ELV-781 Project Report:

Submitted By:

Udit Raj Singh 2016EE10469
Nishant Verma 2016EE10471

Abbreviations:

agem1	age
agefstm	Age at first birth
educm	Years of education
whitem	white
blackm	black
hispm	Hispanic
othracem	Other Race

workedm	If worked for pay
weeksm1	weeks worked
hourswm	hours worked
incomem	annual labour income
famincl	log of family income

Means and Standard deviations:

Xi Mean	All women	wife	husband
Age	29.868	29.97461	32.65742
age at first birth	20.49905	20.74286	23.68556
Years of education	12.1632	12.26449	12.82855
White	0.822795	0.866712	0.866415
Black	0.117915	0.075778	0.078124
Hispanic	0.030149	0.027383	0.028169
Other race	0.029142	0.030128	0.027292

Xi Std	All women	wife	husband
age	3.62831	3.574342	5.064661
age at first birth	3.069067	3.076657	4.512551
Years of education	2.412824	2.4147	3.087226
White	0.381843	0.339887	0.340207
Black	0.322508	0.264643	0.268368
Hispanic	0.170997	0.163196	0.165454
Other racem	0.168204	0.170939	0.162933

Yi mean	All women	wife	husband
Worked for pay	0.557496	0.540688	0.974274
Weeks worked	20.24203	19.32397	47.47637

Hours worked	18.49821	17.54797	43.17618
Annual labour Income	37192.18	37192.18	6506.149
Log family income	10.31362	10.52635	10.31752

Yi Std	All women	wife	husband
Worked for pay	0.496684	0.498342	0.158316
Weeks worked	22.09244	21.83174	11.09071
Hours worked	18.89402	18.63055	12.4738
Annual labour Income	24360.84	24360.84	10345.61
Log family income	1.348681	1.046161	1.261005

Wi (More than 2 kids)	All women	wife
mean	0.2708637318055	0.2816608397796
Standard Deviation	0.4444061021024	0.4498091554687

OLS

OLS	All women	wife	husband
Worked for pay	-0.16813554	-0.16813554	-0.00538576431
Weeks worked	-9.71246319	-8.73406347	-0.523228315
Hours worked	-7.55095385	-6.78612904	0.386591204
Annual labour Income	4181.51824	1180.97577	659.135724
Log family income	-0.0601087233	-0.0965953603	-0.116319706

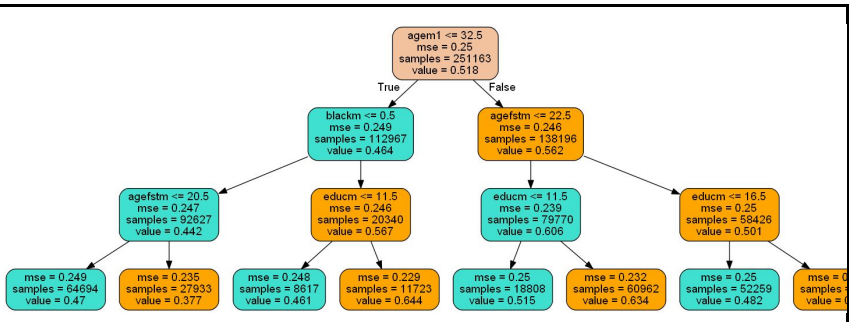
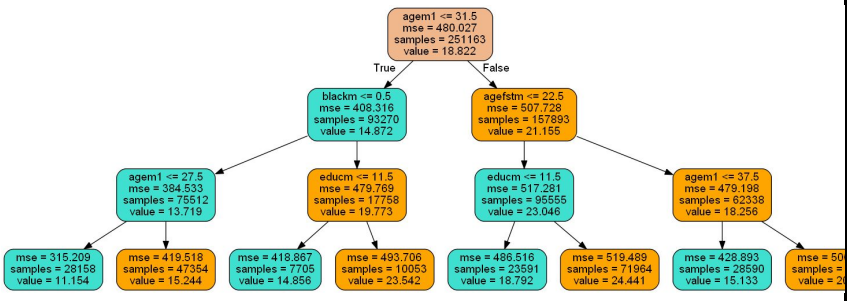
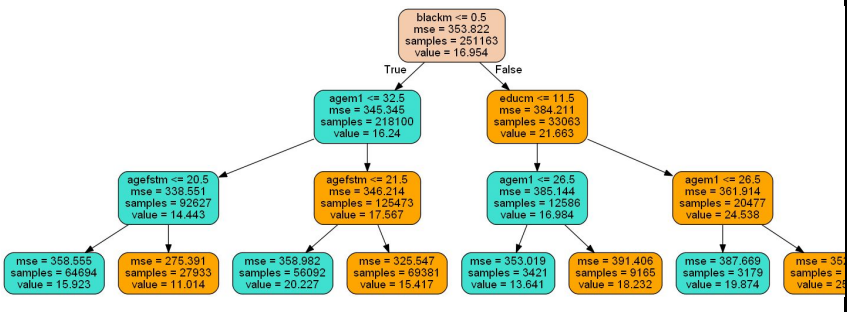
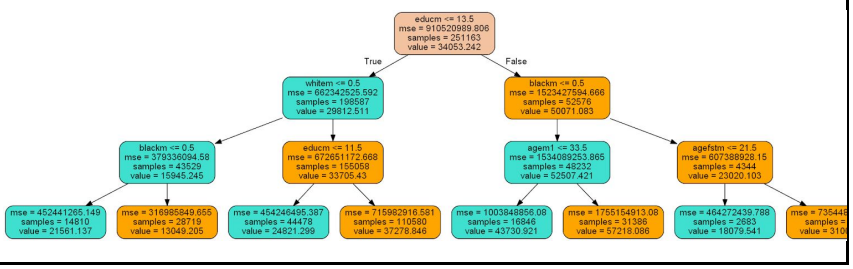
Honest estimation:

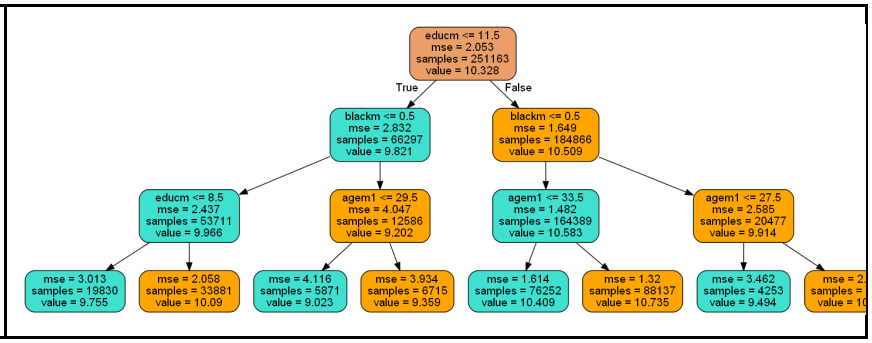
Normaliserd MSE	All women	Married Women	Husbands
Worked for pay	0.38547055103220407	0.41142408136439962	0.026642579912253612
Weeks worked	0.4750198186260566	0.5038574416539014	0.0500624673279833
Hours worked	0.45263548477360244	0.48017817928095047	0.07586019148016028
Annual labour Income	0.37726226588236605	0.2777415084530052	0.6467853138036036
Log family income	0.01481573410354812	0.008831986434439016	0.014136053755134338

Decision Trees

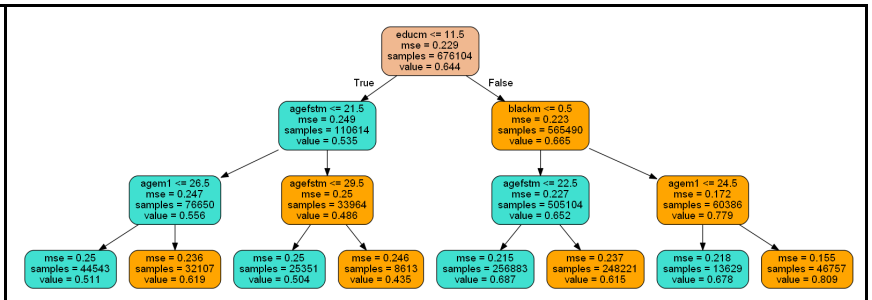
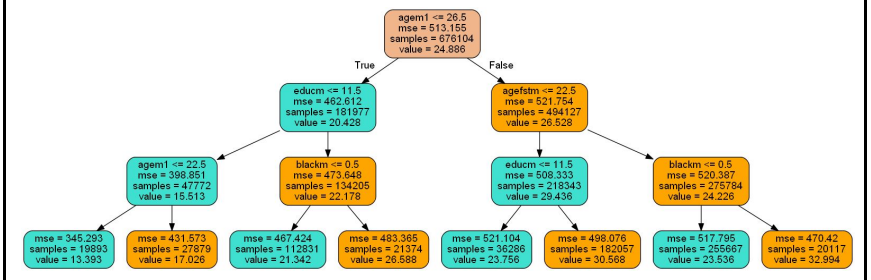
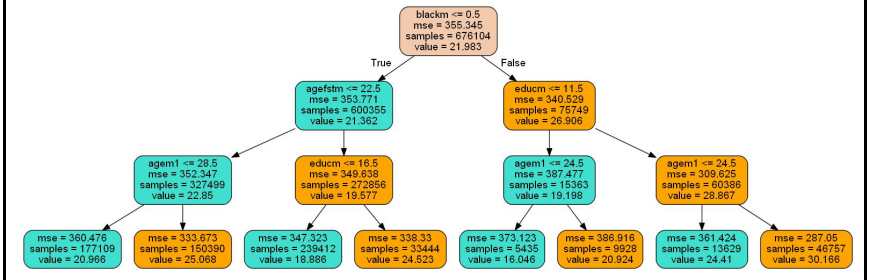
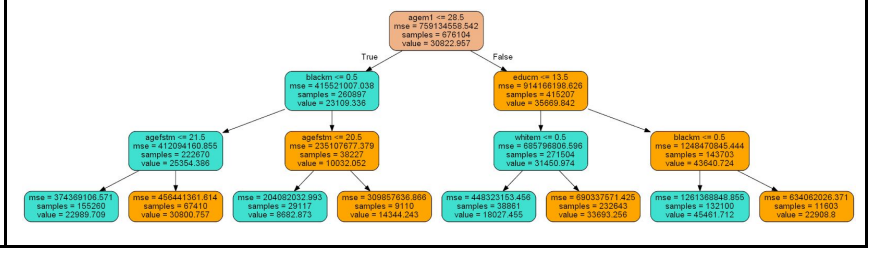
Plain decision trees on treatment 0 and treatment 1 data

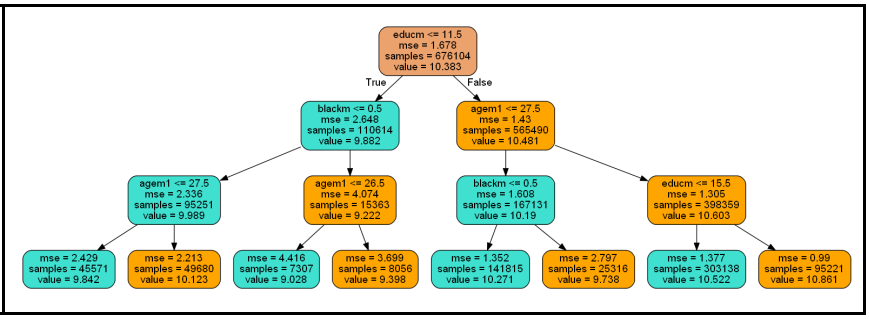
Treatment =1

All Women	Worked for pay	
All Women	Weeks worked	
All Women	Hours worked	
All Women	Annual labour Income	

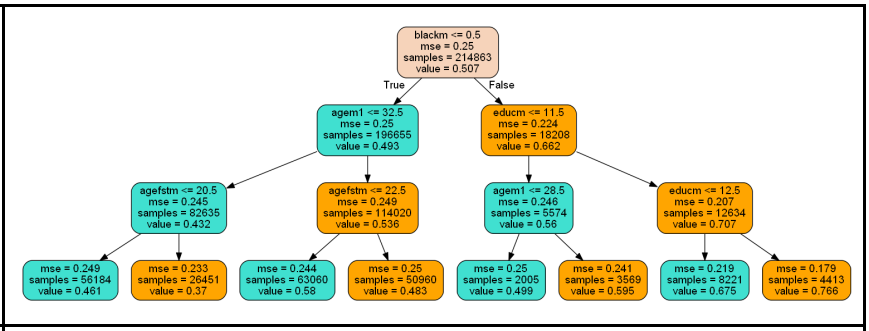
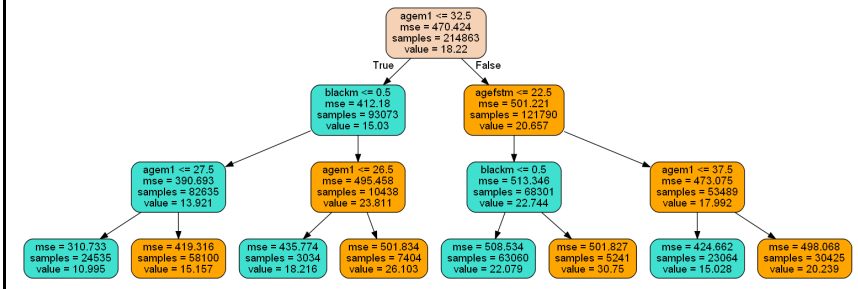
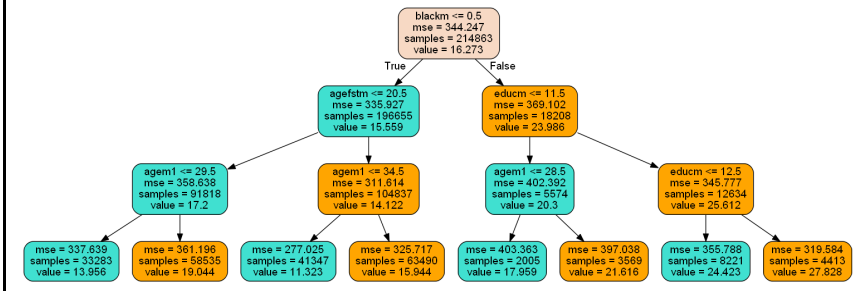
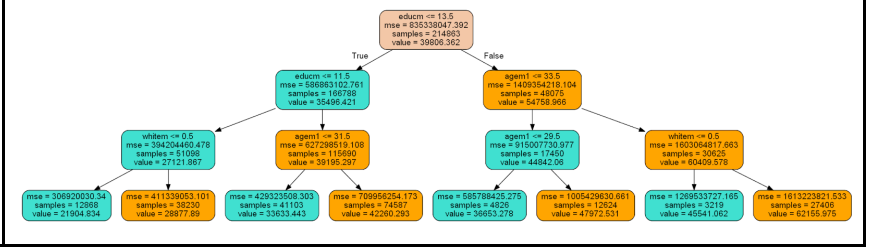
All Women	Log family income	

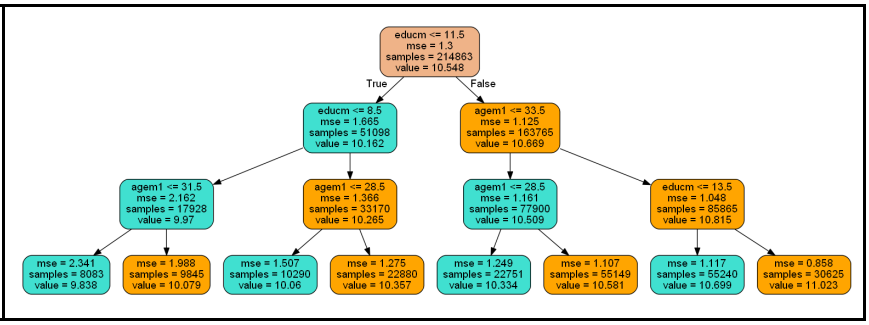
Treatment =0

All Women	Worked for pay	
All Women	Weeks worked	
All Women	Hours worked	
All Women	Annual labour Income	

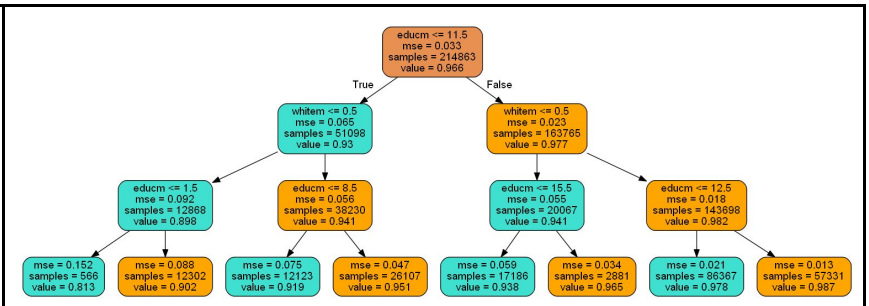
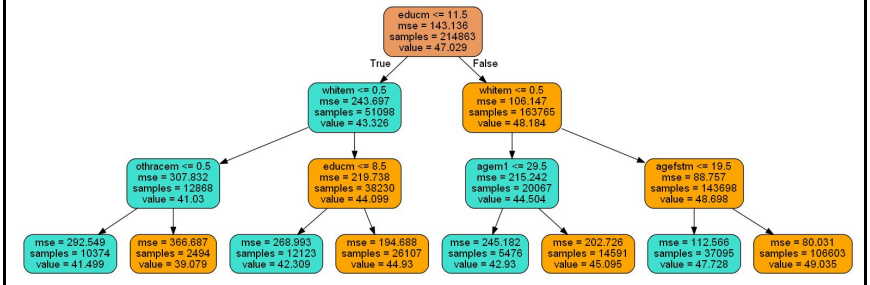
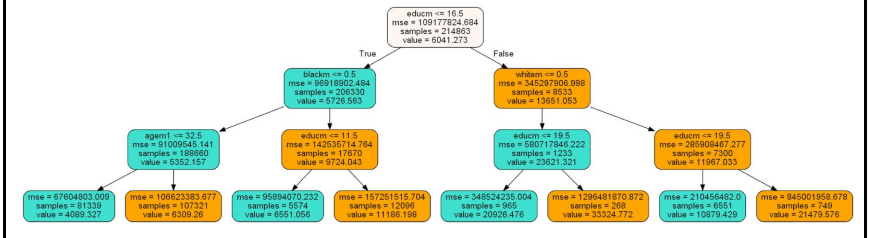
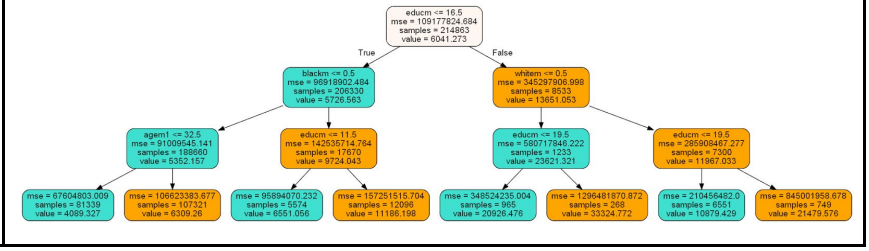
All Women	Log family income	

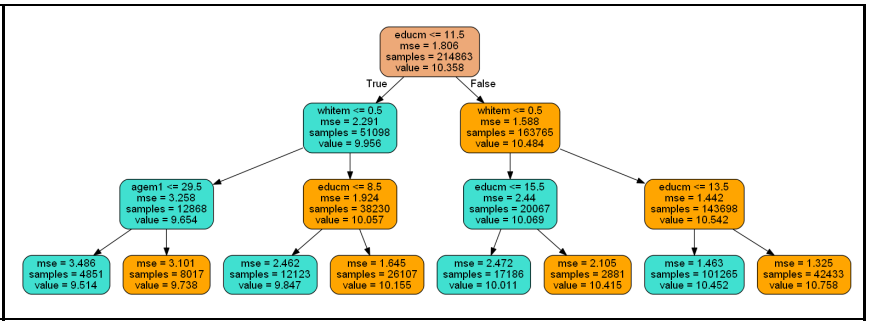
Treatment = 1

Married Women	Worked for pay	
Married Women	Weeks worked	
Married Women	Hours worked	
Married Women	Annual labour Income	

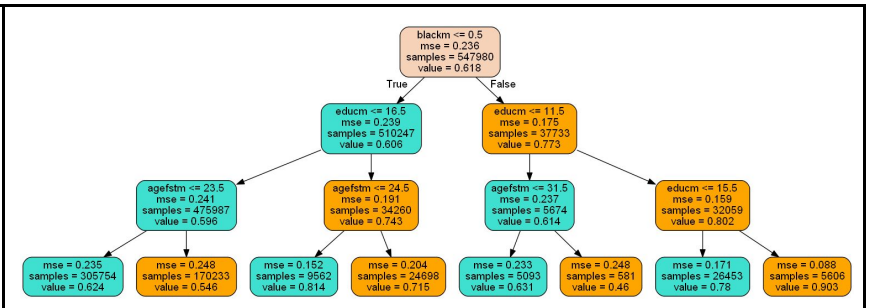
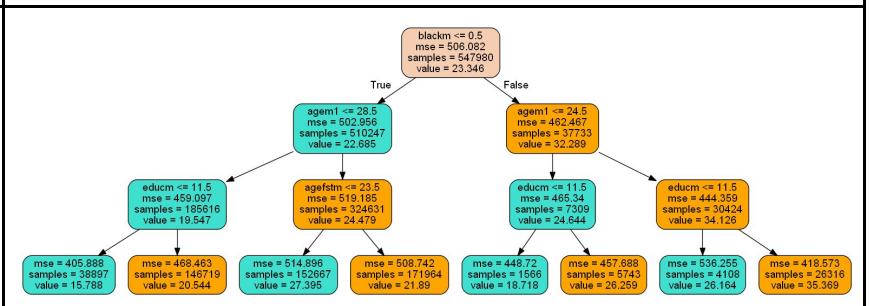
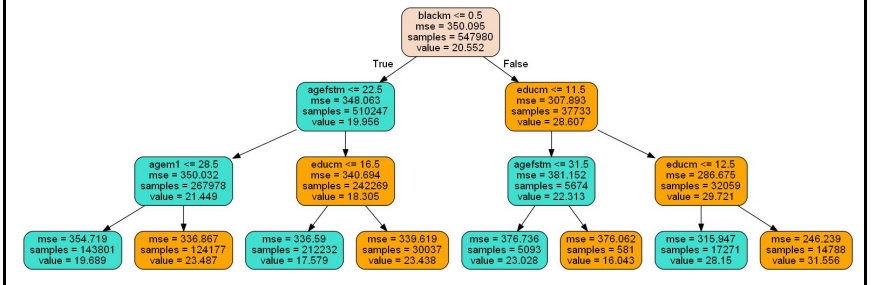
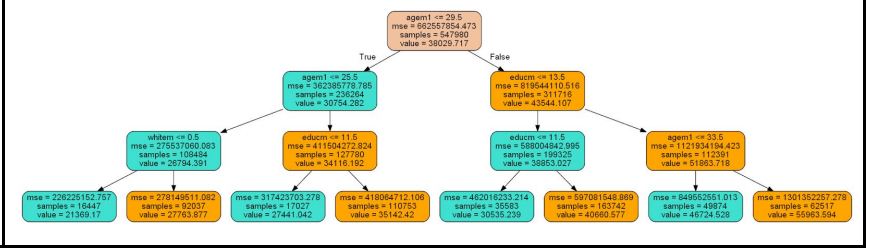
Married Women	Log family income	

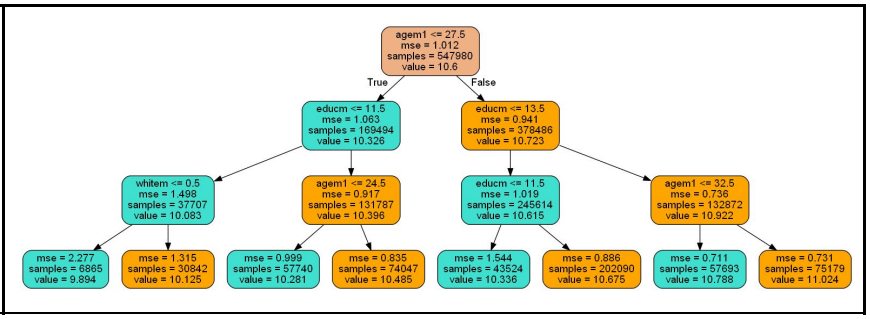
Treatment = 1

Husband	Worked for pay	
Husband	Weeks worked	
Husband	Hours worked	
Husband	Annual labour Income	

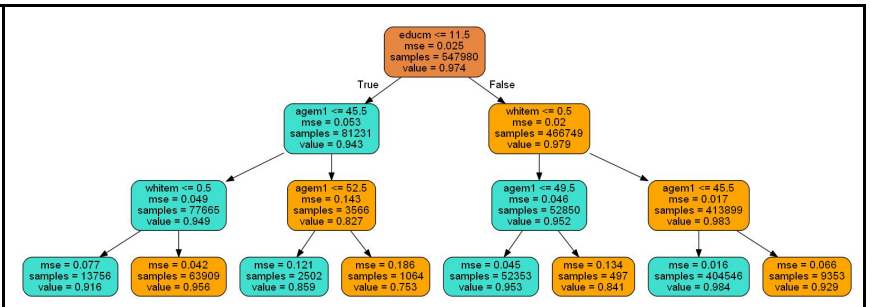
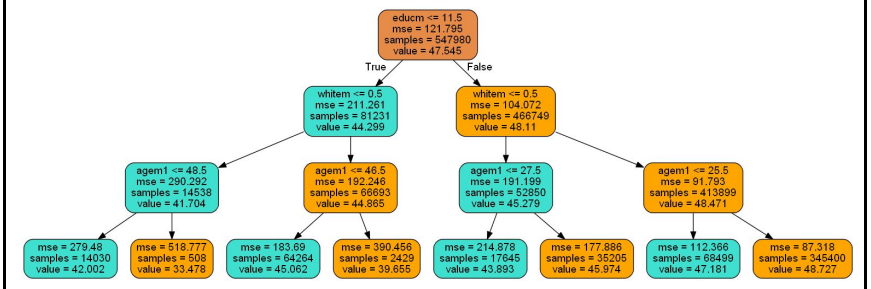
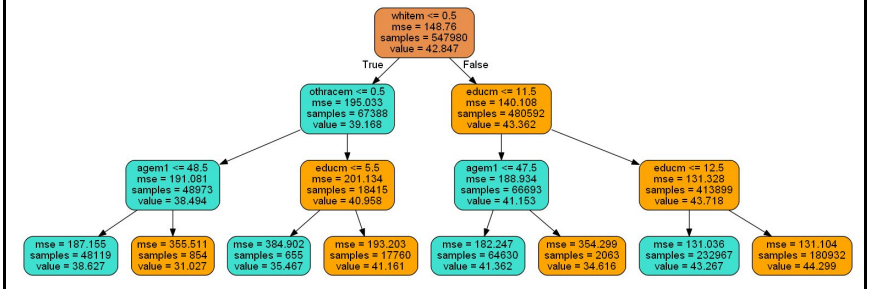
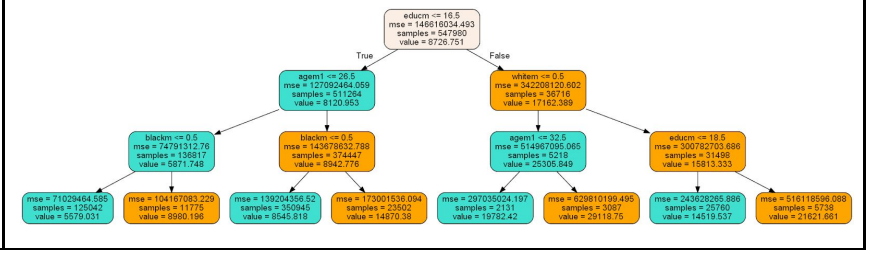
Husband	Log family income	

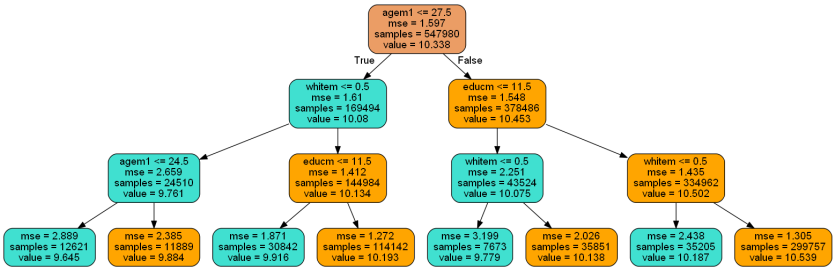
Treatment = 0

Married Women	Worked for pay	
Married Women	Weeks worked	
Married Women	Hours worked	
Married Women	Annual labour Income	

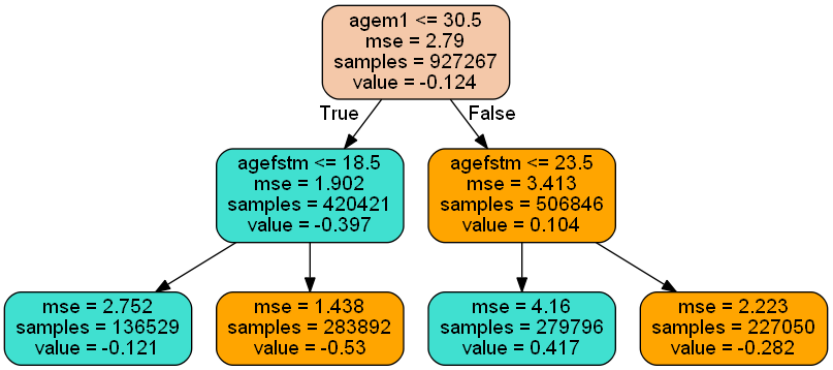
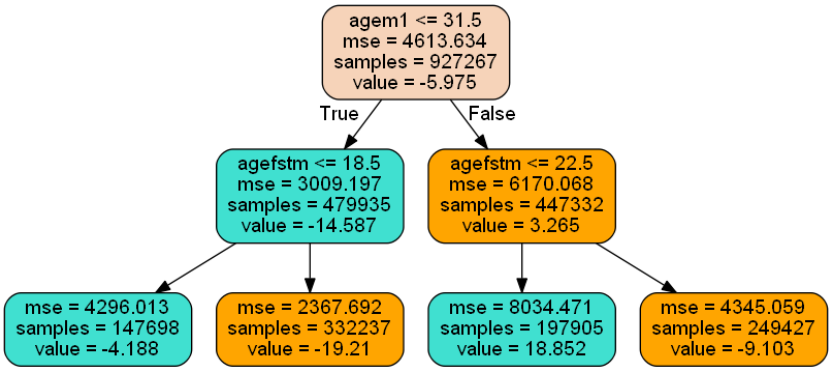
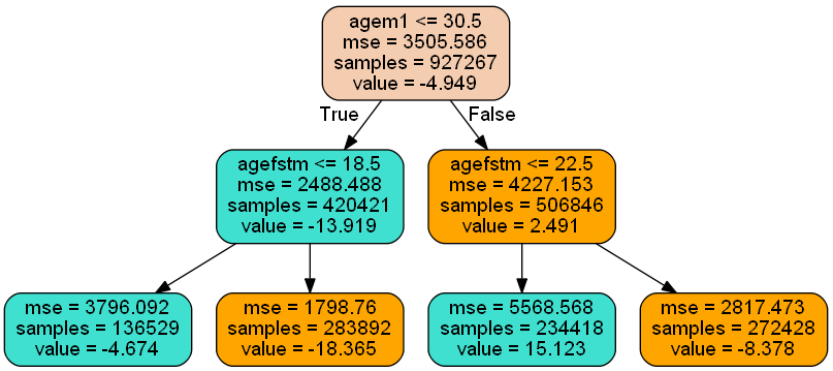
Married Women	Log family income	

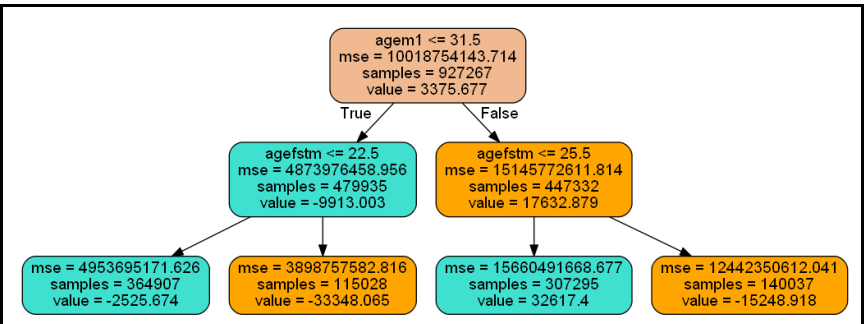
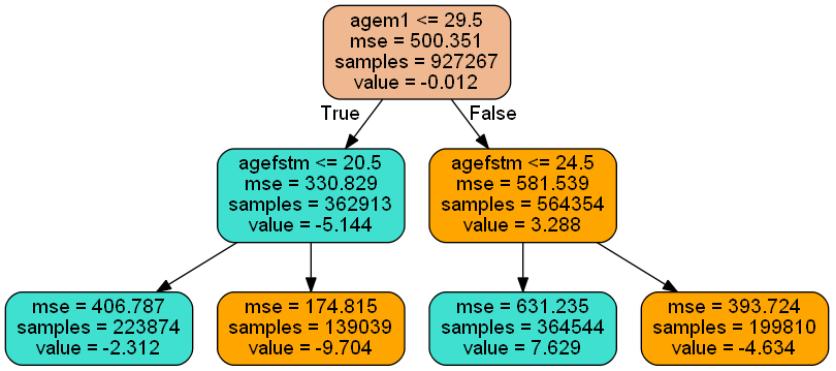
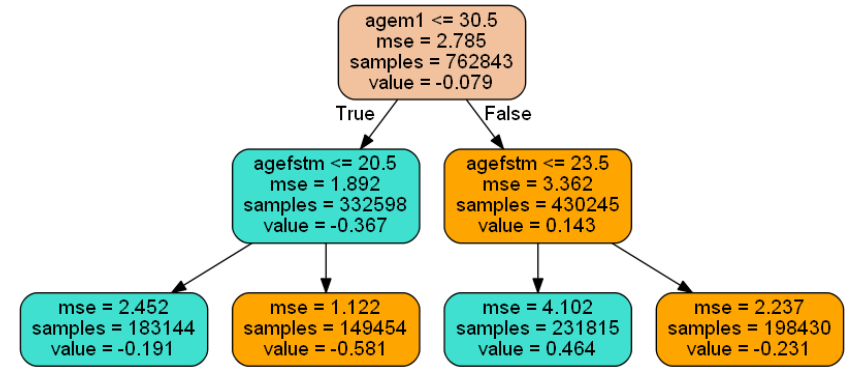
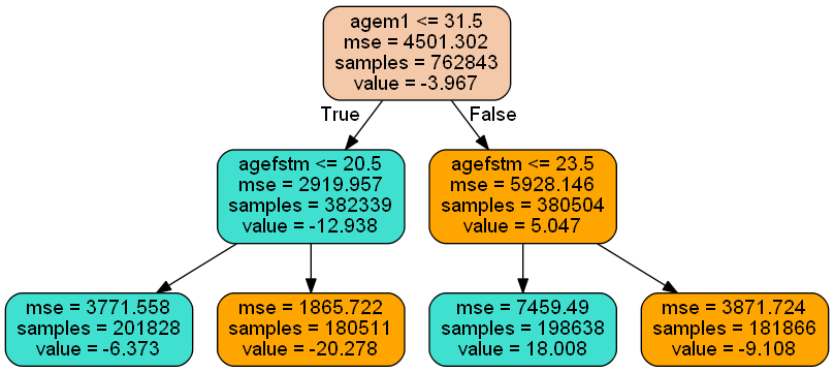
Treatment = 0

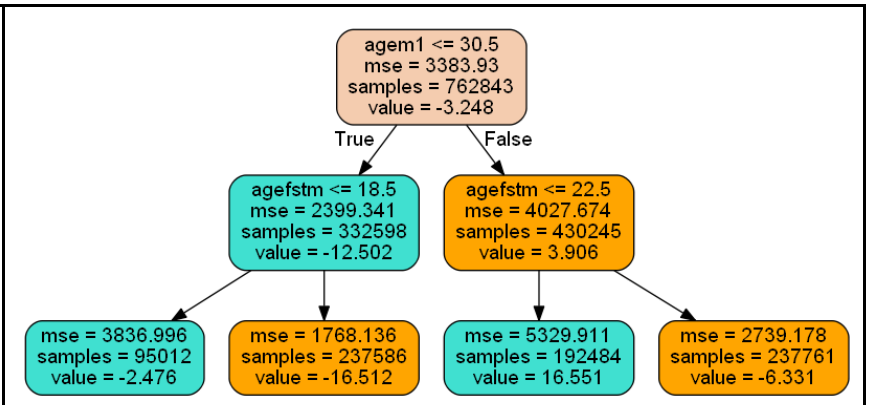
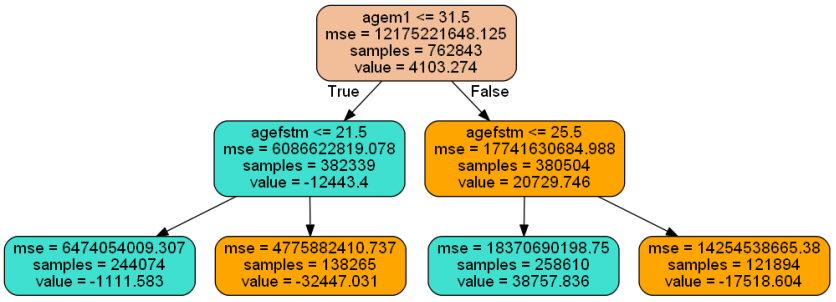
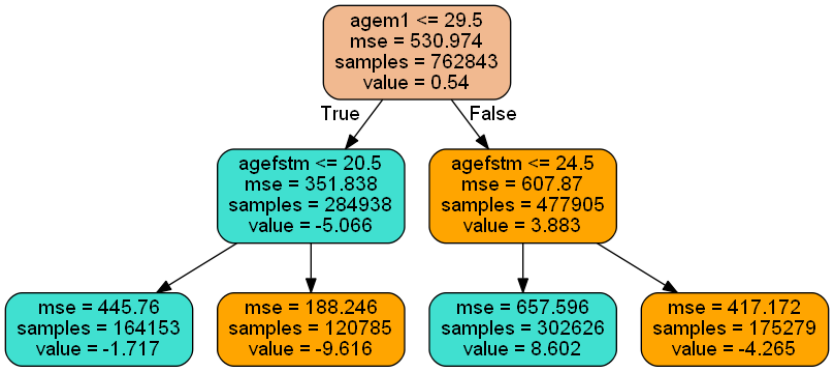
Husband	Worked for pay	
Husband	Weeks worked	
Husband	Hours worked	
Husband	Annual labour Income	

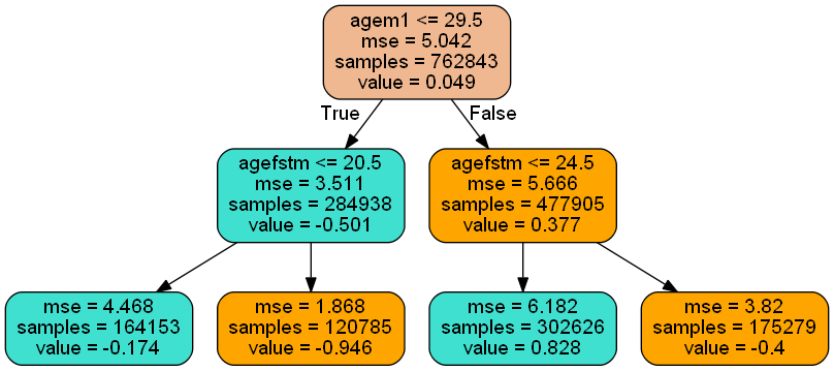
Husband	Log family income	

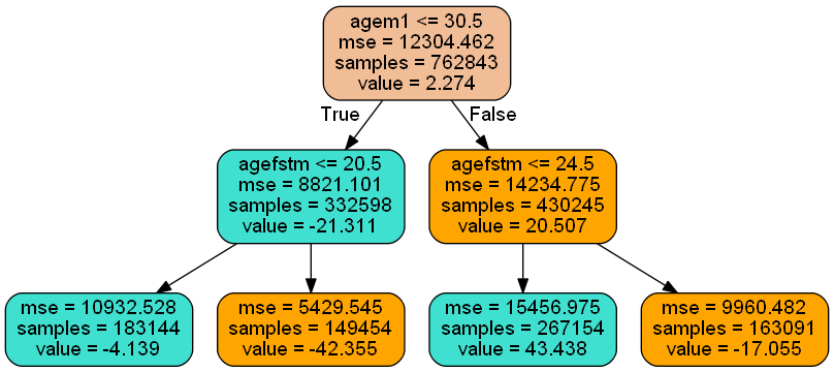
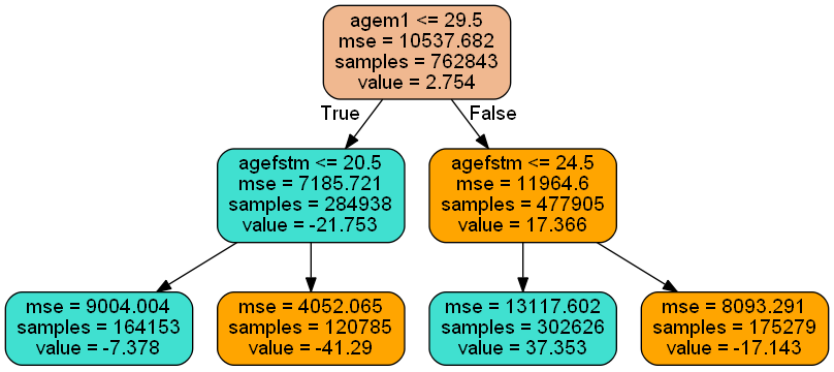
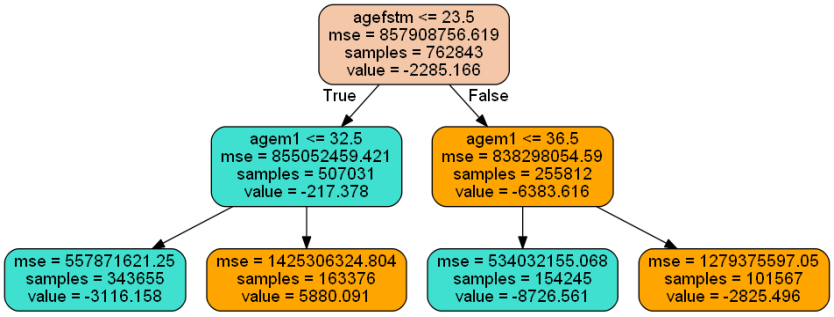
Transformed Outcome Trees

All Women	Worked for pay	
All Women	Weeks worked	
All Women	Hours worked	

All Women	Annual labour Income	
All Women	Log family income	
Married Women	Worked for pay	
Married Women	Weeks worked	

Married Women	Hours worked	
Married Women	Annual labour Income	
Married Women	Log family income	

Husband	Worked for pay	

Husband	Weeks worked	
Husband	Hours worked	
Husband	Annual labour Income	
Husband	Log family income