

## Online Appendix

# ‘Long-Run Effects of Public Policies: Endogenous Alcohol Preferences and Life Expectancy in Russia’

Lorenz Kueng     Evgeny Yakovlev

## 1 Data Appendix

The RLMS covers 33 regions (Russian oblasts), two of which are Muslim and hence contain fewer households that consume alcohol, plus the cities of Moscow and St. Petersburg. The RLMS has a low attrition rate due to low levels of labor mobility in Russia; see e.g., [Andrienko and Guriev \(2004\)](#) for more details on mobility. Attrition is generally low in comparison to other expenditure survey panels. Interview completion exceeds 84% and is lowest in Moscow and St. Petersburg at 60% and highest in Western Siberia at 92%. To deal with attrition, RLMS replenishes its sample on a regular basis, especially in the areas of high mobility and non-response rates such as Moscow and other large cities; see [Gorodnichenko et al. \(2010\)](#) and in particular [Denisova \(2010\)](#) for more detail on sample attrition. During the 13 year period from 1994 to 2007 in [Denisova \(2010\)](#), 61% of individuals in the initial sample left it as their households moved out of the surveyed dwellings. This corresponds to an annual average attrition rate of only 7%. In addition to these studies, the RLMS team provides a detailed analysis of attrition and does not find any systematic relationship with observables; see <http://www.cpc.unc.edu/projects/rlms-hse/project/samprep>.

In our analysis of alcohol consumption patterns, we take advantage of the detailed disaggregated responses by each individual household member age 18 and above provided in the health module of the RLMS. Reported household expenditures on alcoholic beverages on the other hand might be of much poorer quality than the individual consumption measures. For instance, 47% of males who report having consumed alcohol during the previous month report zero household expenditures on alcohol, and another 11% do not report their spending on alcohol at all. Individual consumption data on the other hand tend to be of much higher quality and have fewer nonresponses. This is most likely due to the fact that the health questions are asked in isolation without any other person being present except the interviewer in order to maintain full confidentiality. The average self-reported household budget share of alcohol in our sample is 5% for households reporting positive alcohol expenditures. This number is severely downward biased due to underreporting and more so than in other countries. [Trembl \(1982\)](#), for example, shows that this level of underreporting already

existed in earlier surveys, resulting in estimated alcohol expenditure shares of only 3%. Instead, we estimate the average share of alcohol in total retail sales based on official statistics to be 9% over our sample period; see Goskomstat, Statistical Yearbook, Table 20.16. While this measure of the alcohol budget share is conceptually close to the budget share in non-durable expenditures, the estimated magnitude is most likely understating the alcohol budget shares of the individuals in our sample. Many households do not consume any alcohol at all, either for religious, health, or other reasons and official sales do not include the consumption of illegally obtained or homemade alcohol. Hence, the typical household's expenditure share in our sample could be well above 10%.

Since there is no consistent aggregate price index, especially early in the sample and during the financial crisis of 1997–98, we follow the literature and express real income by deflating it by the price of milk, which is stable over time and is measured at a geographical level which roughly corresponds to the area of a small city. The corresponding real series is then comparable across our sample period from 1994 to 2011. Moreover, by deflating income by the price of milk reported by the household, we implicitly also control for time-varying local effects. Inflation measured using the official aggregate consumer price index (CPI) is 320% in 1994 and 200% in 1995, and it jumps from 28% in 1998 to 85% in 1999; see <http://stats.oecd.org>. While this might be an accurate measure of inflation, using the CPI for our sample does not result in reasonable income figures across years; in particular, it appears to deflate income in later years too much relative to earlier rounds. Using nominal income or income deflated with the aggregate price index provided by Goskomstat and Rosstat instead does not affect any of our results because any difference induced by applying a different aggregate price index is fully absorbed by the period fixed effects.

### **Estimated samogon consumption**

There are two main approaches used in the literature to estimate samogon consumption during and shortly after the Soviet Union. The first approach uses aggregate sales of sugar, which is one of the main ingredients in the production of samogon; see, e.g., [Nemtsov \(1998\)](#). This approach gives reliable estimates until 1986 when the production of sugar was rationed. The second approach uses data on violent and accidental deaths and deaths with unclear causes obtained from autopsy reports; e.g., [Nemtsov \(2002\)](#). For such death events there exist measures of alcohol concentration in the blood of the victim that can be used to estimate aggregate alcohol consumption. This approach gives similar estimates of samogon production as the first approach, but it cannot distinguish between the consumption of samogon and other illegal alcohol. While samogon was by far the main source of illegal alcohol in the Soviet Union, much of the illegal alcohol consumed since 1992 comes from illegal imports as well as illegal production of unregistered alcohol by firms as a form of tax evasion.

Unfortunately, both of these approaches cannot distinguish the type of alcoholic good that was produced at home, in particular whether it was homemade beer, wine, or samogon. Samogon, however, is much more popular than homemade beer. This is largely because homemade beer requires ingredients that do not grow naturally in Russia. Thus, according to the RLMS, for years 2008–2011 only 0.3% of male alcohol consumers consumed homemade beer compared to 6.2% who consumed samogon, with 2008 being the first year respondents were asked about the consumption of homemade beer. In terms of pure alcohol, these numbers are even more striking: consumption of samogon is 69 times higher than homemade-beer consumption when measured in terms of pure alcohol.

### **Male mortality**

For our analysis of the long-run effects of changes in alcohol preferences on (male) life-expectancy it is important to know whether the RLMS gives an accurate representation of death events from life tables, although based on a much smaller sample. This issue has been studied by [Denisova \(2010\)](#), who concludes that “the attrition bias is likely to be rather limited” and that overall, “the RLMS is reasonably good in measuring adult mortality, while the richness of the individual-level information ... with the carefully measured household data makes it very attractive to study the determinants of mortality.” Death events in the RLMS are inferred directly from survey responses. In the cases where some members of the household are absent in a given interview round, the interviewer asks for the reason, and one of the possible answers given is the member’s death. Of course, this source of data has its limitations. For instance, we do not have information on death events for single households. To mitigate some of those shortcomings we restrict our sample to males age 22-65, which are also individuals for whom excessive drinking is a major problem. Furthermore, we exclude households that appeared only once in the survey. Out of the 8,350 males in our final sample, 5.6% died during the sample period before reaching age 65. Of those, 44% died before reaching age 50 and 18.4% before age 40.

### **Classifying goods into new vs. traditional**

Table A.2 provides a detailed description and motivation for classifying the goods in the seven consumption categories in either “new” or “traditional” depending on whether the good became available mostly after the collapse of the Soviet Union (“new”) or whether it was already available before the early 1990s (“traditional”). The goods in the seven categories are assumed to be close but imperfect substitutes.

## 2 A Model of Persistent Consumption Habits

We derive a basic model of habit formation that is consistent with the consumption patterns documented in the paper, illustrating that in a situation where people consume two habit-forming goods, several steady-state consumption patterns are possible even in the absence of any unobserved individual heterogeneity. Whether a person will end up conforming to a steady state depends solely on his initial consumption pattern. Moreover, once the stock of habit sufficiently accumulates, it is hard to change these consumption patterns even with very large shocks. Hence, policies aimed at increasing the relative price of one good may not induce everybody or even many to reduce the consumption of this good. Instead, due to the stock of habits already accumulated, people who are accustomed to this particular good will still prefer it even after the policy change. This implies that policies that influence the initial choices of younger generations can have consequences over their entire lifetime—intended or otherwise.

### 2.1 Model Setup

For simplicity we assume that consumers spend all of their budget on two habit-forming goods, beer and vodka. We also assume that consumers are myopic, i.e., that they maximize only current utility and do not save, that there are no outside goods, that income does not change over time, and that there is no uncertainty.<sup>1</sup>

The individual derives flow utility  $u(v_t, b_t, H_t^v, H_t^b)$  from consuming vodka  $v_t$  and beer  $b_t$  and also from the corresponding stocks of habit  $H_t^v$  and  $H_t^b$ . The utility function has properties that are common in the literature, specifically that  $u_g > 0$ ,  $u_{gg} < 0$ , and  $u_{gH_g} > 0$  with  $g \in \{b, v\}$ . These assumptions imply in particular that the marginal utilities of consuming beer or vodka are positive and increasing with the stock of habit of the corresponding good. Assuming a common rate of depreciation  $\delta$  of the two habit stocks, they evolve as

$$H_{t+1}^g = (1 - \delta)H_t^g + g_t, \quad H_0^g \geq 0, \quad \delta \in [0, 1]. \quad (1)$$

The budget constraint is  $p_{v_t}v_t + b_t = y_t$ . Without loss of generality, we focus on interior solutions.<sup>2</sup> The first-order condition of this optimization problem is

$$u_v(v_t, y_t - p_{v_t}v_t, H_t^v, H_t^b) - p_{v_t}u_b(v_t, y_t - p_{v_t}v_t, H_t^v, H_t^b) = 0, \quad (2)$$

---

<sup>1</sup>Below we reach the same qualitative conclusions if consumers are forward looking and solve a fully dynamic problem.

<sup>2</sup>If there are corner solutions, there is always a symmetric specification with at least 3 equilibria where the two stable equilibria have a consumption share in each good of either 1 or 0.

where  $u_v$  and  $u_b$  are the partial derivatives with respect to the first and second arguments, respectively. Since we are interested in the long-run effects of habit formation, we focus our analysis on the properties of the model's steady state. In the steady state where prices, income, and consumption are constant such that  $p_{v_t} = p_v$ ,  $y_t = y$ , and  $g_t = g$ , the expression for the stocks of habit is  $g/\delta$ . The first-order condition that implicitly defines the steady state can then be rewritten as

$$u_v(v, y - p_v v, v/\delta, (y - p_v v)/\delta) - p_v u_b(v, y - p_v v, v/\delta, (y - p_v v)/\delta) = 0. \quad (3)$$

In general, this is a non-monotonic function in the steady-state vodka consumption  $v$ .<sup>3</sup> Depending on the parametrization of the utility function  $u$ , equation (3) may have a different number of solutions. Figure A.8 illustrates that for certain parametrizations, there is a unique solution, but for many other parametrizations several steady states exist, up to a continuum of solutions.<sup>4</sup> These multiple equilibria are derived without any consumer heterogeneity except for differences in initial conditions. A person who initially consumes primarily beer will also prefer beer in the long-run steady state, and vice versa for vodka.

## 2.2 Model Properties and Extensions

This section shows that the model above with two habit forming goods can have any number of equilibria. We then provide three numerical examples that generate, respectively, one, three, and an infinite number of equilibria. We also show how to map the steady state, which the model expresses in levels, to alcohol shares, which is the concept we use in our empirical analysis. Finally, we show that these insights from the basic myopic model extend to a model with forward-looking consumers.

### 2.2.1 Number of Equilibria in the Model with Myopic Consumers

The steady state first-order condition (FOC) for myopic agents as a function of the level of vodka consumption,  $v$ , is

$$\begin{aligned} F &= u_v(v, y - p_v v, [\delta/(1 - \delta)]v, [\delta/(1 - \delta)][y - p_v v]) \\ &\quad - p_v u_b(v, y - p_v v, [\delta/(1 - \delta)]v, [\delta/(1 - \delta)][y - p_v v]) = 0. \end{aligned}$$

---

<sup>3</sup>This condition can also be expressed as a function of the share of vodka,  $S^v = \frac{v}{v+b}$ , by using the fact that  $v = \frac{y \cdot S^v}{1 - (1 - p_v)S^v}$ ; see below.

<sup>4</sup>See below for a proof. Similar results are obtained for the model with forward-looking consumers because the steady-state Euler equation is also non-monotonic in the consumption levels.

Differentiating  $F$  with respect to  $v$  yields

$$u_{vv} - p_v u_{vb} + \delta/(1 - \delta)u_{vH^v} - p_v \delta/(1 - \delta)u_{vH^b} - p_v [u_{bv} - p_v u_{bb} + \delta/(1 - \delta)u_{bH^v} - p_v \delta/(1 - \delta)u_{bH^b}].$$

Given the assumptions that  $u_{gg} < 0$ ,  $u_{H^g H^g} < 0$ , and  $u_{gH^g} > 0$ , some terms in this expression are positive, e.g.,  $\delta/(1 - \delta)u_{vH^v}$ ,  $p_v^2 \delta/(1 - \delta)u_{bH^b}$ , and some are negative, e.g.,  $u_{vv}$ ,  $p_v^2 u_{bb}$ . Therefore, the sign of the overall sum is ambiguous.

## 2.2.2 Numerical Examples

**One Equilibrium** Let the utility function be  $u = \ln(b) \cdot L_b + \ln(v) \cdot L_v$ —with  $L_g = \ln(1.1 + H^g)$  for  $g \in \{b, v\}$ —so that the marginal utility is  $u_g = \frac{L_g}{g}$ . The FOC is

$$\begin{aligned} 0 &= u_v - p_v \cdot u_b \\ &= \frac{L_v}{v} - \frac{p_v L_b}{b} \\ &= \frac{L_v}{p_v v} - \frac{L_b}{b} \\ &= \frac{L_v}{p_v v} - \frac{L_b}{y - p_v v}. \end{aligned}$$

Solving for  $v$  we obtain

$$v = \frac{L_v}{L_v + L_b} \cdot \frac{y}{p_v}.$$

**Three Equilibria** Let the utility function be  $u = \sqrt{b} \cdot L_b + \sqrt{v} \cdot L_v$ —with  $L_g = \ln(1.1 + H^g)$  for  $g \in \{b, v\}$ —so that the marginal utility is  $u_x = \frac{L_g}{2\sqrt{g}}$ . Solving for  $v$  we obtain

$$v = \frac{R \cdot y}{1 + R \cdot p_v},$$

with  $R = \left(\frac{L_v}{p_v \cdot L_b}\right)^2$ .

**Continuum of Equilibria** Let the utility function be  $u = \sqrt{b \cdot H^b} + \sqrt{v \cdot H^v}$ , so that the marginal utility is  $u_g = \frac{\sqrt{H^g}}{2\sqrt{g}}$ . Solving for  $v$  we obtain

$$v = \frac{R \cdot y}{1 + R \cdot p_v},$$

with  $R = \frac{H^v}{p_v^2 \cdot H^b}$ .

### 2.2.3 Expressing the Model Solutions in Terms of Shares

$S_g = \frac{g}{b+v}$ ,  $S_b + S_v = 1$ ,  $p_v v + b = y$ , and  $\frac{S_v}{S_b} = \frac{v}{b}$ . Hence,

$$\begin{aligned} v &= \frac{S_v}{S_b} b = \frac{S_v}{1 - S_v} (y - p_v v) \\ &= \frac{y \cdot S_v}{1 - (1 - p_v) S_v}. \end{aligned}$$

### 2.2.4 Allowing for Forward-Looking Consumers

We now relax the assumption of myopic behavior. Forward looking agents maximize the present value of utility from consuming beer and vodka,  $U = u(v_t, b_t, H_t^v, H_t^b) + \sum_{i=1}^{\infty} \beta^i [u(v_{t+i}, b_{t+i}, H_{t+i}^v, H_{t+i}^b)]$ . To keep the model simple, we follow [Gruber and Köszegi \(2001\)](#) and assume no savings and that the stock of habits evolves as follows:

$$H_{t+1}^g = \delta(H_t^g + g_t).$$

The FOC for  $v_t$ , after substituting for  $b_t$  using the budget constraints, is

$$u_{v_t} - p_{v_t} u_{b_t} + \sum_{i=1}^{\infty} \beta^i \delta^i (u_{H_{t+i}^v} - p_{v_t} u_{H_{t+i}^b}) = 0.$$

The FOC for  $v_{t+1}$  is

$$u_{v_{t+1}} - p_{v_{t+1}} u_{b_{t+1}} + \sum_{i=1}^{\infty} \beta^i \delta^i (u_{H_{t+i+1}^v} - p_{v_{t+1}} u_{H_{t+i+1}^b}) = 0.$$

Combining the two FOCs and analyzing the steady state we obtain the following Euler equation:

$$\begin{aligned} 0 = & u_v(v, y - p_v v, \frac{\delta}{1-\delta} v, \frac{\delta}{1-\delta} [y - p_v v]) - p_v u_b(v, y - p_v v, \frac{\delta}{1-\delta} v, \frac{\delta}{1-\delta} [y - p_v v]) \\ & + \frac{\beta \delta}{1-\beta \delta} [u_{H^v}(v, y - p_v v, \frac{\delta}{1-\delta} v, \frac{\delta}{1-\delta} [y - p_v v]) - p_v u_{H^b}((v, y - p_v v, \frac{\delta}{1-\delta} v, \frac{\delta}{1-\delta} [y - p_v v]))]. \end{aligned}$$

Assuming that  $u_g \rightarrow \infty$  as  $g \rightarrow 0$  guarantees the existence of a steady state.

To check the possibility of multiple steady states, we can analyze the monotonicity of the right-hand side of the steady-state Euler equation by taking the first derivative with respect to  $v$ ,

$$\begin{aligned} dRHS(v)/dv = & \quad u_{vv} - 2p_v u_{vb} + p_v^2 u_{bb} + \frac{\delta}{1-\delta} [u_{vH^v} - 2p_v u_{vH^b} + p_v^2 u_{bH^b}] \\ & + \frac{\beta\delta}{1-\beta\delta} [u_{vH^v} - p_v u_{bH^v} - p_v u_{vH^v} + p_v^2 u_{bH^b} + \frac{\delta}{1-\delta} [u_{H^v H^v} - 2p_v u_{H^v H^b} + p_v^2 u_{H^b H^b}]]. \end{aligned}$$

This expression can be both negative and positive. To see this, assume that the utility function is separable in the two goods and their stocks of habit. Then the expression above can be rewritten as

$$\begin{aligned} dRHS(v)/dv = & \left[ u_{vv} + p_v^2 u_{bb} + \frac{\beta\delta}{1-\beta\delta} \frac{\delta}{1-\delta} (u_{H^v H^v} + p_v^2 u_{H^b H^b}) \right] \\ & + \left[ \left( \frac{\delta}{1-\delta} + \frac{\beta\delta}{1-\beta\delta} \right) (u_{vH^v} + p_v^2 u_{bH^b}) \right]. \end{aligned}$$

The terms in the first square brackets are all negative, while the terms in the second square brackets are all positive. Thus, depending on the relative magnitude of these terms, the first derivative can be positive or negative. The following utility specifications provide two examples, one with a unique and stable steady state and one with three steady states, two of which are stable and one is unstable. We again set  $p_v = y = 1$  so that the consumption levels correspond to shares, and for simplicity we assume that  $\beta = 1$  and  $\delta = 0.5$ . Then the utility parametrization  $u = \sqrt{g} + \sqrt{H^g} + gH^g$  results in a one equilibrium, while  $u = \sqrt{g} + \sqrt{H^g} + 5gH^g$  yields three equilibria.

### 3 Algorithm for Predicting Male Mortality Rates

Let the forecast horizon  $H = 0$  denote the current sample from 1994 to 2011. For simplicity, let us consider the example of an individual  $i$  that is 30 years old, was born in 1970, and has characteristics  $x_i$ . We then predict consumption shares by running the linear regression

$$S_i^g = \varphi_c + \gamma' x_i + \alpha_a + u_i,$$

where  $\varphi_c$  are birth year effects, i.e.,  $\varphi_{1970}$  and  $\alpha_{30}$  for our individual. Similarly, we predict the mortality hazard by running the corresponding Cox regression,

$$\lambda(a|x_i, S_i^g) = \exp(\delta' S_i^g + \vartheta x_i) \lambda_0(a).$$

Suppose we want to forecast the mortality rate in one year, i.e., at horizon  $H = 1$ . In order to do so we proceed with the following steps:



1. First, we predict the consumption shares by assuming that the same individual, with characteristics  $x_i$  and age 30, also represents a 30 year old next year, but with the consumption habit of a 30 year old *next year*, i.e., with  $\varphi_{1971}$  conditional on the covariates above, that is

$$\hat{S}_i^g|_{H=1} = \hat{\varphi}_{1971} + \hat{\gamma}'x_i + \hat{\alpha}_{30}.$$

Table A.3 provides the regression results for this step.

2. Next, we plug the predicted shares in the estimated mortality hazard,

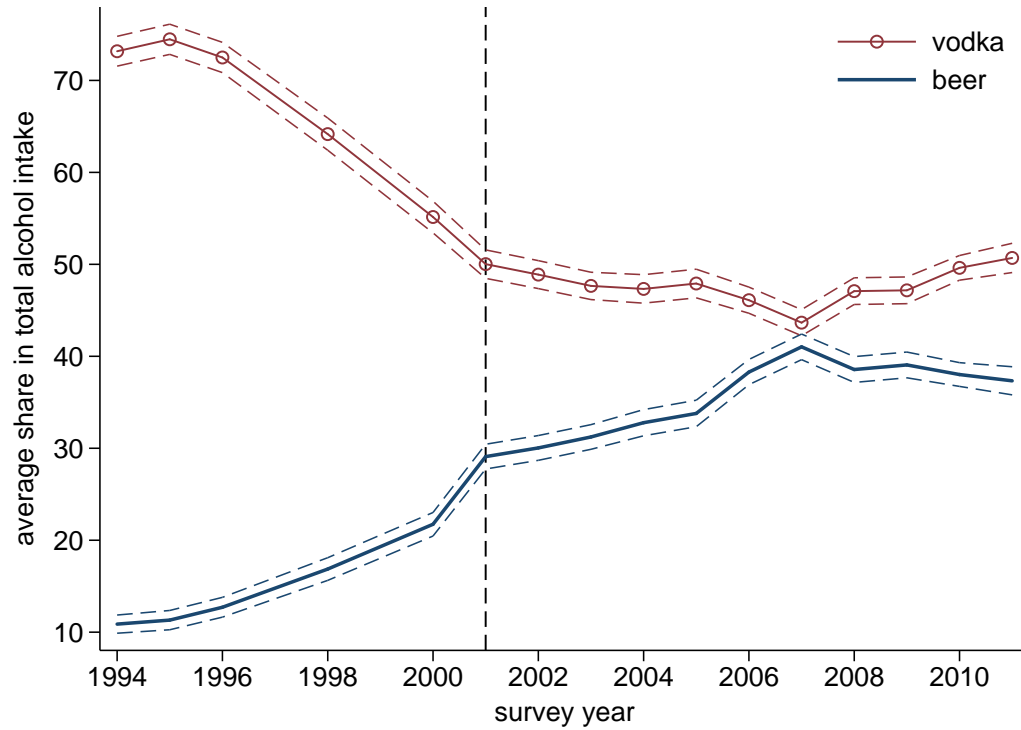
$$\hat{\lambda}_i|_{H=1} = \lambda(a = 30|x_i, \hat{S}_i^g|_{H=1}; \hat{\delta}, \hat{\vartheta}).$$

3. Finally, doing this for all individuals in the sample and integrating over all individuals, we obtain the predicted male mortality rate at horizon  $H = 1$ .

## References

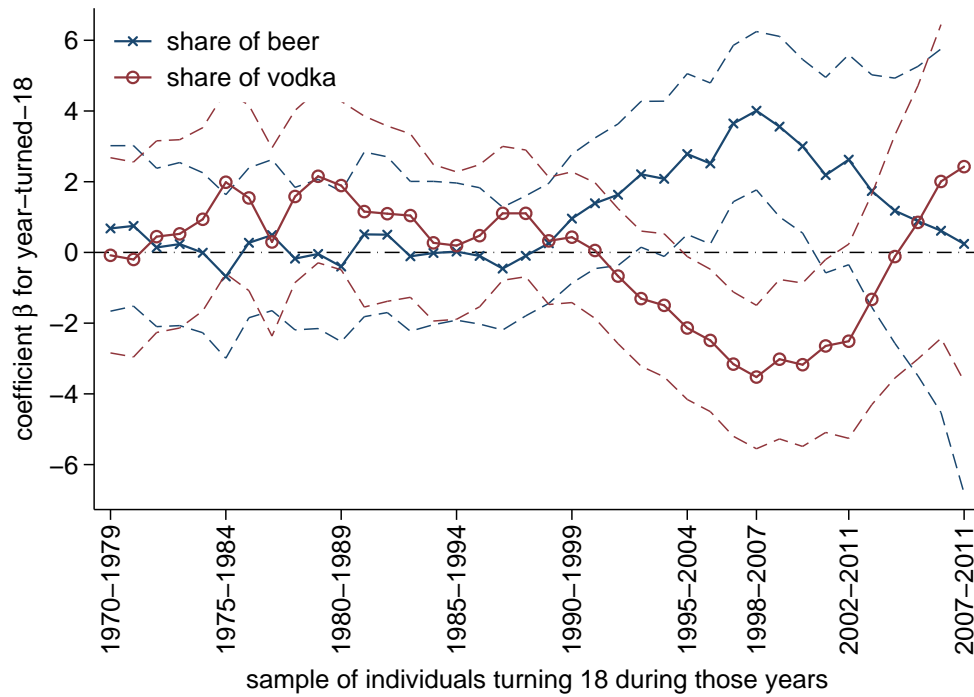
- Andrienko, Yuri and Sergei Guriev**, “Determinants of interregional mobility in Russia,” *Economics of transition*, 2004, *12* (1), 1–27.
- Denisova, Irina**, “Adult mortality in Russia,” *Economics of Transition*, 2010, *18* (2), 333–363.
- Gorodnichenko, Yuriy, Klara Sabirianova Peter, and Dmitriy Stolyarov**, “Inequality and volatility moderation in Russia: Evidence from micro-level panel data on consumption and income,” *Review of Economic Dynamics*, 2010, *13* (1), 209–237.
- Gruber, Jonathan and Botond Köszegi**, “Is Addiction “Rational”? Theory and Evidence,” *Quarterly Journal of Economics*, 2001, *116* (4), 1261–1303.
- Nemtsov, Alexander V**, “Alcohol-related harm and alcohol consumption in Moscow before, during and after a major anti-alcohol campaign,” *Addiction*, 1998, *93* (10), 1501–1510.
- , “Alcohol-related human losses in Russia in the 1980s and 1990s,” *Addiction*, 2002, *97* (11), 1413–1425.
- Treml, Vladimir G**, *Alcohol in the USSR: A statistical study*, Duke University Press Durham, NC, 1982.

Figure A.1: Average alcohol shares by survey year



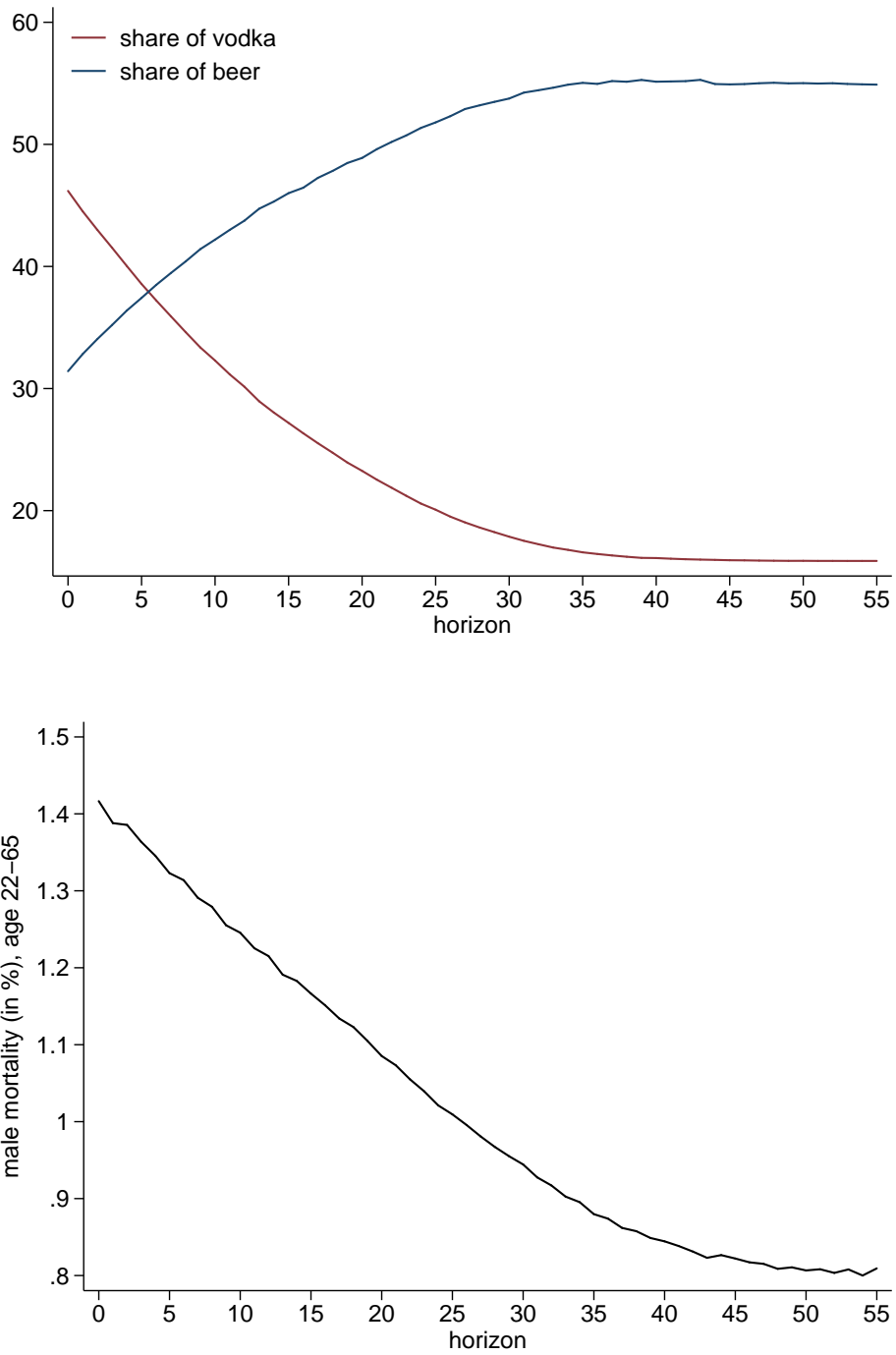
Notes: This figure shows the average alcohol shares by survey year. The vertical dashed line mark year 2001 when the average alcohol shares become stationary and are not *directly* affected by the beer market expansion after the fall of the Soviet Union anymore. Hence, we use survey years 2001-2011 as our baseline sample, and we perform extensive robustness checks of our results using the full sample from 1994 on.

Figure A.2: Adding the response of the vodka share to the beer market expansion experiment



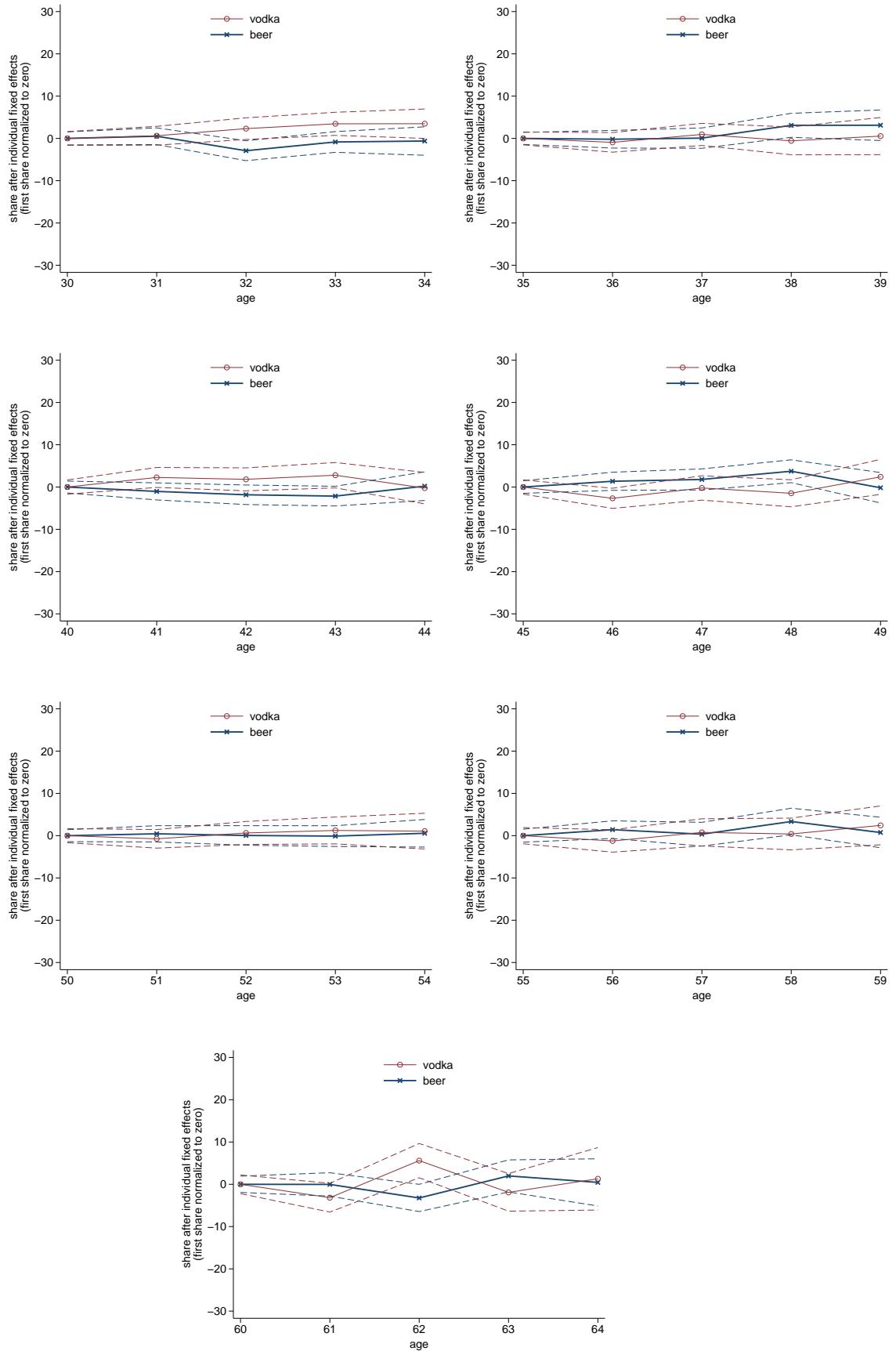
Notes: This figure shows that consumers mostly substitute toward beer at the expense of vodka in response to the expansion of the beer market.

Figure A.3: Simulated dynamics of shares and annual rate of death



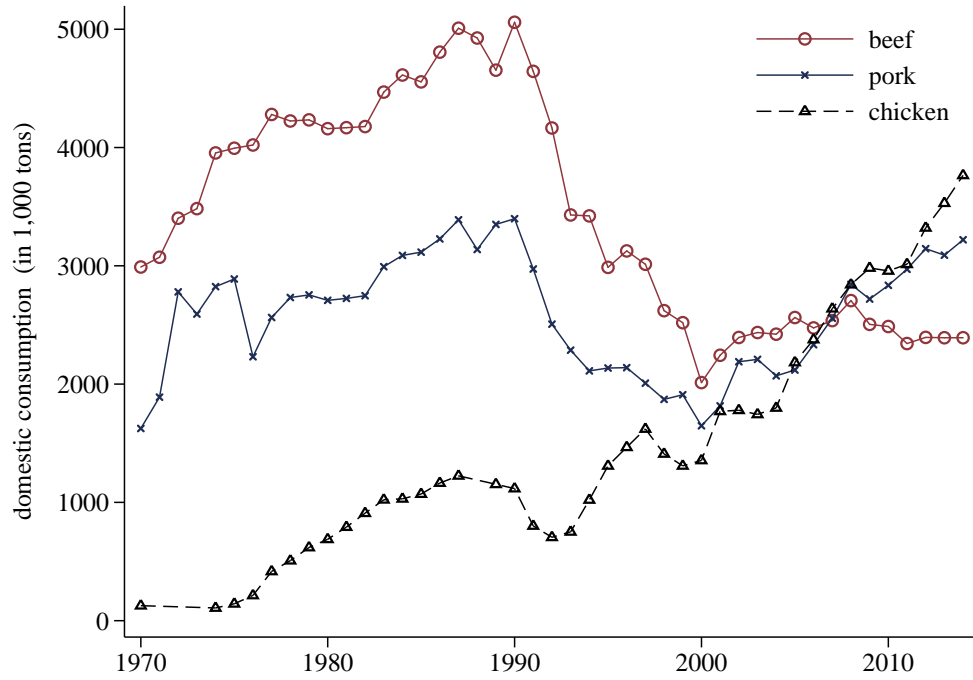
Notes: These figures shows the predicted consumption shares (top panel) and implied mortality rates (bottom panel) for males age 22 to 65 as a function of the forecast horizon in years.

Figure A.4: Demeaned shares over the life-cycle, ages 30-64



Notes: These figures provide the same analysis over the remaining part of the life-cycle as in Figure 4.

Figure A.5: Evolution of meat markets



Notes: This figure shows the expansion of the meat markets after the collapse of the Soviet Union.

Figure A.6: Deaton's (1997) age-cohort-period decomposition of the vodka share

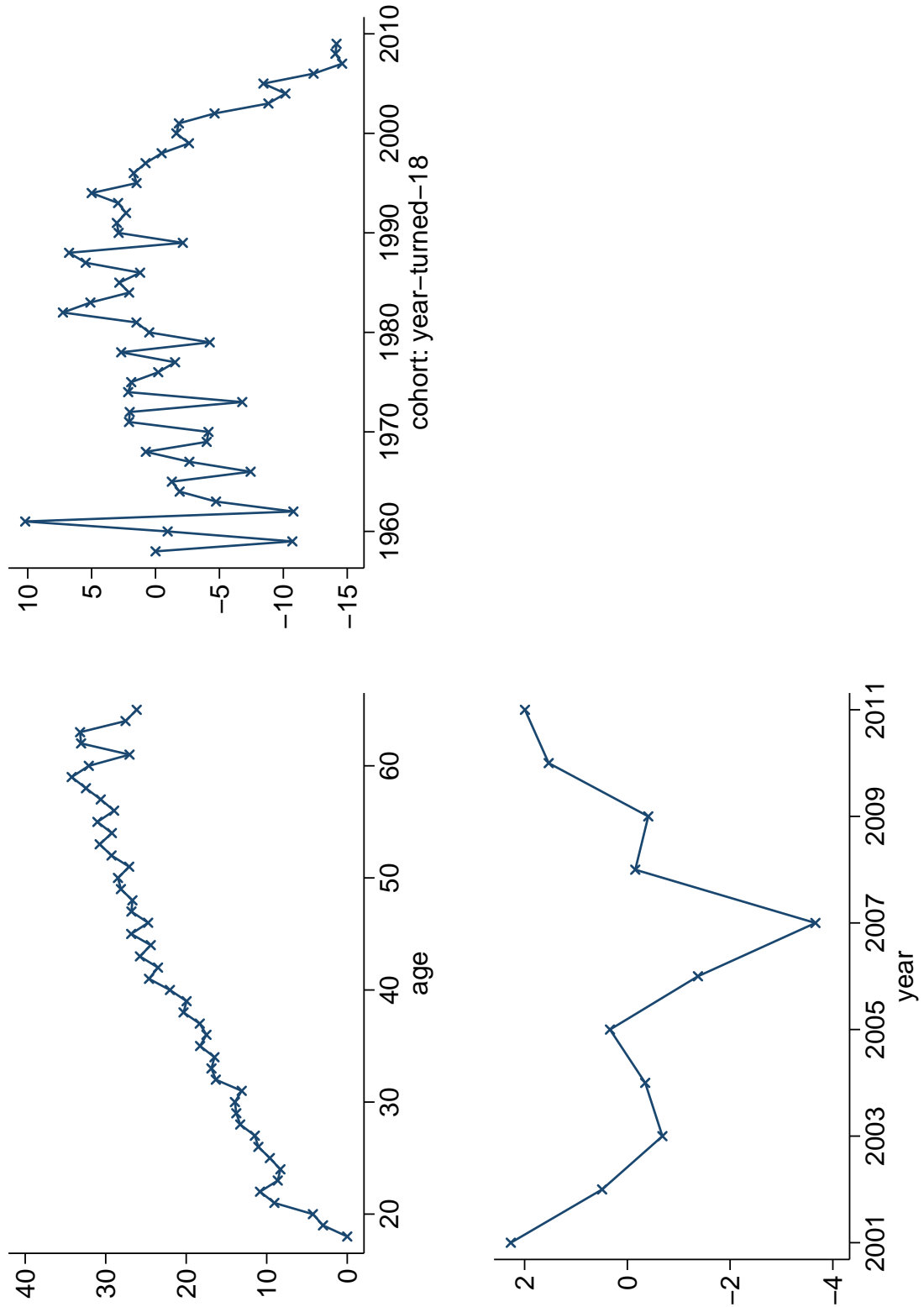


Figure A.7: Deaton's (1997) age-cohort-period decomposition of the beer share

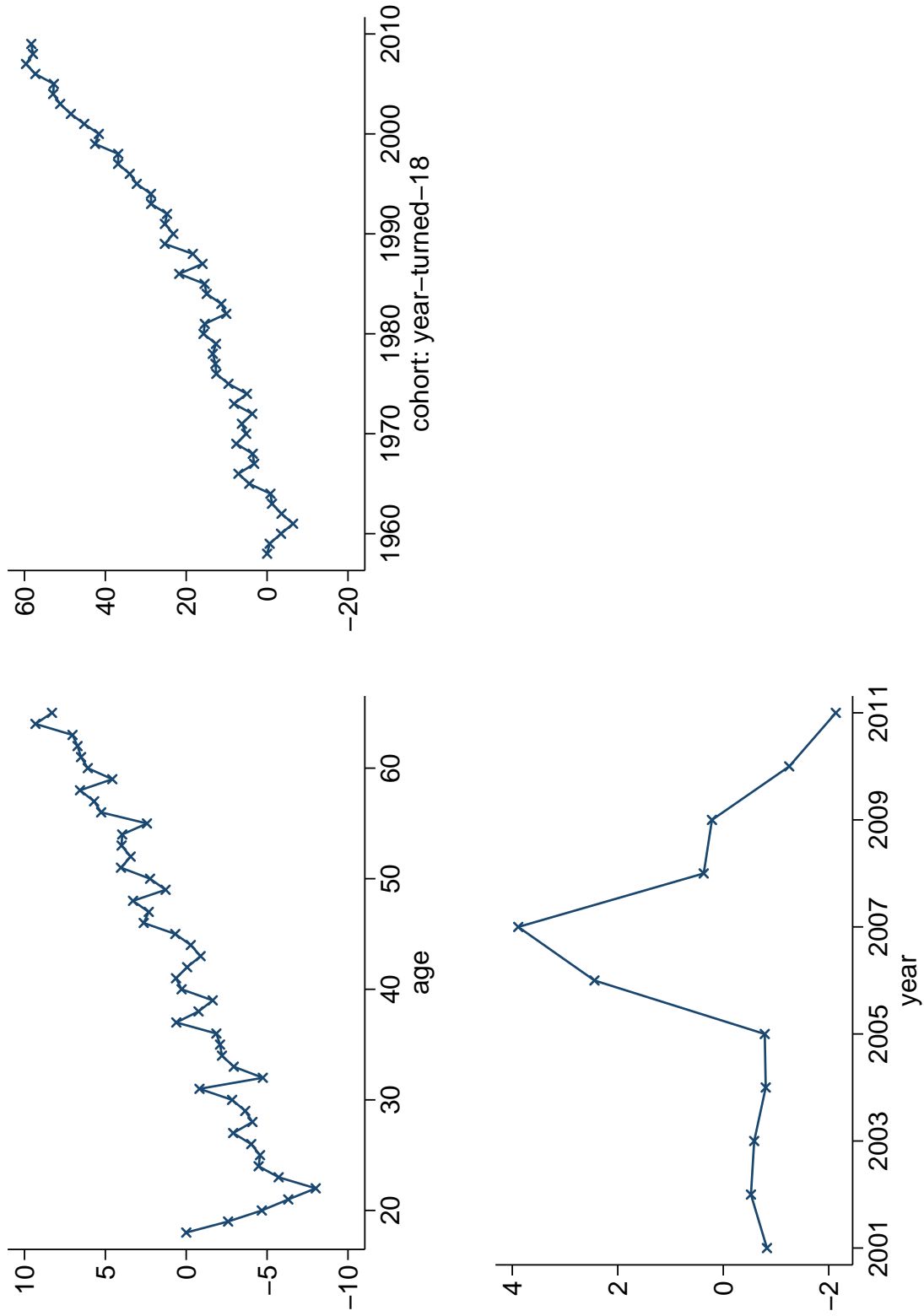
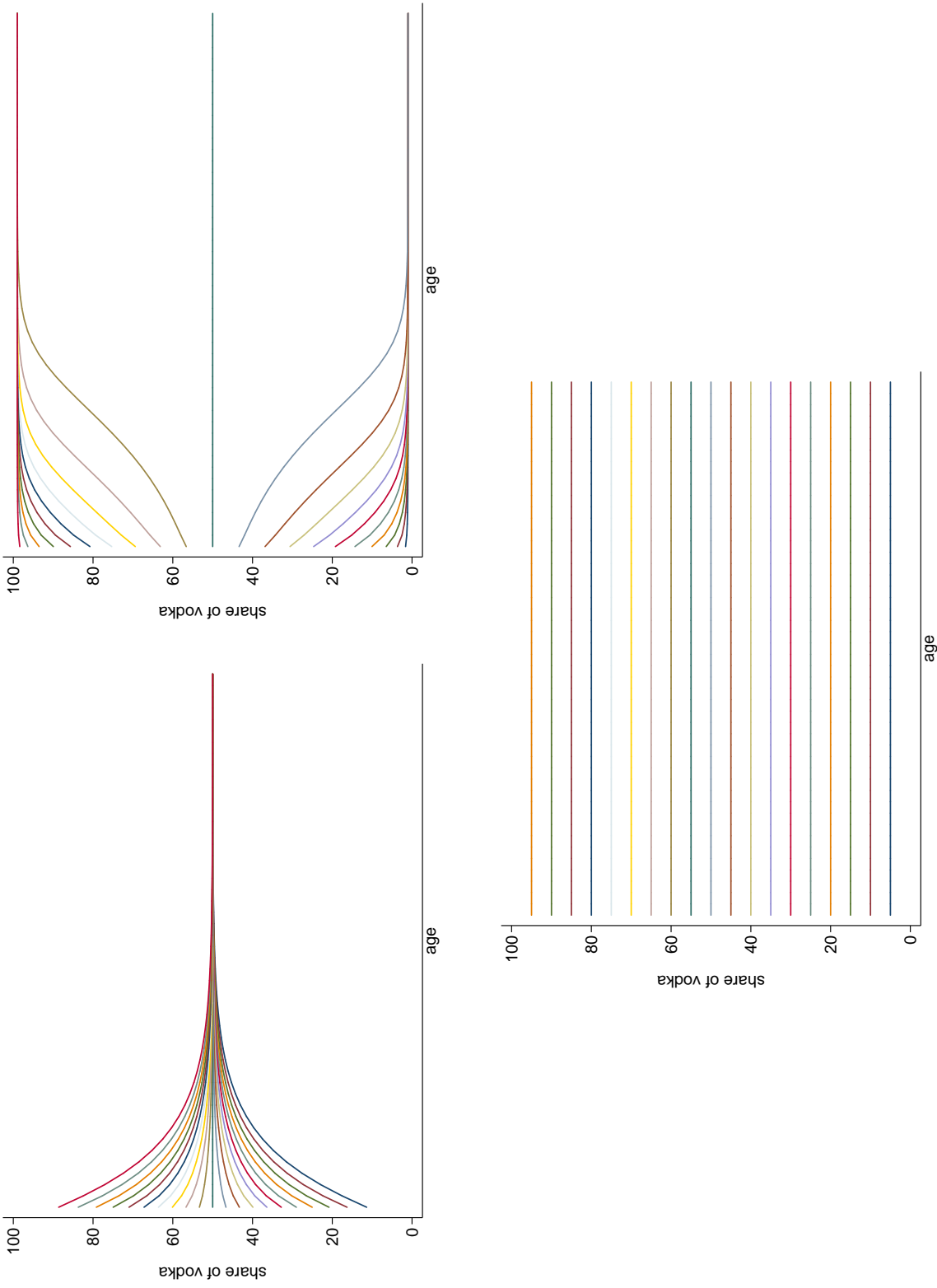




Figure A.8: Illustration of the potential number of long-run steady states in the 2-good Becker-Murphy model



Notes: These figures show the dynamic behavior of the share of vodka starting from different initial conditions, i.e., different initial consumption shares. The three figures correspond to the three parametrizations specified in the text. The top left panel has one stable steady state, the top right panel has three steady states, two stable and one unstable, and the bottom panel has an infinite number of steady states.

**Table A.1: Differential access to samogon of the urban population, 1980-1992**

	Share of samogon (%)	
	(1)	(2)
Fraction of urban population (in %)	-0.268*** [0.044]	-0.300*** [0.049]
Population (in 1,000)		0.625 [0.402]
Observations	981	981
R-squared	0.038	0.040

Notes: This table shows the differential access of the urban population to samogon using panel data at the oblast-level from 1980 to 1992; see text for more details. Robust standard errors are provided in parentheses.

**Table A.2: Classification of non-alcoholic goods**

<i>New goods</i>	<i>Traditional goods</i>	<i>Classification</i>
chicken	pork and beef	After the collapse of the Soviet Union, chicken started to be produced on special chicken farms that used new technologies which more efficiently dealt with the cold weather and significantly lowered production costs. These changes lead chicken sales to exceed that of more traditional meats such as pork or beef within less than two decades.
yogurt	cottage cheese	Cottage cheese was a popular type of breakfast in the Soviet Union. After the collapse of the Soviet Union, the import of new technologies by foreign companies made mass production and storage of yogurt viable so that it became the most popular type of breakfast nowadays.
subtropical fruits	local fruits	Apples, pears, plums are locally grown fruits, while subtropical fruits such as bananas pineapples, or mango do not grow in Russia or any of the fifteen former Soviet republics. Therefore, subtropical fruits were barely available to consumers in the Soviet Union, but imports rose sharply after the collapse of the Soviet Union making them a popular and inexpensive alternative.
chocolate	jam and honey	Chocolate existed in the Soviet Union but was very expensive since cocoa beans do not grow locally. Therefore, many desserts were based on jam and honey, which are local. Today, chocolate is a significant part of Russian imports, and the relative price of chocolate has decreased dramatically.
frozen fruits	dried fruits	The technology to mass produce frozen fruits was introduced only after the collapse of the Soviet Union. Drying was the main technology for storing fruits over longer periods in the Soviet Union.
long-lasting milk	short-lived milk	Ultra-heat treated (UHT) and ultra-pasteurized milk as well as the Tetra Pak technology were introduced only after the collapse of the Soviet Union and contributed to making long-lasting milk popular. Before that, fresh milk or short-lived milk based on high-temperature, short-time (HTST) pasteurization was the only type of milk available for purchase.
salted salmon	salted herring	Salted Salmon started to be imported only after collapse of the Soviet Union, mostly from Norway. During the Soviet Union, herring was the main salted fish available.

**Table A.3: Predicted alcohol shares**

	(1)	(2)
	Share of beer	Share of vodka
Alcohol intake (in kg of ethanol)	-0.922*** [0.042]	0.381*** [0.047]
Log(real income)	0.007*** [0.002]	0.005 [0.003]
Health status	-0.000 [0.007]	-0.019*** [0.007]
Body weight (in g)	-0.300 [0.254]	1.083*** [0.290]
I(college degree)	0.005 [0.009]	-0.024** [0.010]
I(married)	-0.009 [0.009]	0.034*** [0.010]
I(urban)	0.016** [0.007]	-0.003 [0.008]
I(no alcohol consumed)	-0.318*** [0.012]	-0.245*** [0.013]
I(smokes)	0.015** [0.008]	0.036*** [0.009]
Observations	6,623	6,623
R-squared	0.321	0.270
Birth year FE	YES	YES
Age FE	YES	YES

Notes: This table reports the results from the regressions used to predict the shares of vodka and beer consumed for all individuals age 22 to 65. These predicted shares conditional on the covariates are then used to predict individual hazard rates which can be integrated across the sample population to predict the evolution of male mortality.