		
10%	2.884614	1.561996	Obs	583
25%	3.808373	1.59261	Sum of wgt.	583
			Mean	6.844558
50%	5.434783		Std. dev.	5.076187
		Largest		
75%	8.518515	39.23074		
90%	11.6103	40.19808	Variance	25.76767
95%	14.49275	40.19808	Skewness	3.516731
99%	38.70926	40.74659	Kurtosis	21.15914

-> race = Other

Hourly wage

Percentiles		Smallest		
1%	1.80602	1.80602		
5%	2.697261	2.697261		
10%	2.898549	2.898549	Obs	26

25%	5.016103	2.926421	Sum of wgt.	26
50%	7.560383		Mean	8.550781
		Largest	Std. dev.	5.20943
75%	11.6103	12.68116		
90%	12.77777	12.77777	Variance	27.13816
95%	17.52817	17.52817	Skewness	1.428553
99%	25.80515	25.80515	Kurtosis	5.799663

```

.
. * You can plot mean, median, percentile, sum, count, percent, minimum value, and maximum value
.
. graph bar (mean) wage, over(race)
.
.
. graph bar (median) wage, over(race)
.
. * The difference between the -by- and -over-option
.
. graph bar wage , by(race)
.
. graph bar wage, over(race)
.
. graph bar wage, over(race) over(collgrad)
.
. graph bar wage, over(race) over(collgrad) over(union)
.
.
. *****
. * Combine plots
. *****
.
. use https://www.stata-press.com/data/r17/uslifeexp, clear
(U.S. life expectancy, 1900-1999)
.
. line le_male year, saving("D:\temp\male.gph", replace)
file D:\temp\male.gph saved
.
. line le_female year if inrange(year, 1900,1950), saving("D:\temp\female.gph", replace)
file D:\temp\female.gph saved
.
. * Each graph uses its own x-axis
.
. graph combine "D:\temp\male.gph" "D:\temp\female.gph", cols(1) saving("D:\temp\combine100.gph", replace)
file D:\temp\combine100.gph saved
.
. * Make both graphs use the same x-axis
.
. graph combine "D:\temp\male.gph" "D:\temp\female.gph", cols(1) xcommon iscale(.5) saving("D:\temp\combine50.gph", replace)
file D:\temp\combine50.gph saved
.
.
. *****
. * Scatter plots
. *****
.
. use https://www.stata-press.com/data/r17/sp500, clear
(S&P 500)

```

```
. replace volume = volume/1000
(248 real changes made)
```

```
. twoway rspike hi low date || ///
> line close date || ///
> bar volume date, barw(.25) yaxis(2) || ///
> in 1/57 ///
> , yscale(axis(1) r(900 1400)) ///
> yscale(axis(2) r( 9 45)) ///
> ytitle(" Price -- High, Low, Close") ///
> ytitle(" Volume (millions)", axis(2) bexpand just(left)) ///
> legend(off) ///
> subtitle("S&P 500", margin(b+2.5)) ///
> note("Source: Yahoo!Finance and Commodity Systems, Inc.")
```

```
. log close
   name: <unnamed>
   log: D:\Jason\workshop\Stata workshop\Stata presentation\stata presentation5_part3.log
  log type: text
closed on: 26 Jun 2023, 10:40:17
```
