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*************************************************************************************
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MICRO CODING SAMPLE
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*Converting to Long format*
reshape long pri sec loc dev enj whoa whob whoc whod, i( mainid diaryord )
j(slot)


sort mainid diaryord slot

 *** Weighting the data***
* There are 3 weight variables available. The CTUR reccommends to use the
'reccommdended weight' variable.
* You can run this at the beginning of your analysis, by typing:
svyset [pweight= daywtq4]


 ** Broad activities: New variable derived from primary activities ***


* This code creates a variable, "Broad", which takes a different value for each
broad category of activities.
* This coarsens activity data, for example by treating "sleeping", "washing" and
"resting" as the same category.
* Sleep/Personal care: Sleeping
gen broad = 1 if (pri == 101)
* Sleep/Personal care: Resting
replace broad = 1 if (pri == 102)
* Sleep/Personal care: Washing, dressing
replace broad = 1 if (pri == 103)
* Eat/Drink: Eating or Drinking
replace broad = 2 if (pri == 104)
* housework > Preparing food, cooking etc
replace broad = 3 if (pri == 105)
* housework > Cleaning tidying housework .
replace broad = 3 if (pri == 106)
* housework > Clothes washing, mending .
replace broad =3 if (pri == 107)
* housework > Maintenance DIY, etc .
replace broad = 3 if (pri == 108)
* services > Personal services .
replace broad = 4 if (pri == 109)
* services > Shopping, bank etc incl. internet .
replace broad = 4 if (pri == 126)
* leisure > Church, temple, synagogue, prayer.
replace broad = 5 if (pri == 110)
* leisure > Recreational courses.
replace broad = 5 if (pri == 119)
```

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* leisure > Reading including e-books.
replace broad = 5 if (pri == 128)
* leisure > Going out to eat, drink.
replace broad = 5 if (pri == 130)
* leisure > Walking, dog walking.
replace broad = 5 if (pri == 131)
* leisure > eating or drinking in a restaurant or caf?? .
replace broad = 5 if (pri == 133)
* leisure > Cinema, theatre, sport etc.
replace broad = 5 if (pri == 135)
* leisure > Hobbies
replace broad = 5 if (pri == 136)
* travel > Travel: walking, jogging .
replace broad = 6 if (pri == 111)
* travel > Travel: cycle .
replace broad = 6 if (pri == 112)
* travel > Travel: by car.
replace broad = 6 if (pri == 113)
* travel > Travel: by bus, tram .
replace broad = 6 if (pri == 114)
* travel > Travel: by train, tube.
replace broad = 6 if (pri == 115)
* travel > Travel: other .
replace broad = 6 if (pri == 116)
* work > Paid work including at home .
replace broad = 7 if (pri == 117)
* work > Formal education .
replace broad = 7 if (pri == 118)
* work > Work or study break .
replace broad = 7 if (pri == 125)
* unpaidwork > Voluntary work for organisation.
replace broad = 8 if (pri == 120)
* unpaidwork > Caring for own child .
replace broad = 8 if (pri == 121)
* unpaidwork > Caring for other children.
replace broad = 8 if (pri == 122)
* unpaidwork > Help, caring for cores adult .
replace broad = 8 if (pri == 123)
* unpaidwork > Help, caring for no coresidents .
replace broad = 8 if (pri == 124)
* media > Watching tv, video, DVD, music .
replace broad = 9 if (pri == 127)
* media > Playing computer games .
replace broad = 9 if (pri == 132)
* media > Telephone, text, email, letters.
replace broad = 9 if (pri == 134)
* sports > Playing sports, exercise.
replace broad = 10 if (pri == 129)
* other > Write-in, not code .
replace broad = 11 if (pri == 137)
label variable broad "Broad activities"
label define broadx 1 "Sleeping/Personal care" 2 "Eating/drinking" 3 "Housework"
4 "Services" 5 "Leisure" 6 "Travelling" 7 "Paid work/Education" 8 "Unpaid work" 9
"Media" 10 "Sports" 11 "Other"
```

```
label values broad broadx
tab broad
tab pri broad

 ***** Broad primary activities - Duration + Dummy for participation *********

* This code identifies for the broad classes of primary activity
* The duration of each, and a binary indicator of whether the participant spent
any time doing them

************************************ Sleeping/Relaxing/Personal care (primary
activity) ************************************
by mainid diaryord, sort: egen personall = total(pri == 101 | pri == 102 | pri ==
103)
gen personal01=personall
recode personal01 (1/144=1) (0=0)
label variable personal01 "Personal care including sleeping and relaxing"
gen personal=personall*10


********************************************** Eating/drinking (primary
activity) **********************************************
by mainid diaryord, sort: egen eatingl = total(pri == 104)
gen eating01=eatingl
recode eating01 (1/144=1) (0=0)
label variable eating01 "Eating/drinking"
gen eating=eatingl*10
*forgot clothes washing*
************************************************** Housework (primary activity)
**********************************************
by mainid diaryord, sort: egen houseworkl = total(pri == 105 | pri == 106 |
pri==107 | pri == 108 | pri == 109)
gen housework01=houseworkl
recode housework01 (1/144=1) (0=0)
label variable housework01 "Housework"
gen housework=houseworkl*10

************************************************* Services (primary activity)
*********************************************
by mainid diaryord, sort: egen servicesl = total(pri == 109 | pri == 126)
gen services01=servicesl
recode services01 (1/144=1) (0=0)
label variable services01 "Services"
gen services=servicesl*10

****************************************** Leisure activities (primary
activity) ******************************************
by mainid diaryord, sort: egen leisurel = total(pri == 110 | pri == 119 | pri ==
128 | pri == 130 | pri == 131 | pri == 133 | pri == 135 | pri == 136)
gen leisure01=leisurel
recode leisure01 (1/144=1) (0=0)
label variable leisure01 "Leisure"
gen leisure=leisurel*10
```

```
********************************************** Travel (primary activity)
*******************************************
by mainid diaryord, sort: egen travell = total(pri == 111 | pri == 112 | pri ==
113 | pri == 114 | pri == 115 | pri == 116)
gen travel01=travell
recode travel01 (1/144=1) (0=0)
label variable travel01 "Travel"
gen travel=travell*10

********************************************** Work (primary activity)
*******************************************
by mainid diaryord, sort: egen workl = total(pri == 117 | pri == 118 | pri ==
125)
gen work01=workl
recode work01 (1/144=1) (0=0)
label variable work01 "Work"
gen work=workl*10

********************************************** Unpaid (primary activity)
*******************************************
by mainid diaryord, sort: egen unpaidl = total(pri == 120 | pri == 121 | pri ==
122 | pri == 123 | pri == 124)
gen unpaid01=unpaidl
recode unpaid01 (1/144=1) (0=0)
label variable unpaid01 "Unpaid"
gen unpaid=unpaidl*10

********************************************** Media (primary activity)
*******************************************
by mainid diaryord, sort: egen medial = total(pri == 127 | pri == 132 | pri ==
134)
gen media01=medial
recode media01 (1/144=1) (0=0)
label variable media01 "Media"
gen media=medial*10

********************************************** Sports (primary
activity) *******************************************
by mainid diaryord, sort: egen sportsl = total(pri == 129)
gen sports01=sportsl
recode sports01 (1/144=1) (0=0)
label variable sports01 "Sports"
gen sports=sportsl*10

********************************************** Other (primary
activity) *******************************************
by mainid diaryord, sort: egen otherl = total(pri == 137)
gen other01=otherl
recode other01 (1/144=1) (0=0)
label variable other01 "Other"
gen other=otherl*10
```

```
*Dummy for participation secondary activity*
by mainid diaryord, sort: egen sportsll = total(sec == 129)
gen sports001=sportsll
recode sports001 (1/144=1) (0=0)
label variable sports001 "sports Secondary"
gen sportssec=sportsll*10

by mainid diaryord, sort: egen walkingll = total(sec == 131)
gen walking001=walkingll
recode walking001 (1/144=1) (0=0)
label variable walking001 "walking Secondary"
gen walkingsec=walkingll*10



************************************************** Number of episode changes
**************************************************
************************************ Primary activity, enjoyment, location,
co-presence ************************************


* This code identifies the number of 'episode' changes for an individual diary
* There are four ways of identifying an episode change -  from one activity,
level of enjoyment, location, or co-presence
* If a person has the same values for all of these all day, that is 0 episode
changes
* If they change once, that is 1 episode change, if they change twice, that is
two - even if the change is back to the characteristic of the first episode

************************************** Number of episode changes: Primary
activity ***************************************

gen slot1 = slot
replace slot1 = slot1 +144 if(diaryord == 2)
replace slot1 = slot1 +288 if(diaryord == 3)
replace slot1 = slot1 +432 if(diaryord == 4)
xtset mainid slot1
gen change_activity = pri - l.pri
gen tag=0
replace tag = 1 if( change_activity != 0 ) & change_activity!=.
* Caluclate a variable that counts the number of changes for each participant
(every 144)
egen day1tags = total( tag ) if(slot1 <= 144), by( mainid )
egen day2tags = total( tag )if(slot1 > 144 & slot1 <=288), by( mainid )
egen day3tags = total( tag ) if(slot1 > 288 & slot1 <=432), by( mainid )
egen day4tags = total( tag )if(slot1 > 432), by( mainid )
gen episodes = day1tags
replace episodes = day2tags if(diaryord == 2)
replace episodes = day3tags if(diaryord == 3)
replace episodes = day4tags if(diaryord == 4)



************************************** Number of episode changes: Enjoyment
```

```
level ****************************************

gen slot2=slot
replace slot2 = slot2 +144 if(diaryord == 2)
replace slot2 = slot2 +288 if(diaryord == 3)
replace slot2 = slot2 +432 if(diaryord == 4)
xtset mainid slot2
gen change_enj = enj - l.enj
gen tagenj=0
replace tagenj = 1 if( change_enj != 0 ) & change_enj!=.
* Caluclate a variable that counts the number of enjoyment changes for each
participant (every 144)
egen day1tagsenj = total( tagenj ) if(slot2 <= 144), by( mainid )
egen day2tagsenj = total( tagenj )if(slot2 > 144 & slot2 <=288), by( mainid )
egen day3tagsenj = total( tagenj ) if(slot2 > 288 & slot2 <=432), by( mainid )
egen day4tagsenj = total( tagenj )if(slot2 > 432), by( mainid )
gen episodesenj = day1tagsenj
replace episodesenj = day2tagsenj if(diaryord == 2)
replace episodesenj = day3tagsenj if(diaryord == 3)
replace episodesenj = day4tagsenj if(diaryord == 4)

****************************************** Number of episode changes:
Location ******************************************

gen slot3=slot
replace slot3 = slot3 +144 if(diaryord == 2)
replace slot3 = slot3 +288 if(diaryord == 3)
replace slot3 = slot3 +432 if(diaryord == 4)
xtset mainid slot3
gen change_loc = loc - l.loc
gen tagloc=0
replace tagloc = 1 if( change_loc != 0 ) & change_loc!=.
* Caluclate a variable that counts the number of location changes for each
participant (every 144)
egen day1tagsloc = total( tagloc ) if(slot3 <= 144), by( mainid )
egen day2tagsloc = total( tagloc )if(slot3 > 144 & slot2 <=288), by( mainid )
egen day3tagsloc = total( tagloc ) if(slot3 > 288 & slot2 <=432), by( mainid )
egen day4tagsloc = total( tagloc )if(slot3 > 432), by( mainid )
gen episodesloc = day1tagsloc
replace episodesloc = day2tagsloc if(diaryord == 2)
replace episodesloc = day3tagsloc if(diaryord == 3)
replace episodesloc = day4tagsloc if(diaryord == 4)

************************************* Number of episode changes: Co-presence
(person A) **********************************

gen slot4=slot
replace slot4 = slot4 +144 if(diaryord == 2)
replace slot4 = slot4 +288 if(diaryord == 3)
replace slot4 = slot4 +432 if(diaryord == 4)
xtset mainid slot4
gen change_who = whoa - l.whoa
gen tagwho=0
replace tagwho = 1 if( change_who != 0 ) & change_who!=.
```

```
* Caluclate a variable that counts the number of location changes for each
participant (every 144)
egen day1tagswho = total( tagwho ) if(slot4 <= 144), by( mainid )
egen day2tagswho = total( tagwho )if(slot4 > 144 & slot2 <=288), by( mainid )
egen day3tagswho = total( tagwho ) if(slot4 > 288 & slot2 <=432), by( mainid )
egen day4tagswho = total( tagwho )if(slot4 > 432), by( mainid )
gen episodeswho = day1tagswho
replace episodeswho = day2tagswho if(diaryord == 2)
replace episodeswho = day3tagswho if(diaryord == 3)
replace episodeswho = day4tagswho if(diaryord == 4)



 ****** Week day/ Weekend day*******

* Whether completed on a week day or a weekend day
by mainid dday diaryord , sort: egen weekday1 = total(dday == 1 | dday == 2 |
dday == 3 | dday == 4 | dday == 5 )
gen weekday=weekday1
recode weekday (1/144=1) (0=0)
label variable weekday "Weekday/Weekend day"
label define weekdayx 0 "Weekend day" 1 "Weekday"
label values weekday weekdayx
tab dday weekday


*Creating Dummy variables and Duration variables for each leisure activity*
label list pri144
*Pri==110, i.e going to church,temple, prayer*
by mainid diaryord, sort: egen religious_activities= total(pri==110)
gen religious01= religious_activities
recode religious01 (1/144=1) (0=0)
label variable religious01 " Going to Church, temple, prayer"
gen religious= religious_activities*10
sum religious
lab variable religious " Time spent in religious activites(Leisure)"

*Pri==119 i.e Recreational Courses*
by mainid diaryord, sort: egen rec_courses= total(pri==119)
gen reccourses01= rec_courses
recode reccourses01 (1/144=1) (0=0)
lab var reccourses01 " Recreational Courses"
gen reccourses= rec_courses*10
lab var reccourses "time spent in recreational courses"

*Pri==128 i.e Reading Including Ebooks*
by mainid diaryord, sort: egen reading_= total(pri==128)
gen reading01= reading_
recode reading01 (1/144=1) (0=0)
lab var reading01 " reading Including Ebooks"
gen reading= reading_*10
lab var reading " Time spent reading including ebooks"

*Pri==130 i.e going out to eat, drink*
```

```
by mainid diaryord, sort: egen going_out= total(pri==130)
gen goingout01= going_out
recode goingout01 (1/144=1) (0=0)
lab var goingout01 "going out to eat,drink"
gen goingout= going_out*10
lab var goingout "time spent in going out to eat,drink"


*Pri==131 i. e walking, dog walking*
by mainid diaryord, sort: egen walking_= total(pri==131)
gen walking01= walking_
recode walking01 (1/144=1) (0=0)
lab var walking01 " walking inlcuding dog walking"
gen walking= walking_*10
lab var walking " time spent walking, dog walking"


*Pri==133 i.e Time With Friends and Family
by mainid diaryord, sort: egen FF_time= total(pri==133)
gen FFtime01= FF_time
recode FFtime01 (1/144=1)  (0=0)
lab var FFtime01 " Time with friends, family"
gen FFtime= FF_time*10
lab var FFtime " Time Spent with firends, family"

*Pri==135 i.e cinema,theatre,sport*
by mainid diaryord, sort: egen ent_cts= total(pri==135)
gen entcts01=ent_cts
recode entcts01 (1/144=1) (0=0)
lab var entcts01 " Cinema, theatre, sport etc"
gen entcts= ent_cts*10
lab var entcts " Time spent in some sort of entertainment- cinema, theatre, sport
etc"


*Pri==136 i.e hobbies*
by mainid diaryord, sort: egen hobbies_= total(pri==136)
gen hobbies01=hobbies_
recode hobbies01 (1/144=1) (0=0)
lab var hobbies01 " Hobbies"
gen hobbies= hobbies_*10
lab var hobbies "time spent in hobbies"




*Creating Dummy variables and Duration variables for phyical activity*

*Travel:Walking* i.e pri=111*
by mainid diaryord, sort: egen Twalking_= total(pri==111)
gen Twalking01=Twalking_
recode Twalking01 (1/144=1) (0=0)
lab var Twalking01 " Travel:walking, jogging"
```

```
gen Twalking= Twalking_*10
lab var Twalking "time spent in Travel by walking, jogging"

*Travel: Cycle i.e pri=112
by mainid diaryord, sort: egen Tcycle_= total(pri==112)
gen Tcycle01=Tcycle_
recode Tcycle01 (1/144=1) (0=0)
lab var Tcycle01 " Travel:cycling"
gen Tcycle= Tcycle_*10
lab var Tcycle "time spent in Travel by cycle"


*Combined Dummy for primary and secondary activity*

gen sports1=  (sports01==1|sports001==1)
gen walking1= (walking01==1|walking001==1)
gen sportsc= sports+ sportssec
gen walkingc= walking+walkingsec




 ******* KEEPING ONE SLOT PER DIARY ENTRY *******

*This code moves the data from having one row per individual/10 minute time
period, to having one row per individual.
* Essentially reducing to one diary per participant per row *
keep if slot == 1



*Data Management*

*Only using diary one*
keep if diaryord==1


*Worknorm takes -7 if not applicable* * making it zero*  *dropping not asked in
wave non response*
lab list wkhrnorm
*933 not applicable*
tab wkhrnorm
*making it zero, as wkhrnorm is hours worked in a normal week and not applicable
to this question essentially means unemployed/ no worked hours*

replace wkhrnorm=0 if wkhrnorm==-7
*Dropping non response and prefer not to say*
lab list marstat
*Prefer not to say has no observations*
tab marstat
*dropping if non responsive as its just 8 observations*
drop if marstat==-8
*No response/ not asked zero observations, one observation with 14 kids lets drop
it as the rest is 0-5*
```

```
lab list nkids
tab nkids
recode nkids (0=0 "0") (1=1 "1") (2 3 4 5 14 =2 "2+"), gen(nkidsr) label(nkidsr)
test
*No problems*
lab list hied
tab hied
inspect hied

*No problems*
tab age
inspect age


tab weekday
* nearly 2500 not asked in wave for all of them*
tab ncinema
lab list ncinema
lab list ntheatre
tab ntheatre
tab nmuseum
tab ncastle
tab nsports
tab neatout
tab nenttain
* only asked in 2016*
by survey, sort : tabulate wcinema
by survey, sort : tabulate ncinema
inspect ncinema
*Asked In all surveys*
by survey, sort : tabulate swim_4wk
inspect swim_4wk
tab swim_4wk

recode econstat (1/4 = 1 "employed") (5 = 2 "Student")  ( 6 7 8 9 11 =3 "not in
labour force")  (10 = 4 "Unemployed"), generate(econstatr) label(econstatr) test

foreach xx in swimlast kfitlast bikelast teamlast racqlast golflast hikelast
joglast otherlast{
recode `xx' (0=0) (2=0)
lab define `xx' 0 "no/not asked" 1 "yes", replace
}

gen sports_4wk= swim_4wk + team_4wk + racq_4wk + golf_4wk+ other_4wk + jog_4wk
+kfit_4wk + bike_4wk
lab variable sports_4wk "total no of times Participated in  of sports/ physical
activity in the last four weeks"


gen sportslast =   ( kfitlast==1 | teamlast==1 | racqlast==1  |golflast==1 |
joglast==1  | otherlast==1 | swimlast==1)
lab define sportslast 1 "yes" 0 "no"
label values sportslast sportslast
lab var sportslast "Dummy variable for participated in any sport/physical
```

```
activity last week"

foreach xx in wcinema wtheatre wmuseum wlibrary wcastle wsports weatout wenttain{
recode `xx' (0=0) (2=0)
lab define `xx' 0 "no/not asked" 1 "yes" -8 "non response" -5 "not asked in
wave", replace
}

gen agesq=age^2

gen totaltime= personal+ eating+ housework+ services+ leisure+ travel+ work+
unpaid+ media+ sports+ other
lab var totaltime " Total time spent across all activities"
gen adj= totaltime/1440
lab var adj "adjustment factor"
sum adj

foreach xx in  personal eating housework services leisure travel work unpaid
media sports other walking sportsc walkingc{
gen adj_`xx'=`xx'/adj
lab var adj_`xx' "Adjusted `xx'"
}


gen lockdown = survey
recode lockdown (1=0) (2=1) (3=0) (4=1) (5=1) (6=0)
label variable lockdown "Lockdown"
label define lockdownx 0 "Not in a Lockdown" 1 "Lockdown"
label values lockdown lockdownx
tab lockdown

gen sports_c= 2 if (sports_4wk!=0 & sportslast==1)
replace sports_c= 1 if (sports_4wk!=0 & sportslast==0)
replace sports_c= 0 if (sports_4wk==0)
gen hike_c= 2 if (hike_4wk!=0 & hikelast==1)
replace hike_c= 1 if (hike_4wk!=0 & hikelast==0)
replace hike_c= 0 if (hike_4wk==0)

foreach xx in wcinema wtheatre wmuseum wlibrary wcastle wsports weatout wenttain{
gen `xx'_1=`xx' if survey==1
lab values `xx'_1 `xx'
lab var `xx' "variables for just survey 1"
}



gen cinema_c = 2 if (ncinema!=0 & wcinema_1==1)
replace cinema_c = 1 if (ncinema!=0 & wcinema_1==0)
replace cinema_c = 0 if (ncinema==0)

gen museum_c = 2 if (nmuseum!=0 & wmuseum_1==1)
replace museum_c = 1 if (nmuseum!=0 & wmuseum_1==0)
replace museum_c = 0 if (nmuseum==0)
```

```
gen library_c = 2 if (nlibrary!=0 & wlibrary_1==1)
replace library_c = 1 if (nlibrary!=0 & wlibrary_1==0)
replace library_c = 0 if (nlibrary==0)

gen castle_c = 2 if (ncastle!=0 & wcastle_1==1)
replace castle_c = 1 if (ncastle!=0 & wcastle_1==0)
replace castle_c = 0 if (ncastle==0)

gen sporting_c = 2 if (nsports!=0 & wsports_1==1)
replace sporting_c = 1 if (nsports!=0 & wsports_1==0)
replace sporting_c = 0 if (nsports==0)

gen eatout_c = 2 if (neatout!=0 & weatout_1==1)
replace eatout_c = 1 if (neatout!=0 & weatout_1==0)
replace eatout_c = 0 if (neatout==0)

gen enttatin_c = 2 if (nenttain!=0 & wenttain_1==1)
replace enttatin_c = 1 if (nenttain!=0 & wenttain_1==0)
replace enttatin_c = 0 if (nenttain==0)



gen swim_c= 2 if (swim_4wk!=0 & swimlast==1)
replace swim_c= 1 if (swim_4wk!=0 & swimlast==0)
replace swim_c=0 if swim_4wk==0

gen kfit_c= 2 if (kfit_4wk!=0 & kfitlast==1)
replace kfit_c = 1 if (kfit_4wk!=0 & kfitlast==0)
replace kfit_c = 0 if kfit_4wk==0

gen bike_c= 2 if (bike_4wk!=0 & bikelast==1)
replace bike_c =1 if (bike_4wk!=0 & bikelast==0)
replace bike_c= 0 if bike_4wk==0

gen team_c=2 if (team_4wk!=0 & teamlast==1)
replace team_c =1 if (team_4wk!=0 & teamlast==0)
replace team_c=0 if team_4wk==0

gen racq_c= 2 if (racq_4wk!=0 & racqlast==1)
replace racq_c=1 if (racq_4wk!=0 & racqlast==0)
replace racq_c= 0 if racq_4wk==0

gen golf_c= 2 if (golf_4wk!=0 & golflast==1)
replace golf_c=1 if (golf_4wk!=0 & golflast==0)
replace golf_c= 0 if golf_4wk==0

gen jog_c = 2 if (jog_4wk!=0 & joglast==1)
replace jog_c= 1 if (jog_4wk!=0 & joglast==0)
replace jog_c=0 if (jog_4wk==0)

gen other_c=2 if (other_4wk!=0 &  otherlast==1)
replace other_c =1 if (other_4wk!=0 & otherlast==0)
replace other_c= 0 if other_4wk==0
```

```
*Participation Probabilites by various groups*
by sex, sort : tabulate sports01
gen i_prate_sports_male= 235/1623
gen i_prate_sports_female= 263/1553
by sex, sort : tabulate walking01
gen i_prate_walking_male= 342/1623
gen i_prate_walking_female= 333/1523
by marstat, sort : tabulate sports01
gen i_prate_sports_single=151/872
gen i_prate_sports_married=315/2047
gen i_prate_sports_divorced=32/257
by marstat, sort : tabulate walking01
gen i_prate_walking_single= 156/872
gen i_prate_walking_married= 468/2047
gen i_prate_walking_divorced= 51/257


*Actual participatio rates*
tab sports01
tab walking01
gen i_prate_sports=498/3176
gen i_prate_walking= 675/3176


tab sports1
gen prate_sports=536/3176
tab walking1
gen prate_walking= 716/3176

*Descriptives*
tabulate survey, subpop(mainid)
estpost tabulate survey, subpop(mainid)
esttab using tabsurvey.tex, replace cells("b(label(freq)) pct(fmt(2))
cumpct(fmt(2))") nonumber nomtitle nonote noobs  label collabels ("Frequency"
"Percentage" "Cumilative \%")
tabulate dagegrp, subpop(mainid)
estpost tabulate dagegrp, subpop(mainid)
esttab using tabdagegrp.tex, replace cells("b(label(freq)) pct(fmt(2))
cumpct(fmt(2))") nonumber nomtitle nonote noobs  label collabels ("Frequency"
"Percentage" "Cumilative \%")
tabulate sex, subpop(mainid)
estpost tabulate sex, subpop(mainid)
esttab using tabsex.tex, replace cells("b(label(freq)) pct(fmt(2))
cumpct(fmt(2))") nonumber nomtitle nonote noobs  label collabels ("Frequency"
"Percentage" "Cumilative \%")
tabulate marstat, subpop(mainid)
estpost tabulate marstat, subpop(mainid)
esttab using tabmarstat.tex, replace cells("b(label(freq)) pct(fmt(2))
cumpct(fmt(2))") nonumber nomtitle nonote noobs  label collabels ("Frequency"
"Percentage" "Cumilative \%")
tabulate dagegrp if survey==1, subpop(mainid)
estpost tabulate dagegrp if survey==1, subpop(mainid)
esttab using tabdagegrp1.tex, replace cells("b(label(freq)) pct(fmt(2))
```

```
cumpct(fmt(2))") nonumber nomtitle nonote noobs  label collabels ("Frequency"
"Percentage" "Cumilative \%")
tabulate sex if survey==1, subpop(mainid)
estpost tabulate sex if survey==1, subpop(mainid)
esttab using tabsex1.tex, replace cells("b(label(freq)) pct(fmt(2))
cumpct(fmt(2))") nonumber nomtitle nonote noobs  label collabels ("Frequency"
"Percentage" "Cumilative \%")
tabulate marstat if survey==1, subpop(mainid)
estpost tabulate marstat if survey==1, subpop(mainid)
esttab using tabmarstat1.tex, replace cells("b(label(freq)) pct(fmt(2))
cumpct(fmt(2))") nonumber nomtitle nonote noobs  label collabels ("Frequency"
"Percentage" "Cumilative \%")
tab nkidsr, subpop(mainid)
estpost tabulate nkidsr, subpop(mainid)
esttab using tabnkidsr.tex, replace cells("b(label(freq)) pct(fmt(2))
cumpct(fmt(2))") nonumber nomtitle nonote noobs  label collabels ("Frequency"
"Percentage" "Cumilative \%")
tabulate nkidsr if survey==1, subpop(mainid)
estpost tabulate nkidsr if survey==1, subpop(mainid)
esttab using tabnkidsr1.tex, replace cells("b(label(freq)) pct(fmt(2))
cumpct(fmt(2))") nonumber nomtitle nonote noobs  label collabels ("Frequency"
"Percentage" "Cumilative \%")
by survey, sort:  tab sports01
by survey, sort: tab walking01

*Participation Rates*
tabstat sports01, by (survey)
tabstat sports01, by (sex)
tabstat sports01, by (dagegrp)
tabstat sports01, by (marstat)
tabstat sports01, by (nkidsr)
tabstat walking01, by (survey)
tabstat walking01, by (sex)
tabstat walking01, by (dagegrp)
tabstat walking01, by (marstat)
tabstat walking01, by (nkidsr)




by survey, sort: tabstat adj_sports if sports01==1, statistics( mean p1 p99 sd )
graph hbar (mean) adj_sports if sports01==1, over(survey) title(Time Spent in
sports by survey) blabel(bar, size(tiny) format(%13.2fc))
by survey, sort: tabstat adj_walking if walking01==1, statistics( mean p1 p99 sd
)
graph hbar (mean) adj_walking if walking01==1, over(survey) title(Time Spent
walking by survey) blabel(bar, size(tiny) format(%13.2fc))
tabstat adj_sports if sports01==1, statistics( mean p1 median p99 sd ) by(sex)
tabstat adj_walking if walking01==1, statistics( mean p1 median p99 sd ) by(sex)
by marstat, sort : tabstat adj_sports if sports01==1, statistics( mean p1 median
p99 sd ) by(sex)
graph hbar (mean) adj_sports if sports01==1, over(sex) over(marstat) title(Time
Spent in sports by marital status) blabel(bar, size(tiny) format(%13.2fc))
by marstat, sort : tabstat adj_walking if walking01==1, statistics( mean p1
```

```
median p99 sd ) by(sex)
graph hbar (mean) adj_walking if walking01==1, over(sex) over(marstat) title(Time
Spent walking by marital status) blabel(bar, size(tiny) format(%13.2fc))
by nkidsr, sort : tabstat adj_sports if sports01==1, statistics( mean p1 median
p99 sd ) by(sex)
graph hbar (mean) adj_sports if sports01==1, over(sex) over(nkidsr) title(Time
Spent in sports by no of kids) blabel(bar, size(tiny) format(%13.2fc))
by nkidsr, sort : tabstat adj_walking if walking01==1, statistics( mean p1 median
p99 sd ) by(sex)
graph hbar (mean) adj_walking if walking01==1, over(sex) over(nkidsr) title(Time
Spent in walking by no of kids) blabel(bar, size(tiny) format(%13.2fc))
by marstat nkidsr, sort : tabstat adj_sports if sports01==1, statistics( mean p1
median p99 sd ) by(sex)
graph hbar (mean) adj_sports if sports01==1, over(sex) over(marstat) over(nkids)
title(Time Spent in sports by marital status and kids, size(small)) blabel(bar,
size(tiny) format(%13.2fc))
by marstat nkidsr, sort : tabstat adj_walking if walking01==1, statistics( mean
p1 median p99 sd ) by(sex)
graph hbar (mean) adj_walking if walking01==1, over(sex) over(marstat)
over(nkids) title(Time Spent in walking by marital status and kids, size(small))
blabel(bar, size(tiny) format(%13.2fc))
by econstatr, sort : tabstat adj_sports if sports01==1, statistics( mean p1
median p99 sd )
by econstatr, sort : tabstat adj_walking if walking01==1, statistics( mean p1
median p99 sd )
graph hbar (mean) adj_sports if sports01==1, over(econstatr) title(Time Spent in
sports by occupation, size(small)) blabel(bar, size(tiny) format(%13.2fc))
graph hbar (mean) adj_walking if walking01==1, over(econstatr) title(Time Spent
in walking by occupation, size(small)) blabel(bar, size(tiny) format(%13.2fc))
by econstatr, sort : tabstat adj_sports if sports01==1, statistics( mean p1
median p99 sd ) by(sex)
by econstatr, sort : tabstat adj_walking if walking01==1, statistics( mean p1
median p99 sd ) by(sex)
graph hbar (mean) adj_sports if sports01==1, over(econstatr) over(sex) title(Time
Spent in sports by occupation and sex, size(small)) blabel(bar, size(tiny)
format(%13.2fc))
graph hbar (mean) adj_walking if walking01==1, over(econstatr) over(sex)
title(Time Spent in walking by occupation and sex, size(small)) blabel(bar,
size(tiny) format(%13.2fc))
```

Regressions for Sports/ Physcial Activity

Model (i)
*Just using the habit specifc questions in the logistic model for the whole

```
survey*
*Monthly Models*
foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday survey) sports_4wk hike_4wk
predict i_pprate_`xx'
lab var i_pprate_`xx' " Predicted participation probability in `xx', Model (i) "
linktest
}

eststo:reg adj_sports wkhrnorm  age agesq  i.( nkidsr marstat sex hied econstatr
weekday survey) sports_4wk if sports01==1, vce(robust)
*Seems to be failing the ramsey reset test,oof!*
estat ovtest
predict i_pptime_sports
replace i_pptime_sports=0 if i_pptime_sports<0
lab var i_pptime_sports " Predicted particiption time for sports, Model (i)
Monthly"
predict sports_res
*Still Fails the reset test*
reg adj_sports wkhrnorm  age agesq  i.( nkidsr marstat sex hied econstatr
weekday) swim_4wk kfit_4wk bike_4wk team_4wk racq_4wk golf_4wk  jog_4wk other_4wk
if sports01==1, vce(robust)
estat ovtest



eststo:reg adj_walking wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday lockdown) hike_4wk if walking01==1, vce(robust)
estat ovtest
predict i_pptime_walking
replace i_pptime_walking=0 if i_pptime_walking<0
lab var i_pptime_walking " Predicted particiption time for walking, Model (i)
Monthly"
predict walking_res

*Weekly Models*
foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm  age agesq i.(nkidsr marstat sex hied econstatr
weekday survey sportslast hikelast )
predict i_pprate_`xx'w
lab var i_pprate_`xx'w " Predicted participation probability in `xx', Model (i)
weekly "
linktest
}


eststo:reg adj_sports wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday survey sportslast ) if sports01==1, vce(robust)
*Seems to be failing the ramsey reset test,oof!*
estat ovtest
predict i_pptime_sportsw
replace i_pptime_sportsw=0 if i_pptime_sportsw<0
lab var i_pptime_sports " Predicted particiption time for sports, Model (i)
```

```
weekly"
predict sports_resw

eststo:reg adj_walking wkhrnorm  age agesq i.(nkidsr marstat sex hied econstatr
weekday survey hikelast) if walking01==1, vce(robust)
*Seems to be failing the ramsey reset test,oof!*
estat ovtest
predict i_pptime_walkingw
replace i_pptime_walkingw=0 if i_pptime_walkingw<0
lab var i_pptime_walking " Predicted particiption time for walking, Model (i)
weekly"
predict walking_resw


*esttab est1 est2 est5 est6 using logiti.tex, se(%9.3f) b(%9.3f)  star(* 0.10 **
0.05 *** 0.01) s(r2_p) noobs mtitles("Model(i)Sports,Monthly" "Model(i):
Walking,Monthly" "Model(i): Sports, weekly " "Model(i):Walking, weekly")

*esttab est3 est4 est7 est8 using Olssi.tex , se(%9.3f) b(%9.3f)  star(* 0.10 **
0.05 *** 0.01) s(r2) noobs mtitles("Model(i)Sports,Monthly" "Model(i):
Walking,Monthly" "Model(i): Sports, weekly " "Model(i):Walking, weekly")

*Monthly goes first*

foreach xx in sports walking {
eststo:reg i_pprate_`xx' wkhrnorm age agesq  i.(nkidsr marstat sex hied econstatr
weekday sportslast hikelast), vce(robust)
predict i_pprate_`xx'mt if survey==1
replace i_pprate_`xx'mt=0 if i_pprate_`xx'mt<0
}



sum i_prate_sports i_pprate_sports i_pprate_sportsw i_pprate_sportsmt if
sports01==1
sum i_prate_sports i_pprate_sports i_pprate_sportsw i_pprate_sportsmt if
sports01==1
sum i_prate_walking i_pprate_walking i_pprate_walkingw i_pprate_walkingmt if
walking01==1




*generateing long term mean time devoted to each activity*
foreach xx in sports walking {
gen i_LTT_`xx'= i_pprate_`xx'* i_pptime_`xx'
lab var i_LTT_`xx' " Long term mean time devoted to `xx' "
gen i_LTT_`xx'w= i_pprate_`xx'w* i_pptime_`xx'w
lab var i_LTT_`xx'w " Long term mean time devoted to `xx' "
}
```

```
*Model (ii)*
*Just the 2016 survey*
*Monthly Models
foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday) ncinema ntheatre nmuseum nlibrary ncastle nsports neatout nenttain
sports_4wk hike_4wk  if survey==1
predict ii_pprate_`xx' if survey==1
lab var ii_pprate_`xx' " Predicted participation probability in `xx', Model (ii)
"
linktest
}









*Actual participatio rates*
tab sports01 if survey==1
tab walking01 if survey==1
gen ii_prate_sports=80/658
gen ii_prate_walking= 83/658



eststo:reg adj_sports wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday) sports_4wk if sports01==1 & survey==1, vce(robust)
estat ovtest
predict ii_pptime_sports if survey==1
replace ii_pptime_sports=0 if ii_pptime_sports<0
lab var ii_pptime_sports " Predicted particiption time for sports, Model (ii)
Monthly"
predict ii_sports_res if survey==1

eststo:reg adj_walking wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday) hike_4wk if walking01==1 & survey==1, vce(robust)
estat ovtest
predict ii_pptime_walking if survey==1
replace ii_pptime_walking=0 if ii_pptime_walking<0
lab var ii_pptime_walking " Predicted particiption time for walking, Model (ii)
Monthly"
predict ii_walking_res if survey==1

*Weekly Models*
```

```
foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm age agesq  i.(nkidsr marstat sex hied econstatr
weekday sportslast hikelast)  i.(wcinema_1 wtheatre_1 wmuseum_1 wlibrary_1
wcastle_1 wsports_1 weatout_1 wenttain_1) if survey==1
predict ii_pprate_`xx'w if survey==1
lab var ii_pprate_`xx'w " Predicted participation probability in `xx', Model (ii)
weekly "
}

*passing the link test*
foreach xx in sports walking {
logit `xx'01 wkhrnorm age agesq  i.(nkidsr marstat sex hied econstatr weekday
sportslast hikelast)  i.(wcinema_1 wtheatre_1 wmuseum_1 wlibrary_1 wcastle_1
wsports_1 weatout_1 wenttain_1) if survey==1
linktest
}



eststo:reg adj_sports wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday sportslast) if sports01==1 & survey==1, vce(robust)
estat ovtest
predict ii_pptime_sportsw if survey==1
replace ii_pptime_sportsw=0 if ii_pptime_sportsw<0
lab var ii_pptime_sportsw " Predicted particiption time for sports, Model (ii)
weekly"
predict ii_sports_resw if survey==1

eststo:reg adj_walking wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday hikelast) if walking01==1 & survey==1, vce(robust)
estat ovtest
predict ii_pptime_walkingw if survey==1
replace ii_pptime_walkingw=0 if ii_pptime_walkingw<0
lab var ii_pptime_walkingw " Predicted particiption time for walking, Model (ii)
weekly"
predict ii_walking_resw if survey==1


 *generateing long term mean time devoted to each activity*
foreach xx in sports walking {
gen ii_LTT_`xx'= ii_pprate_`xx'* ii_pptime_`xx' if survey==1
lab var ii_LTT_`xx' " Long term mean time devoted to `xx' "
gen ii_LTT_`xx'w= ii_pprate_`xx'w * ii_pptime_`xx'w if survey==1
lab var ii_LTT_`xx'w " Long term mean time devoted to `xx' "
}



*Two Step Models*
*Weekly goes first*
```

```
foreach xx in sports walking {
eststo:reg ii_pprate_`xx'w wkhrnorm age agesq  i.(nkidsr marstat sex hied
econstatr weekday) ncinema ntheatre nmuseum nlibrary ncastle nsports neatout
nenttain sports_4wk hike_4wk if survey==1, vce(robust)
predict ii_pprate_`xx'wt if survey==1
replace ii_pprate_`xx'wt=0 if ii_pprate_`xx'wt<0
}

*Monthly goes first*

foreach xx in sports walking {
eststo:reg ii_pprate_`xx' wkhrnorm age agesq  i.(nkidsr marstat sex hied
econstatr weekday sportslast hikelast)  i.(wcinema_1 wtheatre_1 wmuseum_1
wlibrary_1 wcastle_1 wsports_1 weatout_1 wenttain_1) if survey==1, vce(robust)
predict ii_pprate_`xx'mt if survey==1
replace ii_pprate_`xx'mt=0 if ii_pprate_`xx'mt<0
}




sum ii_prate_sports ii_pprate_sports ii_pprate_sportsw ii_pprate_sportswt if
survey==1 & sports01==1
sum ii_prate_sports ii_pprate_sports ii_pprate_sportsw ii_pprate_sportswt
ii_pprate_sportsmt if survey==1 & sports01==1
sum ii_prate_walking ii_pprate_walking ii_pprate_walkingw ii_pprate_walkingwt
ii_pprate_walkingmt if survey==1 & walking01==1


*Model(iii) Logistic regressions for survey 1 using only the habit specific
questions similar to model(i)*

*Monthly Models
foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday) sports_4wk hike_4wk  if survey==1
predict iii_pprate_`xx' if survey==1
lab var iii_pprate_`xx' " Predicted participation probability in `xx', Model (ii)
"
linktest
}




*Sports one fails but the walking one passes*


*No change in result*
foreach xx in sports walking {
logit `xx'01 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr weekday)
swim_4wk kfit_4wk bike_4wk team_4wk racq_4wk golf_4wk  jog_4wk other_4wk hike_4wk
 if survey==1
```

```
linktest
}



*weekly Models*

foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm age agesq  i.(nkidsr marstat sex hied econstatr
weekday sportslast hikelast)   if survey==1
predict iii_pprate_`xx'w if survey==1
lab var iii_pprate_`xx'w " Predicted participation probability in `xx', Model
(ii) weekly "
}


*Weekly goes first*
foreach xx in sports walking {
eststo:reg iii_pprate_`xx'w wkhrnorm age agesq  i.(nkidsr marstat sex hied
econstatr weekday)  sports_4wk hike_4wk if survey==1, vce(robust)
predict iii_pprate_`xx'wt if survey==1
replace iii_pprate_`xx'wt=0 if iii_pprate_`xx'wt<0
}

*Monthly goes first*

foreach xx in sports walking {
eststo:reg iii_pprate_`xx' wkhrnorm age agesq  i.(nkidsr marstat sex hied
econstatr weekday sportslast hikelast) if survey==1, vce(robust)
predict iii_pprate_`xx'mt if survey==1
replace iii_pprate_`xx'mt=0 if iii_pprate_`xx'mt<0
}

sum ii_prate_sports iii_pprate_sports iii_pprate_sportsw iii_pprate_sportswt
iii_pprate_sportsmt if survey==1 & sports01==1
sum ii_prate_walking iii_pprate_walking iii_pprate_walkingw iii_pprate_walkingwt
iii_pprate_walkingmt if survey==1 & walking01==1







*Both models pass the linktest*
foreach xx in sports walking {
logit `xx'01 wkhrnorm age agesq  i.(nkidsr marstat sex hied econstatr weekday
sportslast hikelast)   if survey==1
linktest
```

```
}

 *generateing long term mean time devoted to each activity*
foreach xx in sports walking {
gen iii_LTT_`xx'= iii_pprate_`xx'* ii_pptime_`xx' if survey==1
lab var iii_LTT_`xx' " Long term mean time devoted to `xx' "
gen iii_LTT_`xx'w= iii_pprate_`xx'w * ii_pptime_`xx'w if survey==1
lab var iii_LTT_`xx'w " Long term mean time devoted to `xx' "
}



*esttab est9 est10 est17 est18 using logitii.tex, replace  se(%9.3f) b(%9.3f)
star(* 0.10 ** 0.05 *** 0.01) s(r2_p) noobs mtitles("Model(ii)Sports,Monthly"
"Model(ii): Walking,Monthly" "Model(iii)Sports,Monthly" "Model(iii):
Walking,Monthly")
*esttab est13 est14 est19 est20 using logitiii.tex,  se(%9.3f) b(%9.3f)  star(*
0.10 ** 0.05 *** 0.01) s(r2_p) noobs mtitles("Model(ii)Sports,Weekly" "Model(ii):
Walking,weekly" "Model(iii): Sports, weekly " "Model(iii):Walking, weekly")
*esttab est11 est12 est15 est16 using OLSii.tex, replace se(%9.3f) b(%9.3f)
star(* 0.10 ** 0.05 *** 0.01)  noobs mtitles("Model(ii)Sports,Monthly"
"Model(ii): Walking,Monthly" "Model(ii)Sports,Weekly" "Model(ii):
Walking,Weekly")







sum i_prate_sports i_pprate_sports i_pprate_sportsw i_pprate_sportsmt if
sports01==1
sum i_prate_sports i_pprate_sports i_pprate_sportsw i_pprate_sportsmt if
sports01==1
sum i_prate_walking i_pprate_walking i_pprate_walkingw i_pprate_walkingmt if
walking01==1



sum ii_prate_sports ii_pprate_sports ii_pprate_sportsw   if survey==1 &
sports01==1
sum ii_prate_sports ii_pprate_sports ii_pprate_sportsw   ii_pprate_sportsmt if
survey==1 & sports01==1
sum ii_prate_walking ii_pprate_walking ii_pprate_walkingw   ii_pprate_walkingmt
if survey==1 & walking01==1



sum ii_prate_sports iii_pprate_sports iii_pprate_sportsw iii_pprate_sportsmt if
survey==1 & sports01==1
sum ii_prate_walking iii_pprate_walking iii_pprate_walkingw iii_pprate_walkingmt
if survey==1 & walking01==1
```

```
*** Exporting results************
*Sports
mat stats= J(3,8,.)
mat stats[1,1]= 0.1568
mat stats[1,2]= 0.2416
mat stats[1,3]= -0.848
mat stats[1,4]= 0.2679
mat stats[1,5]= -0.1111
mat stats[1,6]= 0.1967
mat stats[1,7]= -0.0399
mat stats[1,8]=0

mat stats[2,1]= 0.1215
mat stats[2,2]= 0.1639
mat stats[2,3]= -0.0424
mat stats[2,4]= 0.2179
mat stats[2,5]= -0.0967
mat stats[2,6]= 0.1512
mat stats[2,7]= -0.029
mat stats[2,8]= 0

mat stats[3,1]= 0.1215
mat stats[3,2]= 0.144
mat stats[3,3]= -0.0225
mat stats[3,4]= 0.2023
mat stats[3,5]= -0.08
mat stats[3,6]= 0.1423
mat stats[3,7]= -0.02
mat stats[3,8]= 0

mat rownames stats= "Full Sample(i)" "2016 Sub Sample: Full Habitus(ii)" "2016
Sub Sample:Only Habitus Specific(iii)"

mat colnames stats=  "True Prob"  "Weekly" "ErrorW" "Monthly" "Monthlyerror" "Two
Step-Monthly, Weekly" "ErrorTS" "Best"

esttab matrix(stats, fmt(3 3 3 3 3 3 3 0)),nomtitle

outtable  using sts, replace mat(stats) center f(%9.3f %9.3f %9.3f %9.3f %9.3f
%9.3f %9.3f %9.3f  )

*Walking*

 mat stats= J(3,8,.)
mat stats[1,1]= 0.2125
mat stats[1,2]= 0.2727
mat stats[1,3]= -0.06
mat stats[1,4]= 0.3283
mat stats[1,5]= -0.1158
mat stats[1,6]= 0.220
mat stats[1,7]= -0.0075
mat stats[1,8]= 0
```

```
mat stats[2,1]= 0.1261
mat stats[2,2]= 0.2011
mat stats[2,3]= -0.075
mat stats[2,4]= 0.2864
mat stats[2,5]= -0.0853
mat stats[2,6]= 0.1839
mat stats[2,7]= -0.0578
mat stats[2,8]= 0

mat stats[3,1]= 0.1261
mat stats[3,2]= 0.1928
mat stats[3,3]= -0.066
mat stats[3,4]= 0.266
mat stats[3,5]= -0.1399
mat stats[3,6]= 0.1797
mat stats[3,7]= -0.0536
mat stats[3,8]= 0

mat rownames stats= "Full Sample(i)" "2016 Sub Sample: Full Habitus(ii)" "2016
Sub Sample:Only Habitus Specific(iii)"

mat colnames stats=  "True Prob"  "Weekly" "ErrorW" "Monthly" "Monthlyerror" "Two
Step-Monthly, Weekly" "ErrorTS" "Best"

esttab matrix(stats, fmt(3 3 3 3 3 3 3 )),nomtitle

outtable  using wtwostep.tex, replace mat(stats) center f(%9.3f %9.3f %9.3f %9.3f
%9.3f %9.3f %9.3f %9.3f )
```

```
*Combined Models*
*Whole Survey*
foreach xx in sports walking {
```

```
eststo:logit `xx'01 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday survey sports_c hike_c)
predict ic_pprate_`xx'
lab var ic_pprate_`xx' " Predicted participation probability in `xx', Model (i) "
linktest
}



eststo:reg adj_sports wkhrnorm  age agesq  i.( nkidsr marstat sex hied econstatr
weekday survey sports_c) if sports01==1, vce(robust)

estat ovtest
predict ic_pptime_sports
replace ic_pptime_sports=0 if ic_pptime_sports<0
lab var ic_pptime_sports " Predicted particiption time for sports, Model (i)
Combined"
predict sports_res_ic



eststo:reg adj_walking wkhrnorm  age agesq  i.( nkidsr marstat sex hied econstatr
weekday survey hike_c) if walking01==1, vce(robust)
 *fails*
estat ovtest
predict ic_pptime_walking
replace ic_pptime_walking=0 if ic_pptime_walking<0
lab var ic_pptime_walking " Predicted particiption time for walking, Model (i)
Combined"
predict walking_res_ic

sum adj_sportsc if sports01==1
sum i_pptime_sports ic_pptime_sports
sum adj_walkingc if walking01==1
sum i_pptime_walking ic_pptime_walking
sum i_prate_sports i_pprate_sports ic_pprate_sports if sports01==1
sum i_prate_walking i_pprate_walking ic_pprate_walking if walking01==1


*2016 survey*
foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday cinema_c museum_c library_c castle_c sporting_c eatout_c enttatin_c
sports_c hike_c)  if survey==1
predict iic_pprate_`xx' if survey==1
lab var iic_pprate_`xx' " Predicted participation probability in `xx', Model (ii)
Combined"
*pass*
linktest
}

eststo:reg adj_sports wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday sports_c) if sports01==1 & survey==1, vce(robust)
*pass*
```

```
estat ovtest
predict iic_pptime_sports if survey==1
replace iic_pptime_sports=0 if iic_pptime_sports<0
lab var iic_pptime_sports " Predicted particiption time for sports, Model (ii)
Combined"
predict iic_sports_res if survey==1

eststo:reg adj_walking wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday hike_c) if walking01==1 & survey==1, vce(robust)
*pass*
estat ovtest
predict iic_pptime_walking if survey==1
replace iic_pptime_walking=0 if iic_pptime_walking<0
lab var iic_pptime_walking " Predicted particiption time for walking, Model (ii)
Combined"
predict iic_walking_res if survey==1

foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday sports_c hike_c)  if survey==1
predict iiic_pprate_`xx' if survey==1
lab var iiic_pprate_`xx' " Predicted participation probability in `xx', Model
(iii) Combined"

linktest
}

 *generateing long term mean time devoted to each activity*
foreach xx in sports walking {
gen ic_LTT_`xx'= ic_pprate_`xx'* ic_pptime_`xx'
lab var ic_LTT_`xx' " Long term mean time devoted to `xx' "
gen iic_LTT_`xx'= iic_pprate_`xx' * iic_pptime_`xx' if survey==1
lab var iic_LTT_`xx' " Long term mean time devoted to `xx' "
}

 *generateing long term mean time devoted to each activity*
foreach xx in sports walking {
gen iiic_LTT_`xx'= iiic_pprate_`xx'* iic_pptime_`xx' if survey==1
lab var iiic_LTT_`xx' " Long term mean time devoted to `xx' "
}




*Not combined models*  *Naive models*
foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday) i.(wcinema_1 wtheatre_1 wmuseum_1 wlibrary_1 wcastle_1 wsports_1
weatout_1 wenttain_1 sportslast hikelast)  ncinema ntheatre nmuseum nlibrary
ncastle nsports neatout nenttain sports_4wk hike_4wk   if survey==1
predict iinc_pprate_`xx' if survey==1
```

```
lab var iinc_pprate_`xx' " Predicted participation probability in `xx', Model
(ii) NCombined"
*pass*
linktest
}

eststo:reg adj_sports wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday sportslast) sports_4wk if sports01==1 & survey==1, vce(robust)
*Pass*
estat ovtest
predict iinc_pptime_sports if survey==1
replace iinc_pptime_sports=0 if iinc_pptime_sports<0
lab var iinc_pptime_sports " Predicted particiption time for sports, Model (ii)
NCombined"
predict iinc_sports_res if survey==1

eststo:reg adj_walking wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday hikelast) hike_4wk if walking01==1 & survey==1, vce(robust)
*pass*
estat ovtest
predict iinc_pptime_walking if survey==1
replace iinc_pptime_walking=0 if iinc_pptime_walking<0
lab var iinc_pptime_walking " Predicted particiption time for walking, Model (ii)
NCombined"
predict iinc_walking_res if survey==1


foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday sportslast hikelast) sports_4wk hike_4wk   if survey==1
predict iiinc_pprate_`xx' if survey==1
lab var iiinc_pprate_`xx' " Predicted participation probability in `xx', Model
(ii) NCombined"
*S:fail W:Pass*
linktest
}









*combined models for primary and seconday activites*


foreach xx in sports walking {
eststo:logit `xx'1 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday survey sports_c hike_c)
predict iv_pprate_`xx'
lab var iv_pprate_`xx' " Predicted participation probability in `xx', Model (iv)
"
```

```
linktest
}

foreach xx in sports walking {
eststo:logit `xx'1 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday survey cinema_c museum_c library_c castle_c sporting_c eatout_c
enttatin_c sports_c hike_c)  if survey==1
predict ivb_pprate_`xx' if survey==1
lab var ivb_pprate_`xx' " Predicted participation probability in `xx', Model
(ivb) "
*pass*
linktest
}


foreach xx in sports walking {
eststo:probit `xx'1 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday survey sports_c hike_c)
predict iv_pprate_`xx'p
lab var iv_pprate_`xx'p " Predicted participation probability in `xx', Model (iv)
probit "
linktest
}

foreach xx in sports walking {
eststo:probit `xx'1 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday survey cinema_c museum_c library_c castle_c sporting_c eatout_c
enttatin_c sports_c hike_c)  if survey==1
predict ivb_pprate_`xx'p if survey==1
lab var ivb_pprate_`xx'p " Predicted participation probability in `xx', Model
(ivb) probit "
*pass*
linktest
}



*Combined models with individual sports questions*

foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday survey swim_c kfit_c bike_c jog_c team_c racq_c other_c golf_c hike_c)
predict ici_pprate_`xx'
lab var ici_pprate_`xx' " Predicted participation probability in `xx', Model (i)
"
linktest
}

eststo:reg adj_sports wkhrnorm  age agesq  i.( nkidsr marstat sex hied econstatr
weekday survey swim_c kfit_c bike_c jog_c team_c racq_c other_c golf_c ) if
sports01==1, vce(robust)

estat ovtest
predict ici_pptime_sports
```

```
replace ici_pptime_sports=0 if ici_pptime_sports<0
lab var ici_pptime_sports " Predicted particiption time for sports, Model (i)
Combined"
predict sports_res_ici



eststo:reg adj_walking wkhrnorm  age agesq  i.( nkidsr marstat sex hied econstatr
weekday survey hike_c) if walking01==1, vce(robust)
 *fails*
estat ovtest
predict ici_pptime_walking
replace ici_pptime_walking=0 if ici_pptime_walking<0
lab var ici_pptime_walking " Predicted particiption time for walking, Model (i)
Combined"
predict walking_res_ici



*2016 survey*
foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday cinema_c museum_c library_c castle_c sporting_c eatout_c enttatin_c
swim_c kfit_c bike_c jog_c team_c racq_c other_c golf_c  hike_c)  if survey==1
predict iici_pprate_`xx' if survey==1
lab var iici_pprate_`xx' " Predicted participation probability in `xx', Model
(ii) Combined"
*pass*
linktest
}

eststo:reg adj_sports wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday swim_c kfit_c bike_c jog_c team_c racq_c other_c golf_c ) if sports01==1
& survey==1, vce(robust)
*pass*
estat ovtest
predict iici_pptime_sports if survey==1
replace iici_pptime_sports=0 if iici_pptime_sports<0
lab var iici_pptime_sports " Predicted particiption time for sports, Model (ii)
Combined"
predict iici_sports_res if survey==1

eststo:reg adj_walking wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
weekday hike_c) if walking01==1 & survey==1, vce(robust)
*pass*
estat ovtest
predict iici_pptime_walking if survey==1
replace iici_pptime_walking=0 if iici_pptime_walking<0
lab var iici_pptime_walking " Predicted particiption time for walking, Model (ii)
Combined"
predict iici_walking_res if survey==1

foreach xx in sports walking {
eststo:logit `xx'01 wkhrnorm  age agesq  i.(nkidsr marstat sex hied econstatr
```

```
weekday swim_c kfit_c bike_c jog_c team_c racq_c other_c golf_c  hike_c)  if
survey==1
predict iiici_pprate_`xx' if survey==1
lab var iiici_pprate_`xx' " Predicted participation probability in `xx', Model
(iii) Combined"

linktest
}




*Comparing actual vs predicted*

sum adj_sports if sports01==1 & survey==1

sum ii_pptime_sports ii_pptime_sportsw iic_pptime_sports iinc_pptime_sports
sum ii_prate_sports ii_pprate_sports  ii_pprate_sportsw iii_pprate_sports
iii_pprate_sportsw iic_pprate_sports iinc_pprate_sports iiic_pprate_sports
iiinc_pprate_sports if sports01==1 & survey==1

sum adj_walking if walking01==1 & survey==1

sum ii_pptime_walking ii_pptime_walkingw iic_pptime_walking iinc_pptime_walking
sum ii_prate_walking ii_pprate_walking  ii_pprate_walkingw iii_pprate_walking
iii_pprate_walkingw iic_pprate_walking iinc_pprate_walking iiic_pprate_walking
iiinc_pprate_walking if walking01==1 & survey==1









sum adj_sports if sports01==1
sum i_pptime_sports i_pptime_sportsw


sum i_prate_sports i_pprate_sports i_pprate_sportsw ic_pprate_sports if
sports01==1


sum adj_walking if walking01==1
sum i_pptime_walking i_pptime_walkingw


sum i_prate_walking i_pprate_walking i_pprate_walkingw ic_pprate_walking if
walking01==1
```

```
sum adj_sports if sports01==1 & survey==1
sum ii_pptime_sports ii_pptime_sportsw


sum ii_prate_sports ii_pprate_sports ii_pprate_sportsw if sports01==1 & survey==1

sum adj_walking if walking01==1 & survey==1
sum ii_pptime_walking ii_pptime_walkingw


sum ii_prate_walking ii_pprate_walking ii_pprate_walkingw if walking01==1 &
survey==1


sum ii_prate_sports iii_pprate_sports iii_pprate_sportsw if sports01==1 &
survey==1
sum ii_prate_walking iii_pprate_walking iii_pprate_walkingw if walking01==1 &
survey==1

*Over various categories*
by sex, sort: sum adj_sports if sports01==1
by sex, sort: sum i_pptime_sports i_pptime_sportsw
by sex, sort: sum ii_pptime_sports ii_pptime_sportsw




sum i_prate_sports_male i_prate_sports_female
by sex, sort: sum i_pprate_sports i_pprate_sportsw if sports01==1
by sex, sort: sum ii_pprate_sports ii_pprate_sportsw if sports01==1
by sex, sort: sum iii_pprate_sports iii_pprate_sportsw if sports01==1

by sex, sort: sum adj_walking if walking01==1
by sex, sort: sum i_pptime_walking i_pptime_wallkingw
by sex, sort: sum ii_pptime_walking ii_pptime_wallkingw

sum i_prate_walking_male i_prate_walking_female
by sex, sort: sum i_pprate_walking i_pprate_walkingw if walking01==1
by sex, sort: sum ii_pprate_walking ii_pprate_walkingw if walking01==1
by sex, sort: sum iii_pprate_walking iii_pprate_walkingw if walking01==1

by marstat, sort: sum adj_sports if sports01==1
by marstat, sort: sum i_pptime_sports i_pptime_sportsw
by marstat, sort: sum ii_pptime_sports ii_pptime_sportsw


sum i_prate_sports_single i_prate_sports_married i_sports_divorced
by marstat, sort: sum i_pprate_sports i_pprate_sportsw if sports01==1
by marstat, sort: sum ii_pprate_sports ii_pprate_sportsw if sports01==1
by marstat, sort: sum iii_pprate_sports iii_pprate_sportsw if sports01==1

by marstat, sort: sum adj_walking if walking01==1
by marstat, sort: sum i_pptime_walking i_pptime_walkingw
```

```
by marstat, sort: sum ii_pptime_walking ii_pptime_walkingw


sum i_prate_walking_single i_prate_walking_married i_walking_divorced
by marstat, sort: sum i_pprate_walking i_pprate_walkingw if walking01==1
by marstat, sort: sum ii_pprate_walking ii_pprate_walkingw if walking01==1
by marstat, sort: sum iii_pprate_walking iii_pprate_walkingw if walking01==1


egen float adj_sportsm = mean(adj_sports) if sports01==1
sum adj_sportsm
sum adj_sports if sports01==1
graph dot (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw
graph dot (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
showyvars
graph dot (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
ascategory
graph dot (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
ascategory asyvars
graph dot (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
asyvars
egen float adj_walkingm = mean(adj_walking) if walking01==1
graph dot (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw
(mean) adj_walkingm (mean) i_pptime_walking (mean) i_pptime_walkingw, ascategory
graph dot (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw
(mean) adj_walkingm (mean) i_pptime_walking (mean) i_pptime_walkingw,
over(sports01) ascategory
graph dot (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw
(mean) adj_walkingm (mean) i_pptime_walking (mean) i_pptime_walkingw, ascategory
graph dot (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw
(mean) adj_walkingm (mean) i_pptime_walking (mean) i_pptime_walkingw, ascategory
xalternate
graph dot (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw
(mean) adj_walkingm (mean) i_pptime_walking (mean) i_pptime_walkingw, ascategory
linetype(line)
help graph dot
graph dot (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
ascategory showyvars linetype(line)
graph dot (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
ascategory linetype(line)
graph dot (mean) adj_sportsm i_pptime_sports i_pptime_sportsw
graph bar (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw
graph bar (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
stack
graph hbar (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw
graph hbar (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
saving(sportsfp)
graph hbar (mean) adj_walkingm (mean) i_pptime_walking (mean) i_pptime_walkingw
graph hbar (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
blabel(bar)
graph hbar (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
blabel(bar, format(%9.2g))
graph hbar (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
blabel(bar, format(%9.4g))
```

```
graph hbar (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
blabel(bar, format(%9.4g))
graph hbar (mean) adj_sportsm (mean) i_pptime_sports (mean) i_pptime_sportsw,
saving(sportsfps) blabel(bar, format(%9.4g)),
graph hbar (mean) adj_walkingm (mean) i_pptime_walking (mean) i_pptime_walkingw,
saving(walkingfp)  blabel(bar, format(%9.4g)),
gr combine sportsfps.gph walkingfp.gph
egen float adj_walkingm1 = mean(adj_walking) if walking01==1 & survey==1
egen float adj_sportsm1 = mean(adj_sports) if sports01==1 & survey==1
graph hbar (mean) adj_sportsm1 (mean) ii_pptime_sports (mean) ii_pptime_sportsw,
blabel(bar, format(%9.4g)) ytitle(Mean Predicted Participation Times: Sports)
graph hbar (mean) adj_sportsm1 (mean) ii_pptime_sports (mean) ii_pptime_sportsw,
blabel(bar, format(%9.4g)) title(Mean Predicted Participation Times: Sports)
graph hbar (mean) adj_sportsm1 (mean) ii_pptime_sports (mean) ii_pptime_sportsw,
blabel(bar, size(vsmall) format(%9.4g)) title(Mean Predicted Participation Times:
Sports)
graph hbar (mean) adj_sportsm1 (mean) ii_pptime_sports (mean) ii_pptime_sportsw,
blabel(bar, size(vsmall) format(%9.4g)) title(Mean Predicted Participation Times:
Sports)
graph hbar (mean) adj_sportsm1 (mean) ii_pptime_sports (mean) ii_pptime_sportsw,
blabel(bar, size(vsmall) format(%9.4g)) title(Mean Predicted Participation Times:
Sports) legend(on)
graph hbar (mean) adj_sportsm1 (mean) ii_pptime_sports (mean) ii_pptime_sportsw,
blabel(bar, size(vsmall) format(%9.4g)) title(Mean Predicted Participation Times:
Sports) legend(rowgap(vsmall) colgap(tiny) keygap(tiny))
graph hbar (mean) adj_sportsm1 (mean) ii_pptime_sports (mean) ii_pptime_sportsw,
blabel(bar, size(vsmall) format(%9.4g)) title(Mean Predicted Participation Times:
Sports) legend(rowgap(vsmall) colgap(tiny) keygap(tiny) size(vsmall))
graph hbar (mean) adj_sportsm1 (mean) ii_pptime_sports (mean) ii_pptime_sportsw,
blabel(bar, size(vsmall) format(%9.4g)) title(Mean Predicted Participation Times:
Sports) legend(rowgap(vsmall) colgap(tiny) keygap(tiny) size(vsmall))
graph hbar (mean) adj_sportsm1 (mean) ii_pptime_sports (mean) ii_pptime_sportsw
(mean) iic_pptime_sports, saving(sportspt1) blabel(bar, size(vsmall)
format(%9.4g)) title(Sports) legend(rowgap(vsmall) colgap(tiny) keygap(tiny)
size(vsmall))
graph hbar (mean) adj_walkingm1 (mean) ii_pptime_walking (mean)
ii_pptime_walkingw (mean) iic_pptime_walking, saving(walkingpt1) blabel(bar,
size(vsmall) format(%9.4g)) title(Walking) legend(rowgap(vsmall) colgap(tiny)
keygap(tiny) size(vsmall))
gr combine sportspt1.gph walkingpt1.gph


. graph hbar (mean) ii_prate_sports (mean) ii_pprate_sports (mean)
ii_pprate_sportsw (mean) iii_pprate_sports (mean) iii_pprate_sportsw  (mean)
iic_pprate_sports (mean) iiic_pprate_sports if sports01==1, saving(sportspp)
blabel(bar, size(vsmall) format(%9.3g)) title(Sports) legend(rowgap(vsmall)
colgap(tiny) keygap(tiny) size(vsmall))


. graph hbar (mean) ii_prate_walking (mean) ii_pprate_walking (mean)
ii_pprate_walkingw (mean) iii_pprate_walking (mean) iii_pprate_walkingw  (mean)
iic_pprate_walking (mean) iiic_pprate_walking if walking01==1, saving(walkingpp1)
 blabel(bar, size(vsmall) format(%9.3g)) title(Walking) legend(rowgap(vsmall)
colgap(tiny) keygap(tiny) size(vsmall))
```

```
gr combine sportspp.gph walkingpp1.gph
```