

Contribution from Dr Jitka Rychtarikova

vik	qx	px	lx	dx	Lx_1	Tx	ex
0	0.117259917	0.882740083	100000	11725.9917	89212.08763	5096117.318	50.96117318
1	0.009665661	0.990334339	88274.0083	853.2266296	87847.39498	5006905.231	56.72003943
2	0.005125499	0.994874501	87420.78167	448.0751175	87196.74411	4919057.836	56.26874688
3	0.003505619	0.996494381	86972.70655	304.8932093	86820.25994	4831861.092	55.55606217
4	0.002975204	0.997024796	86667.81334	257.8544644	86538.88611	4745040.832	54.74974675
5	0.003126279	0.996873721	86409.95888	270.1416312	86274.88806	4658501.946	53.91163248
6	0.003234782	0.996765218	86139.81724	278.6435632	86000.49546	4572227.058	53.0791358
7	0.003093616	0.996906384	85861.17368	265.6215042	85728.36293	4486226.562	52.24976983
8	0.003016847	0.996983153	85595.55218	258.2286736	85466.43784	4400498.199	51.41036055
9	0.002943859	0.997056141	85337.3235	251.2210391	85211.71298	4315031.761	50.56441407
10	0.002971844	0.997028156	85086.10246	252.8626184	84959.67116	4229820.048	49.7122318
11	0.0030649	0.9969351	84833.23985	260.005392	84703.23715	4144860.377	48.8589188
12	0.003173011	0.996826989	84573.23445	268.3517757	84439.05857	4060157.14	48.00758971
13	0.0033893	0.9966107	84304.88268	285.7345775	84162.01539	3975718.082	47.15881163
14	0.003829144	0.996170856	84019.1481	321.7213787	83858.28741	3891556.066	46.31749017
15	0.004461788	0.995538212	83697.42672	373.440194	83510.70663	3807697.779	45.49360629
16	0.005438623	0.994561377	83323.98653	453.1677206	83097.40267	3724187.072	44.69525796
17	0.006552158	0.993447842	82870.81881	542.9826716	82599.32747	3641089.669	43.93693367
18	0.007683045	0.992316955	82327.83614	632.5284308	82011.57192	3558490.342	43.22341639
19	0.008525261	0.991474739	81695.30771	696.4738514	81347.07078	3476478.77	42.55420376
20	0.008897357	0.991102643	80998.83385	720.6755159	80638.4961	3395131.699	41.91580962
21	0.008901783	0.991098217	80278.15834	714.6187788	79920.84895	3314493.203	41.28760888
22	0.008717631	0.991282369	79563.53956	693.6055853	79216.73677	3234572.354	40.65395245
23	0.008326068	0.991673932	78869.93397	656.6764633	78541.59574	3155355.617	40.00707822
24	0.007920574	0.992079426	78213.25751	619.4938923	77903.51056	3076814.022	39.33877861
25	0.007257804	0.992742196	77593.76362	563.1603162	77312.18346	2998910.511	38.64886005
26	0.006823754	0.993176246	77030.6033	525.6379084	76767.78435	2921598.328	37.92776121
27	0.00720837	0.99279163	76504.96539	551.4761011	76229.22734	2844830.543	37.1849138
28	0.007917061	0.992082939	75953.48929	601.3284001	75652.82509	2768601.316	36.45127224
29	0.008549941	0.991450059	75352.16089	644.2565674	75030.03261	2692948.491	35.73817206
30	0.008892524	0.991107476	74707.90432	664.3417993	74375.73343	2617918.458	35.04205455
31	0.008829099	0.991170901	74043.56253	653.7379161	73716.69357	2543542.725	34.35197657
32	0.008433377	0.991566623	73389.82461	618.9240303	73080.36259	2469826.031	33.65352138
33	0.008103104	0.991896896	72770.90058	589.670166	72476.0655	2396745.669	32.9354955
34	0.007831571	0.992168429	72181.23041	565.2924406	71898.58419	2324269.603	32.20047081
35	0.007818769	0.992181231	71615.93797	559.9484934	71335.96373	2252371.019	31.45069495
36	0.008047961	0.991952039	71055.98948	571.855809	70770.06157	2181035.055	30.69459832
37	0.008395879	0.991604121	70484.13367	591.7762861	70188.24553	2110264.994	29.93957482
38	0.008762426	0.991237574	69892.35738	612.4266433	69586.14406	2040076.748	29.18883873
39	0.008899077	0.991100923	69279.93074	616.5274563	68971.66701	1970490.604	28.44244478
40	0.00930656	0.99069344	68663.40328	639.0200877	68343.89324	1901518.937	27.69333948
41	0.009691158	0.990308842	68024.3832	659.2350548	67694.76567	1833175.044	26.94879333
42	0.010475847	0.989524153	67365.14814	705.7069838	67012.29465	1765480.278	26.20762111
43	0.010933969	0.989066031	66659.44116	728.852273	66295.01502	1698467.984	25.47978132
44	0.011335112	0.988664888	65930.58889	747.3306202	65556.92358	1632172.969	24.75592887
45	0.011885319	0.988114681	65183.25826	774.7238096	64795.89636	1566616.045	24.03402479
46	0.012615108	0.987384892	64408.53446	812.5206291	64002.27414	1501820.149	23.3170986
47	0.013912606	0.986087394	63596.01383	884.7862658	63153.62069	1437817.874	22.60861792
48	0.015274159	0.984725841	62711.22756	957.8612719	62232.29692	1374664.254	21.92054449
49	0.016187949	0.983812051	61753.36629	999.6603542	61253.53611	1312431.957	21.25280022
50	0.01668817	0.98331183	60753.70593	1013.868186	60246.77184	1251178.421	20.59427325
51	0.017285333	0.982714667	59739.83775	1032.62298	59223.52626	1190931.649	19.93530103
52	0.017808006	0.982191994	58707.21477	1045.458439	58184.48555	1131708.123	19.27715575
53	0.019419494	0.980580506	57661.75633	1119.762153	57101.87525	1073523.637	18.61760212
54	0.020097176	0.979902824	56541.99418	1136.334389	55973.82698	1016421.762	17.97640456
55	0.021100563	0.978899437	55405.65979	1169.090628	54821.11447	960447.9349	17.33483436
56	0.022288918	0.977711082	54236.56916	1208.87445	53632.13193	905626.8204	16.69771585
57	0.023948741	0.976051259	53027.69471	1269.946512	52392.72145	851994.6884	16.06697582
58	0.0260169	0.9739831	51757.7482	1346.576157	51084.46012	799601.967	15.44893267
59	0.027975277	0.972024723	50411.17204	1410.266487	49706.0388	748517.5069	14.84824646
60	0.02955131	0.97044869	49000.90555	1448.040959	48276.88507	698811.4681	14.26119498
61	0.031248133	0.968751867	47552.86459	1485.938217	46809.89549	650534.583	13.68023964
62	0.033233639	0.966766361	46066.92638	1530.971598	45301.44058	603724.6875	13.10538243
63	0.035432975	0.964567025	44535.95478	1578.041354	43746.9341	558423.2469	12.53870608
64	0.037478825	0.962521175	42957.91343	1610.012133	42152.90736	514676.3128	11.98094302
65	0.039551667	0.960448333	41347.90129	1635.378436	40530.21207	472523.4055	11.42799007
66	0.04268121	0.95731879	39712.52286	1694.978545	38865.03358	431993.1934	10.87800931
67	0.045868461	0.954131539	38017.54431	1743.806239	37145.64119	393128.1598	10.34070367
68	0.050528758	0.949471242	36273.73807	1832.866927	35357.30461	355982.5186	9.813780921
69	0.054174554	0.945825446	34440.87115	1865.818827	33507.96173	320625.214	9.309439725
70	0.058611228	0.941388772	32575.05232	1909.263807	31620.42042	287117.2523	8.814022752
71	0.063860297	0.936139703	30665.78851	1958.326361	29686.62533	255496.8319	8.331657011
72	0.070404573	0.929595427	28707.46215	2021.136606	27696.89385	225810.2065	7.76590627
73	0.07509074	0.92490926	26686.32555	2003.895944	25684.37757	198113.3127	7.423776359
74	0.080872582	0.919127418	24682.4296	1996.131801	23684.3637	172428.9351	6.985897981
75	0.086831511	0.913168489	22686.2978	1969.885516	21701.35504	148744.5714	6.556581983
76	0.096476624	0.903523376	20716.41228	1998.649513	19717.08753	127043.2164	6.132491216
77	0.106063233	0.893936767	18717.76277	1985.266433	17725.12955	107326.1288	5.733918639
78	0.116672019	0.883327981	16732.49634	1952.214126	15756.38928	89600.99929	5.354909242

79	0.12705511	0.87294489	14780.28221	1877.910385	13841.32702	73844.61001	4.996156971
80	0.139123712	0.860876288	12902.37183	1795.025856	12004.8589	60003.28299	4.650562222
81	0.152999035	0.847000965	11107.34597	1699.413212	10257.63936	47998.42409	4.321322503
82	0.167292671	0.832707329	9407.932758	1573.878197	8620.99366	37740.78473	4.011591675
83	0.183278679	0.816721321	7834.054561	1435.815174	7116.146974	29119.79107	3.717077899
84	0.200739289	0.799260711	6398.239387	1284.378029	5756.050373	22003.64409	3.439015448
85	0.219765694	0.780234306	5113.861359	1123.85129	4551.935714	16247.59372	3.177167424
86	0.240443984	0.759556016	3990.010069	959.3739182	3510.323109	11695.65801	2.931235212
87	0.262851944	0.737148056	3030.63615	796.6086049	2632.331848	8185.334898	2.700863612
88	0.287055211	0.712944789	2234.027545	641.2892494	1913.382921	5553.00305	2.485646635
89	0.313102774	0.686897226	1592.738296	498.6907789	1343.392907	3639.62013	2.285133809
90	0.341021811	0.658978189	1094.047517	373.0940656	907.5004843	2296.227223	2.098836831
91	0.370811917	0.629188083	720.9534514	267.3381313	587.2843858	1388.726739	1.926236342
92	0.402438829	0.597561171	453.6153201	182.5524185	362.3391109	801.4423532	1.766788549
93	0.435827855	0.564172145	271.0629017	118.1367631	211.9945202	439.1032422	1.619931165
94	0.470857294	0.529142706	152.9261386	72.00638783	116.9229447	227.1087221	1.485087665
95	0.507352291	0.492647709	80.91975081	41.05482099	60.39234031	110.1857774	1.361667285
96	0.545079678	0.454920322	39.86492982	21.72956312	29.00014826	49.79343704	1.249053674
97	0.583744505	0.416255495	18.13536669	10.58642065	12.84215637	20.79328879	1.146560152
98	0.622989087	0.377010913	7.548946048	4.702911005	5.197490545	7.951132414	1.053277155
99	0.662395475	0.337604525	2.846035043	1.885200733	1.903434676	2.753641869	0.967536178
100	0.701492231	0.298507769	0.96083431	0.674017804	0.623825408	0.850207193	0.884863482
101	0.739766298	0.260233702	0.286816506	0.212177185	0.180727914	0.226381785	0.789291341
102	0.776680426	0.223319574	0.074639321	0.0579709	0.045653871	0.045653871	0.611659787
103	0.811696137	0.188303863	0.016668421	0.016668421	0	0	0

vik	qx	px	lx	dx	Lx_1	Tx	ex
0	0.095559615	0.904440385	100000	9555.961538	91208.51538	5895750.764	58.95750764
1	0.008442241	0.991557759	90444.03846	763.5503617	90062.26328	5804542.248	64.17827363
2	0.004443495	0.995556505	89680.4881	398.4948226	89481.24069	5714479.985	63.72043804
3	0.003069006	0.996930994	89281.99328	274.0069546	89144.9898	5624998.744	63.00261159
4	0.002361524	0.997638476	89007.98632	210.1945061	88902.88907	5535853.755	62.19502298
5	0.002340556	0.997659444	88797.79182	207.8362237	88693.8737	5446950.866	61.34106214
6	0.002181712	0.997818288	88589.95559	193.2777746	88493.31671	5358256.992	60.48379815
7	0.002023714	0.997976286	88396.67782	178.889629	88307.233	5269763.675	59.61495166
8	0.001787466	0.998212534	88217.78819	157.6863251	88138.94503	5181456.442	58.73482603
9	0.001588192	0.998411808	88060.10186	139.8563282	87990.1737	5093317.497	57.83910522
10	0.001460116	0.998539884	87920.24554	128.373744	87856.05866	5005327.323	56.93031557
11	0.001510891	0.998489109	87791.87179	132.6439489	87725.54982	4917471.265	56.01283085
12	0.001581592	0.998418408	87659.22784	138.6411643	87589.90726	4829745.715	55.0968316
13	0.001939026	0.998060974	87520.58668	169.7047231	87435.73432	4742155.808	54.18331832
14	0.002246202	0.997753798	87350.88196	196.2077151	87252.7781	4654720.073	53.28761392
15	0.002583984	0.997416016	87154.67424	225.206285	87042.0711	4567467.295	52.40645249
16	0.002865369	0.997134631	86929.46796	249.0850203	86804.92545	4480425.224	51.54092541
17	0.00322248	0.99677752	86680.38294	279.3258056	86540.72003	4393620.299	50.68759678
18	0.003565224	0.996434776	86401.05713	308.0391066	86247.03758	4307079.579	49.84984816
19	0.0040319	0.9959681	86093.01802	347.1184063	85919.45882	4220832.541	49.02642093
20	0.004346063	0.995653937	85745.89962	372.6570963	85559.57107	4134913.082	48.22286664
21	0.004512695	0.995487305	85373.24252	385.2634022	85180.61082	4049353.511	47.43117857
22	0.004401135	0.995598865	84987.97912	374.043549	84800.95734	3964172.9	46.64392472
23	0.004165158	0.995834842	84613.93557	352.4304209	84437.72036	3879371.943	45.84790811
24	0.003966343	0.996033657	84261.50515	334.2100274	84094.40013	3794934.223	45.03757933
25	0.004002586	0.995997414	83927.29512	335.9261995	83759.33202	3710839.822	44.21493409
26	0.004046112	0.995953888	83591.36892	338.2200254	83422.25891	3627080.49	43.39061003
27	0.004265921	0.995734079	83253.1489	355.1513223	83075.57324	3543658.232	42.56485525
28	0.004212055	0.995787945	82897.99757	349.1709413	82723.4121	3460582.658	41.74506936
29	0.00416085	0.99583915	82548.82663	343.4732974	82377.08998	3377859.246	40.91953071
30	0.004114885	0.995885115	82205.35334	338.2655747	82036.22055	3295482.156	40.08841301
31	0.00422266	0.99577734	81867.08776	345.6969017	81694.23931	3213445.936	39.25198787
32	0.004258762	0.995741238	81521.39086	347.1801871	81347.80077	3131751.696	38.41631826
33	0.004451896	0.995548104	81174.21067	361.3791717	80993.52109	3050403.896	37.57848546
34	0.004375709	0.995624291	80812.8315	353.6134461	80636.02478	2969410.375	36.74429319
35	0.004437811	0.995562189	80459.21805	357.0628361	80280.68664	2888774.35	35.90358469
36	0.00441735	0.99558265	80102.15522	353.8392185	79925.23561	2808493.663	35.06139948
37	0.004570406	0.995429594	79748.316	364.4821513	79566.07492	2728568.428	34.21474665
38	0.004965368	0.995034632	79383.83385	394.16992	79186.74889	2649002.353	33.3695442
39	0.005204801	0.994795199	78989.66393	411.1255136	78784.10117	2569815.604	32.53356801
40	0.005487139	0.994512861	78578.53841	431.1714006	78362.95271	2491031.503	31.7011687
41	0.005717439	0.994282561	78147.36701	446.8027964	77923.96562	2412668.55	30.87331848
42	0.005740934	0.994259066	77700.56422	446.0738309	77477.5273	2334744.584	30.04797465
43	0.005876768	0.994123232	77254.49039	454.0067365	77027.48702	2257267.057	29.21858711
44	0.006403402	0.993596598	76800.48365	491.7844205	76554.59145	2180239.57	28.38835729
45	0.006759743	0.993240257	76308.69925	515.8271675	76050.78566	2103684.978	27.56808856
46	0.007157443	0.992842557	75792.87208	542.4831621	75521.6305	2027634.193	26.75230714
47	0.007502801	0.992497199	75250.38892	564.5886898	74968.09457	1952112.562	25.9415611
48	0.007833277	0.992166723	74685.80023	585.0345738	74393.28294	1877144.468	25.13388706
49	0.008418965	0.991581035	74100.76565	623.8517701	73788.83977	1802751.185	24.3283746
50	0.009369031	0.990630969	73476.91388	688.4074941	73132.71014	1728962.345	23.53068812
51	0.009947208	0.990052792	72788.50639	724.0423931	72426.48519	1655829.635	22.74850408
52	0.010470036	0.989529964	72064.464	754.5175619	71687.20522	1583403.15	21.97203811
53	0.010686612	0.989313388	71309.94644	762.0617474	70928.91556	1511715.944	21.19922984
54	0.011467141	0.988532859	70547.88469	808.9825087	70143.39343	1440787.029	20.42282395
55	0.012452796	0.987547204	69738.90218	868.4443383	69304.68001	1370643.635	19.65393192
56	0.013548278	0.986451722	68870.45784	933.0760917	68403.91979	1301338.955	18.89545962
57	0.014739202	0.985260798	67937.38175	1001.342769	67436.71036	1232935.036	18.14810939
58	0.01560923	0.98439077	66936.03898	1044.820048	66413.62896	1165498.325	17.41211973
59	0.01626985	0.98373015	65891.21893	1072.040264	65355.1988	1099084.696	16.68029085
60	0.017672086	0.982327914	64819.17867	1145.490109	64246.43361	1033729.498	15.94789565
61	0.019573115	0.980426885	63673.68856	1246.292402	63050.54236	969483.0639	15.2258034
62	0.021617407	0.978382593	62427.39616	1349.518424	61752.63695	906432.5215	14.51978742
63	0.024158329	0.975841671	61077.87773	1475.539471	60340.108	844679.8846	13.82955525
64	0.0264379	0.9735621	59602.33826	1575.760672	58814.45793	784339.7766	13.15954708
65	0.028926764	0.971073236	58026.57759	1678.521136	57187.31702	725525.3187	12.50332776
66	0.032149083	0.967850917	56348.05646	1811.538331	55442.28729	668338.0017	11.86088827
67	0.03547252	0.96452748	54536.51812	1934.547743	53569.24425	612895.7144	11.23826264
68	0.038965777	0.961034223	52601.97038	2049.676625	51577.13207	559326.4701	10.63318477
69	0.043430877	0.956569123	50552.29376	2195.530466	49454.52852	507749.338	10.04404153
70	0.047155699	0.952844301	48356.76329	2280.296996	47216.61479	458294.8095	9.477367349
71	0.052594817	0.947405183	46076.46629	2423.383315	44864.77464	411078.1947	8.921651936
72	0.060272254	0.939727746	43653.08298	2631.069698	42337.54813	366213.4201	8.389176551
73	0.06588443	0.93411557	41022.01328	2702.711949	39670.65731	323875.872	7.89517252
74	0.072819898	0.927180102	38319.30133	2790.407631	36924.09752	284205.2147	7.416764001
75	0.081264368	0.918735632	35528.8937	2887.233079	34085.27716	247281.1171	6.960000478
76	0.08904669	0.91095331	32641.66062	2906.631823	31188.34471	213195.84	6.531402996
77	0.096641828	0.903358172	29735.0288	2873.647532	28298.20503	182007.4953	6.120979284
78	0.106048721	0.893951279	26861.38127	2848.615116	25437.07371	153709.2902	5.722315197

79	0.115224945	0.884775055	24012.76615	2766.869648	22629.33133	128272.2165	5.341834245
80	0.127170928	0.872829072	21245.8965	2701.86037	19894.96632	105642.8852	4.972390089
81	0.140858632	0.859141368	18544.03613	2612.087566	17237.99235	85747.91889	4.624015952
82	0.154442352	0.845557648	15931.94857	2460.567607	14701.66476	68509.92654	4.300159911
83	0.169221902	0.830778098	13471.38096	2279.652703	12331.55461	53808.26177	3.994264726
84	0.185238819	0.814761181	11191.72826	2073.14253	10155.15699	41476.70717	3.706014497
85	0.202563252	0.797436748	9118.585727	1847.090377	8195.040539	31321.55017	3.434913167
86	0.221262076	0.778737924	7271.49535	1608.906158	6467.042271	23126.50964	3.180433807
87	0.241396939	0.758603061	5662.589192	1366.931696	4979.123344	16659.46737	2.942022951
88	0.263021931	0.736978069	4295.657496	1129.85213	3730.731431	11680.34402	2.719105057
89	0.28618089	0.71381911	3165.805366	905.992997	2712.808867	7949.61259	2.511086966
90	0.310904308	0.689095692	2259.812369	702.5854009	1908.519669	5236.803723	2.317362182
91	0.337205876	0.662794124	1557.226968	525.1060835	1294.673926	3328.284054	2.137314677
92	0.365078687	0.634921313	1032.120885	376.8053377	843.7182158	2033.610128	1.970321653
93	0.394491189	0.605508811	655.3155469	258.516209	526.0574424	1189.891912	1.815754132
94	0.425382982	0.574617018	396.7993379	168.7916855	312.4034951	663.8344696	1.672972725
95	0.457660658	0.542339342	228.0076524	104.3501322	175.8325863	351.4309744	1.541312192
96	0.491193887	0.508806113	123.6575202	60.73981798	93.28761118	175.5983882	1.420038085
97	0.525812061	0.474187939	62.91770219	33.08288669	46.37625884	82.310777	1.308229229
98	0.561301859	0.438698141	29.8348155	16.7463374	21.4616468	35.93451815	1.20444915
99	0.597406145	0.402593855	13.0884781	7.819137247	9.178909472	14.47287136	1.105771905
100	0.633824688	0.366175312	5.269340849	3.33983832	3.599421689	5.293961887	1.004672508
101	0.670217162	0.329782838	1.929502529	1.293185708	1.282909675	1.694540198	0.878226471
102	0.706208891	0.293791109	0.636316821	0.449372596	0.411630523	0.411630523	0.646895555
103	0.741399684	0.258600316	0.186944224	0.186944224	0	0	0