Step by step – Calculating the inter-sector country-level PiN while avoiding double counting.

Once the PiNs for all sectors have been calculated, the next and final step of the process would be calculating the inter-sector or country level PiN.

In this example we will assume our country has only 5 provinces and we are coordinating 3 sectors (but you can add as many admin1 levels and sectors as is required).

Picking up from the last step, we have the 3 following tables as a result of calculating all sector PiNs:

Sector 1

Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	29	37	68	60	194	3	4	7	7	21	32	41	75	67	215
Province2	64	60	111	101	336	7	7	12	11	37	71	67	123	112	373
Province3	35	46	74	76	231	5	7	11	11	34	40	53	85	87	265
Province4	84	75	155	154	468	8	7	14	14	43	92	82	169	168	511
Province5	47	49	75	63	234	7	8	11	10	36	54	57	86	73	270
Country	259	267	483	454	1,463	30	33	55	53	171	289	300	538	507	1,634

Sector 2

Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	45	-	70	-	115	3	-	7	-	10	48	-	77	-	125
Province2	70	-	126	-	196	7	-	12	-	19	77	-	138	-	215
Province3	40	-	80	-	120	5	-	11	-	16	45	-	91	-	136
Province4	80	-	160	-	240	8	-	14	-	22	88	-	174	-	262
Province5	45	-	80	-	125	7	-	11	-	18	52	-	91	-	143
Country	280	-	516	-	796	30	-	55	-	85	310	-	571	-	881

Sector 3

Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	42	54	-	-	96	8	8	-	-	16	50	62	-	-	112
Province2	71	65	-	-	136	10	11	-	-	21	81	76	-	-	157
Province3	42	65	-	-	107	9	11	-	-	20	51	76	-	-	127
Province4	81	94	-	-	175	12	14	-	-	26	93	108	-	-	201
Province5	64	61	-	-	125	11	10	-	-	21	75	71	-	-	146
Country	300	339	-	-	639	50	54	-	-	104	350	393	-	-	743

To calculate the total country PiN follow these steps:

1. Identify the maximum value for each gender, age and admin level 1. In the example of the table below, we are comparing the values for girls in the same province in Sector 1 (29), Sector 2 (45), and Sector 3 (42). As a result, the maximum value is 45, and this will be the value at the inter-sector or country level, for Province1 and Girls.

Sector 1

Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	29	37	68	60	194	3	4	7	7	21	32	41	75	67	215
Province2	64	60	111	101	336	7	7	12	11	37	71	67	123	112	373
Province3	35	46	74	76	231	5	7	11	11	34	40	53	85	87	265
Province4	84	75	155	154	468	8	7	14	14	43	92	82	169	168	511
Province5	47	49	75	63	234	7	8	11	10	36	54	57	86	73	270
Country	259	267	483	454	1,463	30	33	55	53	171	289	300	538	507	1,634

Sector 2

Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	45	-	70	-	115	3	-	7	-	10	48	-	77	-	125
Province2	70	-	126	-	196	7	-	12	-	19	77	-	138	-	215
Province3	40	-	80	-	120	5	-	11	-	16	45	-	91	-	136
Province4	80	-	160	-	240	8	-	14	-	22	88	-	174	-	262
Province5	45	-	80	-	125	7	-	11	-	18	52	-	91	-	143
Country	280	-	516	-	796	30	-	55	-	85	310	-	571	-	881

Sector 3

Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	42	54	-	-	96	8	8	-	-	16	50	62	-	-	112
Province2	71	65	-	-	136	10	11	-	-	21	81	76	-	-	157
Province3	42	65	-	-	107	9	11	-	-	20	51	76	-	-	127
Province4	81	94	-	-	175	12	14	-	-	26	93	108	-	-	201
Province5	64	61	-	-	125	11	10	-	-	21	75	71	-	-	146
Country	300	339	-	-	639	50	54	-	-	104	350	393	-	-	743

Inter-Sector

Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Province2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Province3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Province4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Province5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Country	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

2. To continue, you should calculate the maximum value for each gender, age, province and population group. If you follow the previous step, your calculated table will look like this:

Inter-Sector

Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	45	54	70	60		8	8	7	7						
Province2	71	65	126	101		10	11	12	11						
Province3	42	65	80	76		9	11	11	11						
Province4	84	94	160	154		12	14	14	14						
Province5	64	61	80	63		11	10	11	10						
Country															

3. Now you can sum up al gender and age values for each province. (you can do a sum because these are excluding groups and will not cause duplication)

Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	45	54	70	60	229	8	8	7	7						
Province2	71	65	126	101		10	11	12	11						
Province3	42	65	80	76		9	11	11	11						
Province4	84	94	160	154		12	14	14	14						
Province5	64	61	80	63		11	10	11	10						
Country															

Inter-Sector

4. Repeat the same process for all provinces and population groups (in this example, In destination and in transit)

Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	45	54	70	60	229	8	8	7	7	30					
Province2	71	65	126	101	363	10	11	12	11	44					
Province3	42	65	80	76	263	9	11	11	11	42					
Province4	84	94	160	154	492	12	14	14	14	54					
Province5	64	61	80	63	268	11	10	11	10	42					
Country															

Inter-Sector

5. Sum up the values of each province for Girls (in destination)

Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	45	54	70	60	229	8	8	7	7	30					
Province2	71	65	126	101	363	10	11	12	11	44					
Province3	42	65	80	76	263	9	11	11	11	42					
Province4	84	94	160	154	492	12	14	14	14	54					
Province5	64	61	80	63	268	11	10	11	10	42					
Country	306														

Inter-Sector

6. Repeat the same process for all gender and age groups and population groups (in this example, In destination and in transit).

Inter-Sector														
Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	45	54	70	60	229	8	8	7	7	30					
Province2	71	65	126	101	363	10	11	12	11	44					
Province3	42	65	80	76	263	9	11	11	11	42					
Province4	84	94	160	154	492	12	14	14	14	54					
Province5	64	61	80	63	268	11	10	11	10	42					
Country	306	339	516	454		50	54	55	53						

7. Calculate the total PiN for each population group (in destination and in transit), by summing up all totals of each age and gender group within each population type. You have calculated the total PiN for each population group (1615 and 212)

Inter-Sector														
Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	45	54	70	60	229	8	8	7	7	30					
Province2	71	65	126	101	363	10	11	12	11	44					
Province3	42	65	80	76	263	9	11	11	11	42					
Province4	84	94	160	154	492	12	14	14	14	54					
Province5	64	61	80	63	268	11	10	11	10	42					
Country	306	339	516	454	1,615	50	54	55	53	212					

8. As a final step, you need to sum the individual values of these two population type groups. The reason why we can do this sum is because in destination and in transit groups are exclusive and don´t cause duplication. To do that we will first sum the value for girls in each province:

Inter-Sector														
Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	45	54	70	60	229	8	8	7	7	30	53				
Province2	71	65	126	101	363	10	11	12	11	44					
Province3	42	65	80	76	263	9	11	11	11	42					
Province4	84	94	160	154	492	12	14	14	14	54					
Province5	64	61	80	63	268	11	10	11	10	42					
Country	306	339	516	454	1,615	50	54	55	53	212					

9. Repeat this process for all gender and age groups in each province:

Inter-Sector														
Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	45	54	70	60	229	8	8	7	7	30	53	62	77	67	
Province2	71	65	126	101	363	10	11	12	11	44	81	76	138	112	
Province3	42	65	80	76	263	9	11	11	11	42	51	76	91	87	
Province4	84	94	160	154	492	12	14	14	14	54	96	108	174	168	
Province5	64	61	80	63	268	11	10	11	10	42	75	71	91	73	
Country	306	339	516	454	1,615	50	54	55	53	212					

10. Finally, you can repeat the same process as in steps 3 to 7 but for total PiN and you will get your final PiN value:

Inter-Sector														
Admin 1	PiN (in destination)					PiN (in Transit)					PiN Total				
	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total	Girls	Boys	Women	Men	Total
Province1	45	54	70	60	229	8	8	7	7	30	53	62	77	67	259
Province2	71	65	126	101	363	10	11	12	11	44	81	76	138	112	407
Province3	42	65	80	76	263	9	11	11	11	42	51	76	91	87	305
Province4	84	94	160	154	492	12	14	14	14	54	96	108	174	168	546
Province5	64	61	80	63	268	11	10	11	10	42	75	71	91	73	310
Country	306	339	516	454	1,615	50	54	55	53	212	374	694	1,333	2,613	5,014