

Contribution from Dr Jitka Rychtarikova

vik	qx	px	lx	dx	Lx_1	Tx	ex
0	0.166071509	0.833928491	100000	16607.15088	84721.42119	4965523.038	49.65523038
1	0.024433455	0.975566545	83392.84912	2037.57544	82374.0614	4880801.617	58.52781946
2	0.009010103	0.990989897	81355.27368	733.0194166	80988.76397	4798427.556	58.98114945
3	0.005429588	0.994570412	80622.25426	437.7456497	80403.38144	4717438.792	58.51286143
4	0.003111717	0.996888283	80184.50861	249.5115203	80059.75285	4637035.41	57.82956696
5	0.003283329	0.996716671	79934.99709	262.4529129	79803.77064	4556975.658	57.00851721
6	0.002922826	0.997077174	79672.54418	232.8690146	79556.10967	4477171.887	56.19466446
7	0.002545268	0.997454732	79439.67517	202.1952479	79338.57754	4397615.777	55.35792748
8	0.002365561	0.997634439	79237.47992	187.4410591	79143.75939	4318277.2	54.4979119
9	0.002218767	0.997781233	79050.03886	175.3936239	78962.34205	4239133.44	53.62595011
10	0.002091914	0.997908086	78874.64524	164.9989546	78792.14576	4160171.098	52.74408634
11	0.001986703	0.998013297	78709.64628	156.3727222	78631.45992	4081378.953	51.85360557
12	0.001922938	0.998077062	78553.27356	151.0530885	78477.74701	4002747.493	50.95583305
13	0.002013609	0.997986391	78402.22047	157.8714165	78323.28476	3924269.746	50.05304342
14	0.002240847	0.997759153	78244.34905	175.3336514	78156.68223	3845946.461	49.1530252
15	0.002734711	0.997265289	78069.0154	213.4961682	77962.26732	3767789.779	48.26229406
16	0.003476236	0.996523764	77855.51923	270.6441264	77720.19717	3689827.511	47.3932683
17	0.00409446	0.99590554	77584.87511	317.6681946	77426.04101	3612107.314	46.55684899
18	0.004865786	0.995134214	77267.20691	375.9657195	77079.22405	3534681.273	45.74620223
19	0.00551782	0.99448218	76891.24119	424.2720413	76679.10517	3457602.049	44.96743706
20	0.005964811	0.994035189	76466.96915	456.1109856	76238.91366	3380922.944	44.21416177
21	0.00633576	0.99366424	76010.85817	481.5865557	75770.06489	3304684.03	43.4764731
22	0.006431146	0.993568854	75529.27161	485.7397357	75286.40174	3228913.965	42.75049787
23	0.006239099	0.993760901	75043.53188	468.2040022	74809.42987	3153627.564	42.02397575
24	0.005990971	0.994009029	74575.32787	446.7786574	74351.93854	3078818.134	41.28467446
25	0.005717412	0.994282588	74128.54922	423.8234793	73916.63748	3004466.195	40.53048693
26	0.005607049	0.994392951	73704.72574	413.2660221	73498.09273	2930549.558	39.7606738
27	0.005411053	0.994588947	73291.45971	396.5840057	73093.16771	2857051.465	38.98205161
28	0.005477237	0.994522763	72894.87571	399.2625371	72695.24444	2783958.297	38.19141291
29	0.005557416	0.994442584	72495.61317	402.8882558	72294.16904	2711263.053	37.3989947
30	0.00546143	0.99453857	72092.72492	393.7293723	71895.86023	2638968.884	36.60520374
31	0.005497025	0.994502975	71698.99554	394.1311805	71501.92995	2567073.024	35.80347262
32	0.005715441	0.994284559	71304.86436	407.5387472	71101.09499	2495571.094	34.99860936
33	0.005751813	0.994248187	70897.32562	407.7881291	70693.43155	2424469.999	34.19691755
34	0.006015218	0.993984782	70489.53749	424.0099201	70277.53253	2353776.567	33.39185716
35	0.006141813	0.993858187	70065.52757	430.329353	69850.36289	2283499.035	32.59090617
36	0.006282051	0.993717949	69635.19821	437.4518702	69416.47228	2213648.672	31.78922052
37	0.006370447	0.993629553	69197.74634	440.8205835	68977.33605	2144232.199	30.98702361
38	0.006897081	0.993102919	68756.92576	474.2220635	68519.81473	2075254.863	30.18248475
39	0.007244783	0.992755217	68282.7037	494.6933708	68035.35701	2006735.049	29.38862904
40	0.007532544	0.992467456	67788.01033	510.6161838	67532.70223	1938699.692	28.59944823
41	0.007897687	0.992102313	67277.39414	531.3358161	67011.72623	1871166.989	27.812715
42	0.00817927	0.99182073	66746.05833	545.9340053	66473.09132	1804155.263	27.03013943
43	0.008757761	0.991242239	66200.12432	579.7648478	65910.2419	1737682.172	26.24892611
44	0.009572418	0.990427582	65620.35947	628.1454842	65306.28673	1671771.93	25.47642139
45	0.010236567	0.989763433	64992.21399	665.2971803	64659.5654	1606465.643	24.71781687
46	0.010728355	0.989271645	64326.91681	690.1220278	63981.85579	1541806.078	23.96828815
47	0.011070143	0.988929857	63636.79478	704.4684218	63284.56057	1477824.222	23.22279472
48	0.011476972	0.988523028	62932.32636	722.272518	62571.1901	1414539.661	22.47715512
49	0.012347421	0.987652579	62210.05384	768.1337398	61825.98697	1351968.471	21.73231476
50	0.013431237	0.986568763	61441.9201	825.2410087	61029.2996	1290142.484	20.99775662
51	0.014807526	0.985192474	60616.67909	897.5830618	60167.88756	1229113.185	20.27681495
52	0.015576212	0.984423788	59719.09603	930.197282	59253.99739	1168945.297	19.57406215
53	0.016293542	0.983706458	58788.89875	957.8793702	58309.95906	1109691.3	18.87586472
54	0.017122072	0.982877928	57831.01938	990.1868818	57335.92594	1051381.341	18.18023186
55	0.018362742	0.981637258	56840.8325	1043.753523	56318.95573	994045.4148	17.48822758
56	0.020164799	0.979835201	55797.07897	1125.136892	55234.51053	937726.4591	16.80601344
57	0.021126704	0.978873296	54671.94208	1155.037955	54094.4231	882491.9485	16.14158771
58	0.022531084	0.977468916	53516.90413	1205.793874	52914.00719	828397.5254	15.47917502
59	0.02423159	0.97576841	52311.11025	1267.581376	51677.31956	775483.5182	14.82445153
60	0.026032923	0.973967077	51043.52888	1328.812281	50379.12274	723806.1987	14.18017552
61	0.028649223	0.971350777	49714.7166	1424.288014	49002.57259	673427.0759	13.54582953
62	0.031763957	0.968236043	48290.42858	1533.8951	47523.48103	624424.5034	12.93060595
63	0.034154146	0.965845854	46756.53348	1596.929475	45958.06874	576901.0223	12.33840448
64	0.036833772	0.963166228	45159.60401	1663.398556	44327.90473	530942.9536	11.75703298
65	0.040133561	0.959866439	43496.20545	1745.657606	42623.37665	486615.0489	11.18752875
66	0.042974839	0.957025161	41750.54784	1794.223058	40853.43631	443991.6722	10.63439153
67	0.046216236	0.953783764	39956.32479	1846.63093	39033.00932	403138.2359	10.08947239
68	0.050771449	0.949228551	38109.69386	1934.884372	37142.25167	364105.2266	9.554136749
69	0.05651514	0.94348486	36174.80948	2044.424427	35152.59727	326962.9749	9.038415947
70	0.061630714	0.938369286	34130.38506	2103.480005	33078.64505	291810.3776	8.549870655
71	0.067488957	0.932511043	32026.90505	2161.462424	30946.17384	258731.7326	8.078574316
72	0.073412157	0.926587843	29865.44263	2192.486569	28769.19934	227785.5587	7.627061202
73	0.080071171	0.919928829	27672.95606	2215.80599	26565.05306	199016.3594	7.191727511
74	0.087034542	0.912965458	25457.15007	2215.651387	24349.32438	172451.3063	6.774179587
75	0.094831437	0.905168563	23241.49868	2204.024721	22139.48632	148101.982	6.372307741
76	0.104035759	0.895964241	21037.47396	2188.649561	19943.14918	125962.4956	5.987529485
77	0.112981264	0.887018736	18848.8244	2129.564007	17784.0424	106019.3465	5.624719304
78	0.122609527	0.877390473	16719.26039	2049.940602	15694.29009	88235.30406	5.277464552

79	0.133143112	0.866856888	14669.31979	1953.118892	13692.76034	72541.01397	4.945083685
80	0.144717811	0.855282189	12716.2009	1840.260764	11796.07052	58848.25362	4.627817231
81	0.157280837	0.842719163	10875.94013	1710.576971	10020.65165	47052.18311	4.326263525
82	0.170831818	0.829168182	9165.363164	1565.735647	8382.49534	37031.53146	4.040377975
83	0.185426826	0.814573174	7599.627517	1409.174807	6895.040113	28649.03612	3.769794777
84	0.201120831	0.798879169	6190.452709	1245.028992	5567.938213	21753.99601	3.514120377
85	0.217966637	0.782033363	4945.423717	1077.937378	4406.455028	16186.05779	3.2729365
86	0.236013627	0.763986373	3867.486339	912.77948	3411.096599	11779.60276	3.045803328
87	0.255306284	0.744693716	2954.706859	754.3552271	2577.529246	8368.506165	2.832262747
88	0.275882484	0.724117516	2200.351632	607.0384732	1896.832395	5790.97692	2.631841582
89	0.297771561	0.702228439	1593.313159	474.4433458	1356.091486	3894.144524	2.444054706
90	0.320992127	0.679007873	1118.869813	359.1484007	939.2956126	2538.053039	2.268407825
91	0.34554968	0.65445032	759.7214123	262.5214909	628.4606669	1598.757426	2.104399587
92	0.371434021	0.628565979	497.1999214	184.6769658	404.8614385	970.2967591	1.95152235
93	0.398616525	0.601383475	312.5229556	124.5768146	250.2345483	565.4353206	1.809260122
94	0.427047355	0.572952645	187.946141	80.26190245	147.8151897	315.2007723	1.67708031
95	0.456652699	0.543347301	107.6842385	49.17429819	83.09708942	167.3855826	1.554411165
96	0.487332182	0.512667818	58.50994032	28.51377688	44.25305188	84.28849319	1.440584159
97	0.518956611	0.481043389	29.99616344	15.56670733	22.21280978	40.03544131	1.334685397
98	0.551366264	0.448633736	14.42945612	7.955915306	10.45149846	17.82263152	1.235156154
99	0.584369946	0.415630054	6.473540812	3.782942696	4.582069464	7.371133061	1.138655533
100	0.617745092	0.382254908	2.690598116	1.662103782	1.859546225	2.789063597	1.036596131
101	0.651239168	0.348760832	1.028494334	0.669795794	0.693596437	0.929517372	0.903765185
102	0.684572647	0.315427353	0.35869854	0.245555209	0.235920935	0.235920935	0.657713677
103	0.717443791	0.282556209	0.113143331	0.113143331	0	0	0

vik	qx	px	lx	dx	Lx_1	Tx	ex
0	0.140991651	0.859008349	100000	14099.16509	87028.76811	5238309.04	52.3830904
1	0.022065999	0.977934001	85900.83491	1895.487706	84953.09105	5151280.272	59.96775559
2	0.008305245	0.991694755	84005.3472	697.685028	83656.50468	5066327.181	60.30957969
3	0.005762191	0.994237809	83307.66217	480.034679	83067.64483	4982670.676	59.81047297
4	0.003086332	0.996913668	82827.62749	255.6335567	82699.81071	4899603.032	59.15421195
5	0.003181975	0.996818025	82571.99394	262.7420004	82440.62293	4816903.221	58.33579875
6	0.002740807	0.997259193	82309.25193	225.5937953	82196.45504	4734462.598	57.52041826
7	0.002478368	0.997521632	82083.65814	203.4334869	81981.9414	4652266.143	56.67712975
8	0.00225869	0.99774131	81880.22465	184.9420138	81787.75365	4570284.202	55.81670325
9	0.002011016	0.997988984	81695.28264	164.2905518	81613.13736	4488496.448	54.94192936
10	0.001912575	0.998087425	81530.99209	155.9341212	81453.02503	4406883.31	54.05163359
11	0.001949217	0.998050783	81375.05797	158.6176094	81295.74916	4325430.285	53.15425136
12	0.002130158	0.997869842	81216.44036	173.0038396	81129.93844	4244134.536	52.25708634
13	0.002305691	0.997694309	81043.43652	186.8611612	80950.00594	4163004.598	51.36757246
14	0.002579202	0.997420798	80856.57536	208.545418	80752.30265	4082054.592	50.48512844
15	0.002854868	0.997145132	80648.02994	230.23949	80532.91019	4001302.289	49.61438354
16	0.003245284	0.996754716	80417.79045	260.9786046	80287.30115	3920769.379	48.75500007
17	0.003623421	0.996376579	80156.81184	290.4418435	80011.59092	3840482.078	47.91211114
18	0.003978722	0.996021278	79866.37	317.7660598	79707.48697	3760470.487	47.08452991
19	0.004290583	0.995709417	79548.60394	341.309892	79377.94899	3680763	46.27061718
20	0.004552354	0.995447646	79207.29405	360.5796673	79027.00421	3601385.051	45.46784604
21	0.004844244	0.995155756	78846.71438	381.9526884	78655.73804	3522358.047	44.67349178
22	0.005246876	0.994753124	78464.76169	411.6948987	78258.91424	3443702.309	43.88852059
23	0.005462661	0.994537339	78053.06679	426.3774398	77839.87807	3365443.395	43.11737556
24	0.005544402	0.994455598	77626.68935	430.3935889	77411.49256	3287603.517	42.35145855
25	0.00557414	0.99442586	77196.29576	430.3029953	76981.14427	3210192.024	41.58479357
26	0.005656958	0.994343042	76765.99277	434.2620217	76548.86176	3133210.88	40.81508969
27	0.005838174	0.994161826	76331.73075	445.6379566	76108.91177	3056662.018	40.04444794
28	0.006132402	0.993867598	75886.09279	465.3640298	75653.41078	2980553.106	39.27667108
29	0.006138744	0.993861256	75420.72876	462.9885281	75189.2345	2904899.695	38.51593246
30	0.006105977	0.993894023	74957.74023	457.6902573	74728.8951	2829710.461	37.75074398
31	0.005887901	0.994112099	74500.04998	438.6489078	74280.72552	2754981.566	36.97959353
32	0.005773858	0.994226142	74061.40107	427.620027	73847.59105	2680700.84	36.1956539
33	0.005823252	0.994176748	73633.78104	428.7880884	73419.387	2606853.249	35.40295245
34	0.00615068	0.99384932	73204.99295	450.2605204	72979.86269	2533433.862	34.60739165
35	0.006355796	0.993644204	72754.73243	462.4142446	72523.52531	2460454	33.81847362
36	0.006777862	0.993222138	72292.31819	489.987391	72047.32449	2387930.474	33.03159359
37	0.006935917	0.993064083	71802.3308	498.0149955	71553.3233	2315883.15	32.25359294
38	0.0070133	0.9929867	71304.3158	500.0785691	71054.27652	2244329.826	31.47537146
39	0.007175263	0.992824737	70804.23723	508.0390232	70550.21772	2173275.55	30.69414536
40	0.007030745	0.992969255	70296.19821	494.2346223	70049.0809	2102725.332	29.91236206
41	0.007053078	0.992946922	69801.96359	492.318678	69555.80425	2032676.251	29.12061705
42	0.007165165	0.992834835	69309.64491	496.6150113	69061.3374	1963120.447	28.32391436
43	0.007457863	0.992542137	68813.0299	513.1981205	68556.43084	1894059.11	27.52471607
44	0.007858899	0.992141101	68299.83178	536.7614876	68031.45103	1825502.679	26.72777709
45	0.008565062	0.991434938	67763.07029	580.3948994	67472.87284	1757471.228	25.93553126
46	0.008910763	0.991089237	67182.67539	598.648899	66883.35094	1689998.355	25.15527024
47	0.009195004	0.990804996	66584.02649	612.2403795	66277.9063	1623115.004	24.37694278
48	0.009374928	0.990625072	65971.78611	618.480741	65662.54574	1556837.098	23.59852885
49	0.009713808	0.990286192	65353.30537	634.829455	65035.89064	1491174.552	22.81712522
50	0.010313099	0.989686901	64718.47591	667.4480182	64384.75191	1426138.661	22.03603594
51	0.011315183	0.988684817	64051.0279	724.7490839	63688.65335	1361753.909	21.26045364
52	0.012096964	0.987903036	63326.27881	766.0557336	62943.25095	1298065.256	20.49805042
53	0.012940224	0.987059776	62560.22308	809.5433279	62155.45142	1235122.005	19.7429284
54	0.013827971	0.986172029	61750.67975	853.886607	61323.73645	1172966.554	18.99520067
55	0.014836395	0.985163605	60896.79314	903.4888806	60445.0487	1111642.817	18.25453788
56	0.016123702	0.983876298	59993.30426	967.3141686	59509.64718	1051197.769	17.52191818
57	0.017353589	0.982646411	59025.9901	1024.312793	58513.8337	991688.1213	16.80087229
58	0.018679147	0.981320853	58001.6773	1083.421877	57459.96636	933174.2876	16.08874659
59	0.020278762	0.979721238	56918.25543	1154.231777	56341.13954	875714.3213	15.38547369
60	0.022674243	0.977325757	55764.02365	1264.407036	55131.82013	819373.1817	14.6935807
61	0.025329112	0.974670888	54499.61661	1380.42691	53809.40316	764241.3616	14.02287592
62	0.028693805	0.971306195	53119.1897	1524.191666	52357.09387	710431.9585	13.37429962
63	0.031364674	0.968635326	51594.99804	1618.26029	50785.86789	658074.8646	12.75462525
64	0.033241015	0.966758985	49976.73775	1661.2775	49146.099	607288.9967	12.15143333
65	0.03554913	0.96445087	48315.46025	1717.572569	47456.67396	558142.8977	11.5520559
66	0.038375266	0.961624734	46597.88768	1788.20634	45703.78451	510686.2237	10.95942862
67	0.041617382	0.958382618	44809.68134	1864.861606	43877.25053	464982.4392	10.37682986
68	0.047196274	0.952803726	42944.81973	2026.835476	41931.40199	421105.1887	9.805727241
69	0.052326694	0.947673306	40917.98425	2141.102848	39847.43283	379173.7867	9.266678054
70	0.05782052	0.94217948	38776.88141	2242.099431	37655.83169	339326.3539	8.750738625
71	0.063066982	0.936933018	36534.78198	2304.138422	35382.71276	301670.5222	8.25707739
72	0.069323656	0.930676344	34230.64355	2372.993346	33044.14688	266287.8094	7.779222994
73	0.077141018	0.922858982	31857.65021	2457.531554	30628.88443	233243.6625	7.321433345
74	0.085361714	0.914638286	29400.11865	2509.64452	28145.29639	202614.7781	6.891631306
75	0.091241644	0.908758356	26890.47413	2453.531074	25663.7086	174469.4817	6.488151932
76	0.1002607	0.8997393	24436.94306	2450.065015	23211.91055	148805.7731	6.089377577
77	0.109033959	0.890966041	21986.87804	2397.316357	20788.21987	125593.8626	5.712219002
78	0.119672397	0.880327603	19589.56169	2344.329807	18417.39678	104805.6427	5.350075942

79	0.130128991	0.869871009	17245.23188	2244.104624	16123.17957	86388.24591	5.009398917
80	0.141823522	0.858176478	15001.12726	2127.512694	13937.37091	70265.06634	4.683985753
81	0.154422006	0.845577994	12873.61456	1987.969387	11879.62987	56327.69544	4.375437463
82	0.167987363	0.832012637	10885.64518	1828.650832	9971.319759	44448.06557	4.083181553
83	0.182677795	0.817322205	9056.994344	1654.511757	8229.738465	34476.74581	3.806643186
84	0.198473792	0.801526208	7402.482586	1469.198793	6667.88319	26247.00734	3.545703355
85	0.215428314	0.784571686	5933.283794	1278.197323	5294.185132	19579.12415	3.299879937
86	0.233590834	0.766409166	4655.08647	1087.385531	4111.393705	14284.93902	3.068673184
87	0.253005853	0.746994147	3567.700939	902.6492196	3116.376329	10173.54532	2.851568977
88	0.273711175	0.726288825	2665.051719	729.4544364	2300.324501	7057.168987	2.648042038
89	0.295735948	0.704264052	1935.597283	572.4256965	1649.384435	4756.844486	2.457558981
90	0.319098473	0.680901527	1363.171586	434.9859715	1145.678601	3107.460052	2.279581003
91	0.343803791	0.656196209	928.1856149	319.1137328	768.6287485	1961.781451	2.113565885
92	0.369841077	0.630158923	609.0718821	225.2598009	496.4419817	1193.152703	1.958968617
93	0.397180902	0.602819098	383.8120813	152.4428288	307.5906668	696.7107209	1.815239162
94	0.425772425	0.574227575	231.3692524	98.51064762	182.1139286	389.120054	1.681814026
95	0.45554062	0.54445938	132.8586048	60.52249124	102.5973592	207.0061254	1.558093476
96	0.48638369	0.51361631	72.33611359	35.18310581	54.74456068	104.4087662	1.443383685
97	0.518170808	0.481829192	37.15300777	19.25160405	27.52720575	49.6642055	1.33674791
98	0.550740424	0.449259576	17.90140372	9.859026683	12.97189038	22.13699975	1.236606922
99	0.583899351	0.416100649	8.04237704	4.695938735	5.694407672	9.165109371	1.139602051
100	0.617422901	0.382577099	3.346438305	2.066167648	2.313354481	3.470701699	1.03713303
101	0.651056354	0.348943646	1.280270657	0.833528346	0.863506484	1.157347218	0.903986365
102	0.684518004	0.315481996	0.446742311	0.305803155	0.293840734	0.293840734	0.657740998
103	0.717504035	0.282495965	0.140939156	0.140939156	0	0	0