

Contribution from Dr Jitka Rychtarikova

vik	qx	px	lx	dx	Lx_1	Tx	ex
0	0.114426256	0.885573744	100000	11442.6256	89472.78445	5549049.544	55.49049544
1	0.01219504	0.98780496	88557.3744	1079.960709	88017.39405	5459576.76	61.65016518
2	0.005948608	0.994051392	87477.4137	520.3688353	87217.22928	5371559.366	61.40510034
3	0.004763493	0.995236507	86957.04486	414.2192545	86749.93523	5284342.136	60.76956898
4	0.003511587	0.996488413	86542.82561	303.9026708	86390.87427	5197592.201	60.05803676
5	0.003418368	0.996581632	86238.92293	294.79634	86091.52476	5111201.327	59.267917
6	0.003060072	0.996939928	85944.12659	262.9952261	85812.62898	5025109.802	58.46949642
7	0.002830502	0.997169498	85681.13137	242.5206554	85559.87104	4939297.173	57.64743175
8	0.002618934	0.997381066	85438.61071	223.7580457	85326.73169	4853737.302	56.80964685
9	0.002312182	0.997687818	85214.85267	197.0322607	85116.33654	4768410.57	55.95750531
10	0.002061463	0.997938537	85017.82041	175.2610521	84930.18988	4683294.234	55.08603033
11	0.001827638	0.998172362	84842.55935	155.0614589	84765.02863	4598364.044	54.19878984
12	0.001698288	0.998301712	84687.4979	143.8237873	84615.586	4513599.015	53.29711147
13	0.001564814	0.998435186	84543.67411	132.2951476	84477.52653	4428983.429	52.38692872
14	0.001789433	0.998210567	84411.37896	151.0484696	84335.85473	4344505.903	51.46824938
15	0.001961452	0.998038548	84260.33049	165.272615	84177.69418	4260170.048	50.55961712
16	0.00239694	0.99760306	84095.05788	201.5708415	83994.27246	4175992.354	49.65799964
17	0.002969783	0.997030217	83893.48703	249.145492	83768.91429	4091998.081	48.77611154
18	0.003475463	0.996524537	83644.34154	290.7028515	83498.99012	4008229.167	47.91990819
19	0.003681938	0.996318062	83353.63869	306.9028954	83200.18724	3924230.177	47.08528912
20	0.003831171	0.996168829	83046.7358	318.1662255	82887.65268	3841529.99	46.25744712
21	0.003741833	0.996258167	82728.56957	309.556476	82573.79133	3758642.337	45.43342592
22	0.003699885	0.996300115	82419.01309	304.9409086	82266.54264	3676068.546	44.60219078
23	0.003659987	0.996340013	82114.07219	300.5364556	81963.80396	3593802.003	43.7659698
24	0.003746789	0.996253211	81813.53573	306.538015	81660.26672	3511838.199	42.92490439
25	0.003711698	0.996288302	81506.99771	302.5293298	81355.73305	3430177.932	42.08445935
26	0.003640391	0.996359609	81204.46838	295.6159833	81056.66039	3348822.199	41.23938392
27	0.00359351	0.99640649	80908.8524	290.7467661	80763.47902	3267765.539	40.38823246
28	0.003646451	0.996353549	80618.10564	293.9699973	80471.12064	3187002.06	39.53208817
29	0.003785973	0.996214027	80324.13564	304.1050303	80172.08312	3106530.939	38.67493767
30	0.004134157	0.995865843	80020.03061	330.8153351	79854.62294	3026358.856	37.82001623
31	0.004234547	0.995765453	79689.21527	337.4477402	79520.4914	2946504.233	36.97494351
32	0.004459092	0.995540908	79351.76753	353.836838	79174.84911	2866983.742	36.13005521
33	0.004703299	0.995296701	78997.93069	371.5509043	78812.15524	2787808.893	35.28964453
34	0.005053976	0.994946024	78626.37979	397.3758412	78427.69187	2708996.737	34.45404386
35	0.005336	0.994664	78229.00395	417.4299833	78020.28896	2630569.046	33.62651846
36	0.005560128	0.994439872	77811.57397	432.6423397	77595.2528	2552548.757	32.80422984
37	0.005636394	0.994363606	77378.93163	436.1381376	77160.86256	2474953.504	31.98484978
38	0.005811494	0.994188506	76942.79349	447.1525989	76719.21719	2397792.641	31.1633167
39	0.005979554	0.994020446	76495.64089	457.4098323	76266.93597	2321073.424	30.34255805
40	0.006405955	0.993594045	76038.23106	487.0974998	75794.68231	2244806.488	29.52207668
41	0.006842386	0.993157614	75551.13356	516.9500326	75292.65854	2169011.806	28.70918944
42	0.007505322	0.992494678	75034.18352	563.1556741	74752.60569	2093719.147	27.90353741
43	0.008040942	0.991959058	74471.02785	598.8171961	74171.61925	2018966.542	27.11076508
44	0.008423232	0.991576768	73872.21065	622.2427945	73561.08926	1944794.922	26.32647521
45	0.008853997	0.991146003	73249.96786	648.5549625	72925.69038	1871233.833	25.54586559
46	0.009194334	0.990805666	72601.4129	667.52161	72267.65209	1798308.143	24.76960256
47	0.009755081	0.990244919	71933.89129	701.7209679	71583.0308	1726040.491	23.99481607
48	0.01057655	0.98942345	71232.17032	753.3906004	70855.47502	1654457.46	23.22626774
49	0.011411322	0.988588678	70478.77972	804.2560302	70076.6517	1583601.985	22.46920266
50	0.011867069	0.988132931	69674.52369	826.8323695	69261.1075	1513525.333	21.72279411
51	0.012446735	0.987553265	68847.69132	856.9289409	68419.22685	1444264.226	20.97767112
52	0.013295287	0.986704713	67990.76238	903.9566809	67538.78404	1375844.999	20.23576366
53	0.014431329	0.985568671	67086.8057	968.1517507	66602.72982	1308306.215	19.50169189
54	0.015768497	0.984231503	66118.65395	1042.591799	65597.35805	1241703.485	18.77992686
55	0.017827407	0.982172593	65076.06215	1160.13743	64495.99343	1176106.127	18.07279187
56	0.018951221	0.981048779	63915.92472	1211.284784	63310.28233	1111610.133	17.39175547
57	0.020287953	0.979712047	62704.63993	1272.148759	62068.56555	1048299.851	16.7180587
58	0.021397978	0.978602022	61432.49118	1314.531123	60775.22561	986231.2855	16.05390351
59	0.022600597	0.977399403	60117.96005	1358.701758	59438.60917	925456.0599	15.39400304
60	0.024172771	0.975827229	58759.25829	1420.374083	58049.07125	866017.4507	14.73839997
61	0.026498119	0.973501881	57338.88421	1519.372597	56579.19791	807968.3795	14.09110747
62	0.028122966	0.971877034	55819.51161	1569.810211	55034.60651	751389.1816	13.46104901
63	0.03119449	0.96880551	54249.7014	1692.291769	53403.55552	696354.5751	12.83609968
64	0.033191776	0.966808224	52557.40963	1744.473775	51685.17275	642951.0196	12.23330876
65	0.036477017	0.963522983	50812.93586	1853.504343	49886.18369	591265.8468	11.63612842
66	0.039629795	0.960370205	48959.43152	1940.252243	47989.30539	541379.6631	11.05771955
67	0.043062299	0.956937701	47019.17927	2024.753952	46006.8023	493390.3577	10.49338515
68	0.047344957	0.952655043	44994.42532	2130.259137	43929.29575	447383.5554	9.943088555
69	0.052177316	0.947822684	42864.16618	2236.537154	41745.89761	403454.2697	9.412390246
70	0.05679786	0.94320214	40627.62903	2307.562394	39473.84783	361708.3621	8.903014296
71	0.062558596	0.937441404	38320.06664	2397.249551	37121.44186	322234.5142	8.409028024
72	0.068336245	0.931663755	35922.81708	2454.830438	34695.40187	285113.0724	7.936823877
73	0.074064152	0.925935848	33467.98665	2478.77804	32228.59763	250417.6705	7.482304602
74	0.081827883	0.918172117	30989.20861	2535.781335	29721.31794	218189.0729	7.040808162
75	0.089079021	0.910920979	28453.42727	2534.603433	27186.12556	188467.7549	6.62372772
76	0.09641381	0.90358619	25918.82384	2498.932552	24669.35756	161281.6294	6.22567443
77	0.105670973	0.894329027	23419.89129	2474.802696	22182.48994	136612.2718	5.833172757
78	0.115665405	0.884334595	20945.08859	2422.622148	19733.77752	114429.7819	5.463322888

79	0.126420093	0.873579907	18522.46644	2341.611931	17351.66048	94696.00437	5.112494314
80	0.137706544	0.862293456	16180.85451	2228.209551	15066.74974	77344.34389	4.779991306
81	0.150096311	0.849903689	13952.64496	2094.240532	12905.52469	62277.59415	4.463497375
82	0.163505253	0.836494747	11858.40443	1938.911414	10888.94872	49372.06946	4.16346649
83	0.177995449	0.822004551	9919.493014	1765.62461	9036.680709	38483.12074	3.879545122
84	0.193628292	0.806371708	8153.868404	1578.819612	7364.458598	29446.44003	3.611345998
85	0.210463362	0.789536638	6575.048792	1383.806874	5883.145355	22081.98143	3.358451341
86	0.228557062	0.771442938	5191.241918	1186.495003	4597.994416	16198.83608	3.120416334
87	0.247961005	0.752038995	4004.746915	993.021071	3508.236379	11600.84166	2.896772732
88	0.268720122	0.731279878	3011.725844	809.3113358	2607.070176	8092.605281	2.687032519
89	0.29087049	0.70912951	2202.414508	640.6173867	1882.105814	5485.535105	2.490691505
90	0.314436874	0.685563126	1561.797121	491.086604	1316.253819	3603.429291	2.307232637
91	0.33942999	0.66057001	1070.710517	363.4312604	888.9948869	2287.175472	2.136128706
92	0.365843531	0.634156469	707.2792567	258.7535405	577.9024864	1398.180585	1.97684376
93	0.39365099	0.60634901	448.5257162	176.5625924	360.24442	820.2780984	1.828831812
94	0.422802392	0.577197608	271.9631238	114.9866593	214.4697941	460.0336784	1.691529616
95	0.453221023	0.546778977	156.9764645	71.1450338	121.4039476	245.5638843	1.56433568
96	0.484800339	0.515199661	85.83143066	41.61110669	65.02587732	124.1599367	1.4465556
97	0.51740125	0.48259875	44.22032397	22.87965089	32.78049853	59.1340594	1.33725975
98	0.550850024	0.449149976	21.34067308	11.75551029	15.46291794	26.35356087	1.234898298
99	0.584937117	0.415062883	9.585162797	5.606717493	6.78180405	10.89064293	1.136198014
100	0.619417235	0.380582765	3.978445304	2.46431759	2.746286509	4.108838882	1.032775008
101	0.654010991	0.345989009	1.514127713	0.990256166	1.018999631	1.362552374	0.899892632
102	0.688408468	0.311591532	0.523871548	0.360637609	0.343552743	0.343552743	0.655795766
103	0.722274991	0.277725009	0.163233938	0.163233938	0	0	0

vik	qx	px	lx	dx	Lx_1	Tx	ex
0	0.096121796	0.903878204	100000	9612.179572	91156.79479	5879455.82	58.7945582
1	0.011881943	0.988118057	90387.82043	1073.982964	89850.82895	5788299.025	64.03848436
2	0.005003638	0.994996362	89313.83746	446.8941136	89090.39041	5698448.196	63.8025233
3	0.004585813	0.995414187	88866.94335	407.5271969	88663.17975	5609357.806	63.12085905
4	0.003387152	0.996612848	88459.41615	299.6255077	88309.6034	5520694.626	62.40934957
5	0.003608006	0.996399194	88159.79065	317.4463052	88001.06749	5432385.022	61.61975865
6	0.003252818	0.996747182	87842.34434	285.7351731	87699.47675	5344383.955	60.84063438
7	0.003060343	0.996939657	87556.60917	267.9532744	87422.63253	5256684.478	60.03755203
8	0.002695351	0.997304649	87288.65589	235.2736072	87171.01909	5169261.846	59.22031669
9	0.002345964	0.997654036	87053.38229	204.2240955	86951.27024	5082090.826	58.37901634
10	0.001993892	0.998006108	86849.15819	173.1678511	86762.57426	4995139.556	57.51511771
11	0.00176192	0.99823808	86675.99034	152.7161652	86599.63226	4908376.982	56.62902682
12	0.001564292	0.998435708	86523.27417	135.3476256	86455.60036	4821777.35	55.72809623
13	0.00162608	0.99837392	86387.92655	140.4737138	86317.68969	4735321.749	54.81462443
14	0.001689029	0.998310971	86247.45283	145.6744178	86174.61563	4649004.06	53.90308823
15	0.001950964	0.998049036	86101.77842	167.9815067	86017.78766	4562829.444	52.99344018
16	0.0022628	0.9977372	85933.79691	194.4509531	85836.57143	4476811.656	52.09605321
17	0.002589828	0.997410172	85739.34596	222.050201	85628.32086	4390975.085	51.21306952
18	0.002821681	0.997178319	85517.29576	241.302504	85396.6445	4305346.764	50.3447487
19	0.002993579	0.997006421	85275.99325	255.2804458	85148.35303	4219950.12	49.48579264
20	0.00312065	0.99687935	85020.71281	265.3199205	84888.05285	4134801.767	48.6328758
21	0.003345776	0.996654224	84755.39289	283.5725634	84613.6066	4049913.714	47.78355189
22	0.003458509	0.996541491	84471.82032	292.1465201	84325.74706	3965300.107	46.94228314
23	0.003551846	0.996448154	84179.6738	298.9932763	84030.17716	3880974.36	46.10346162
24	0.00365286	0.99634714	83880.68053	306.4044134	83727.47832	3796944.183	45.26601548
25	0.003597758	0.996402242	83574.27611	300.6800276	83423.9361	3713216.705	44.430139
26	0.003543521	0.996456479	83273.59608	320.7286222	83126.05522	3629792.768	43.58875969
27	0.003516136	0.996483864	82978.51436	291.7637458	82832.63249	3546666.713	42.74198858
28	0.003511769	0.996488231	82686.75061	290.3767508	82541.56224	3463834.081	41.89104125
29	0.003662735	0.996337265	82396.37386	301.7960562	82245.47583	3381292.519	41.03690927
30	0.003956782	0.996043218	82094.57781	324.8303496	81932.16263	3299047.043	40.18593104
31	0.004097105	0.995902895	81769.74746	335.0192435	81602.23784	3217114.88	39.34358342
32	0.004039242	0.995960758	81434.72821	328.9346019	81270.26091	3135512.642	38.50338438
33	0.003954448	0.996045552	81105.79361	320.7286222	80945.4293	3054242.381	37.65751182
34	0.00387788	0.99612212	80785.06499	313.2747559	80628.42761	2973296.952	36.80503262
35	0.00400938	0.99599062	80471.79023	322.6419856	80310.46924	2892668.524	35.94636724
36	0.004305886	0.995694114	80149.14825	345.1131067	79976.59169	2812358.055	35.0890573
37	0.00453801	0.99546199	79804.03514	362.1514786	79622.9594	2732381.463	34.23863792
38	0.004674408	0.995325592	79441.88366	371.3437509	79256.21179	2652758.504	33.39244214
39	0.004894892	0.995105108	79070.53991	387.0417546	78877.01903	2573502.292	32.54691691
40	0.005069151	0.994930849	78683.49816	398.8585081	78484.0689	2494625.273	31.70455472
41	0.005246869	0.994753131	78284.63965	410.7492133	78079.26504	2416141.204	30.86354124
42	0.005509767	0.994490233	77873.89044	429.0670183	77659.35693	2338061.939	30.02369506
43	0.005678806	0.994321194	77444.82342	439.7941243	77224.92636	2260402.582	29.18726498
44	0.006237335	0.993762665	77005.02929	480.3061491	76764.87622	2183177.656	28.35110481
45	0.00684866	0.99315134	76524.72314	524.0918391	76262.67722	2106412.78	27.5259118
46	0.007215507	0.992784493	76000.6313	548.3830996	75726.43976	2030150.103	26.71227946
47	0.007614711	0.992385289	75452.24821	574.5470459	75164.97468	1954423.663	25.90278897
48	0.007907246	0.992092754	74877.70116	592.0764043	74581.66296	1879258.688	25.09770812
49	0.008083747	0.991916253	74285.62476	600.5062207	73985.37164	1804677.025	24.29375846
50	0.008658503	0.991341497	73685.11853	638.0027858	73366.11714	1730691.654	23.48766872
51	0.009141781	0.990858219	73047.11575	667.780754	72713.22537	1657325.536	22.68844594
52	0.009699846	0.990300154	72379.33499	702.0684293	72028.30078	1584612.311	21.8931593
53	0.010473142	0.989526858	71677.26657	750.686196	71301.92347	1512584.01	21.10270219
54	0.011296399	0.988703601	70926.58037	801.214937	70525.9729	1441282.087	20.32076098
55	0.012271037	0.987728963	70125.36543	860.5109736	69695.10995	1370756.114	19.5472224
56	0.013149741	0.986850259	69264.85446	910.8148667	68809.44703	1301061.004	18.78385531
57	0.014401785	0.985598215	68354.03959	984.4201483	67861.82952	1232251.557	18.02748695
58	0.015595074	0.984404926	67369.61944	1050.36419	66844.30235	1164389.727	17.28360256
59	0.016961789	0.983038211	66318.98525	1124.888606	65756.54095	1097545.425	16.54949063
60	0.018815252	0.981184748	65194.09665	1226.643337	64580.77498	1031788.884	15.82641584
61	0.020364287	0.979635713	63967.45331	1302.65155	63316.12754	967208.1091	15.12031602
62	0.022103246	0.977896754	62664.80176	1385.09555	61972.25399	903891.9816	14.42423747
63	0.024574575	0.975425425	61279.70621	1505.922752	60526.74483	841919.7276	13.73896482
64	0.027094404	0.972905596	59773.78346	1619.535076	58964.01593	781392.9827	13.07250332
65	0.030496305	0.969503695	58154.2484	1773.489706	57267.50354	722428.9668	12.4226344
66	0.033711219	0.966288781	56380.75869	1900.664103	55430.42664	665161.4633	11.79766783
67	0.036274681	0.963725319	54480.09459	1976.248072	53491.97055	609731.0366	11.19181311
68	0.040112515	0.959887485	52503.84652	2106.061335	51450.81585	556239.0661	10.59425362
69	0.044566801	0.955433199	50397.78518	2246.068046	49274.75116	504788.2502	10.01608004
70	0.049609014	0.950390986	48151.71713	2388.759233	46957.33752	455513.4991	9.45996376
71	0.05530306	0.94469694	45762.9579	2530.831626	44497.54209	408556.1616	8.927660717
72	0.060427861	0.939572139	43232.12628	2612.424919	41925.91382	364058.6195	8.42102045
73	0.066113781	0.933886219	40619.70136	2685.522038	39276.94034	322132.7057	7.930454802
74	0.072972757	0.927027243	37934.17932	2768.161636	36550.0985	282855.7653	7.456488328
75	0.080127151	0.919872849	35166.01768	2817.752816	33757.14127	246305.6668	7.004081868
76	0.086804524	0.913195476	32348.26487	2807.975746	30944.27699	212548.5255	6.570631421
77	0.095996446	0.904003554	29540.28912	2835.762781	28122.40773	181604.2486	6.147680133
78	0.105891395	0.894108605	26704.52634	2827.779551	25290.63656	153481.8408	5.747409217

79	0.1166146	0.8833854	23876.74679	2784.377271	22484.55815	128191.2043	5.368872292
80	0.127688927	0.872311073	21092.36952	2693.262025	19745.7385	105706.6461	5.011606023
81	0.139875028	0.860124972	18399.10749	2573.575668	17112.31966	85960.9076	4.672015077
82	0.153105396	0.846894604	15825.53182	2422.97431	14614.04467	68848.58795	4.350475467
83	0.167447906	0.832552094	13402.55751	2244.230192	12280.44242	54234.54328	4.046581648
84	0.182970273	0.817029727	11158.32732	2041.642199	10137.50622	41954.10086	3.759891572
85	0.199738876	0.800261124	9116.685123	1820.956436	8206.206905	31816.59464	3.489930189
86	0.217817322	0.782182678	7295.728686	1589.136083	6501.160645	23610.38773	3.236193223
87	0.237264723	0.762735277	5706.592603	1353.973113	5029.606047	17109.22709	2.998151134
88	0.258133652	0.741866348	4352.61949	1123.557565	3790.840708	12079.62104	2.77525317
89	0.280467767	0.719532233	3229.061926	905.6477881	2776.238032	8288.780333	2.566931364
90	0.304299093	0.695700907	2323.414137	707.0128158	1969.90773	5512.542301	2.372604269
91	0.32964497	0.67035503	1616.401322	532.8385651	1349.982039	3542.634571	2.191680076
92	0.356504688	0.643495312	1083.562757	386.2952028	890.4151552	2192.652532	2.023558413
93	0.384855881	0.615144119	697.2675538	268.3475185	563.0937946	1302.237377	1.867629391
94	0.414650746	0.585349254	428.9200353	177.8520128	339.9940289	739.1435825	1.723266627
95	0.445812249	0.554187751	251.0680226	111.9291999	195.1034226	399.1495536	1.589806418
96	0.478230473	0.521769527	139.1388226	66.54042493	105.8686102	204.046131	1.466493155
97	0.511759363	0.488240637	72.59839771	37.15290978	54.02194282	98.17752077	1.352337295
98	0.546214167	0.453785833	35.44548794	19.36082765	25.76507411	44.15557795	1.245731982
99	0.581369902	0.418630098	16.08466029	9.351137367	11.4090916	18.39050384	1.143356683
100	0.616961267	0.383038733	6.733522919	4.154322829	4.656361504	6.981412236	1.036814209
101	0.6526844	0.3473156	2.579200089	1.683403663	1.737498258	2.325050732	0.901461946
102	0.688200899	0.311799101	0.895796427	0.616487906	0.587552474	0.587552474	0.655899551
103	0.723144454	0.276855546	0.279308521	0.279308521	0	0	0