

Giffen Goods in a Transition Economy: Subsistence Consumption in Russia

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Abstract

In the last decade, events outside the realm of Western economics have been viewed as “paradoxes.” We focus on the Giffen paradox, and argue that Giffenity is consistent with a generalized law of demand. We confirm the occurrence of Giffenity in Russia during the early 1990s. During this period, people reduced consumption of less affordable meat and fish despite a decline in their relative prices, while augmenting their consumption of more affordable potatoes and bread, a significant increase in relative prices of the latter goods notwithstanding. We conclude that incorporating Giffenity into current economic theory will make it more robust.

Keywords: Giffen goods, inferior goods, subsistence, Russia, household consumption, post-soviet transition

JEL Classification: D1, E2.

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1 - Introduction

Emerging markets have subjected modern Western economics to a difficult test. In the past, economists enjoyed a high level of consistency between empirical evidence, economic theory, and policy. Western economic thought and practice are compatible with institutions and organizations of advanced market democracies. During the last quarter century, there has been an increasing variance between outcomes implied by Western economic theory and the complex reality of emerging markets. The former uses an excessive amount of implicit assumptions. However, many developing economies in emerging markets fail to satisfy several of these assumptions.

Conflicts between Western-type economics and soviet-type institutions³ resulted in problems during post-soviet transition. Different opinions existed regarding constraints facing market reforms. This difference of opinion created controversy around the so-called Washington consensus. Proposed solutions for emerging markets by international financial organizations were often criticized for not being effective and in some cases led to opposite outcomes than those intended by foreign donors (Stiglitz, 2000).

This study focuses on the so-called Giffen paradox, or Giffenity. Giffen goods are those that appear to violate the fundamental laws of supply and demand. Whereas the quantity demanded for a “regular” good and its price are inversely related, the quantity demanded for Giffen good increases together with its price.

Giffen goods are not easily compatible with developed market economies. The consumer’s choice is predominantly a function of taste and preferences rather than of physical survival. Modern neoclassical economic theory views Giffenity as “a violation of the law of demand,” and “a curiosum of theoretical rather than practical interest” (Silberberg and Walker, 1984; Davies, 1994). We argue that Giffenity is consistent with a generalized law of

³ Institutions here are understood broadly as: “humanly devised constraints that structure human interaction. They are made of formal constraints (e.g., rules, laws, and constitutions), informal constraints (e.g., norms of behavior, conventions, self-imposed codes of conduct), and their enforcement characteristics. Together they define the incentive structure of societies and specifically economies” (North, 1993). Thus, cultures, traditions, and consumption patterns belong to these informal institutions that affect economic decision making.

demand. Giffen goods occur more frequently and are more significant than many are willing to admit.

This paper first re-examines the debate on Giffen goods in the literature. We look at Russian food consumption data in the early 1990s. Due to an increase in income inequality and pauperization of a large segment of Russian population, Giffen-type effects took place. The authors of this paper interviewed a number of individuals who witnessed the occurrence of Giffenity firsthand in the early to mid 1990s. Testimony from interview subjects corroborate the existence of Giffen goods in their households and millions of other families throughout Russia in that period. Many people, especially pensioners and unemployed individuals, had to switch to basic foods (bread and potatoes), and away from other “luxury” foods (such as meat, fish, dairy, fruits and vegetables), when the relative prices of the former foods increased significantly. The anecdotal evidence finds support in Russian household income and spending statistics. Unfortunately, since the data published on this period is highly aggregated and only covers a relatively short period, no rigorous hypothesis testing has been possible.

2 – Theory

A fundamental postulate of standard economics is the existence of an inverse relationship between the relative price of a good and the quantity consumed. Yet, already in the early nineteenth century, Henry Beeke and Simon Gray indicated the possibility of violations of this postulate (Marshall, 1895). Later, Robert Giffen described a “statistical phenomenon” which provided a concrete example for such a violation. Alfred Marshall elevated Giffen to be the namesake for Giffen goods.

For a hundred years, the Giffen effect or the Giffenity property of commodities has been subject to controversy. Some authors have objected to the basic theory. Others doubt the existence of empirical evidence of Giffen goods, or at least their occurrence in a modern economy. Others argue that even if Giffen goods exist, experimental proof might never be found.

We argue that Giffenity is observable. In fact, Giffenity, or more precisely “Giffenability” is an attribute of some goods which may differ by culture or place. These goods are not Giffen goods in absolute terms but become Giffen under specific conditions. Standard examples for Giffenity include cases of extreme scarcity in subsistence consumption. The occurrence of Giffen goods is related to an “...imperative arising from the fact that

consumption is subject not just to budgetary constraints but also to additional constraints issuing from the basic nutritional requirements for health and life” (Davies, 1994). In a limited-choice or choice-less environment, Giffenity reflects a survival behavior that extends beyond the discipline of economics (as the following experiment with rats suggests). While it may seem paradoxical from an affluent Western society’s perspective, Giffenity is “normal” in poor subsistence societies that operate on the borderline of famine.

According to standard economic theory, households choose their consumption bundles in order to maximize utility under a set of prices and a given budget constraint. A change in price, *ceteris paribus*, produces two outcomes: the substitution effect and the income effect (Hicks and Allen, 1934). The substitution effect causes a shift in demand. An increase (decrease) in price causes a good to become less (more) appealing relative to other commodities. If the relative price of beef rises, households may decide to consume chicken instead. However, a price change also affects the income of consumers. If a good, consumed by a household, becomes more (less) expensive, *ceteris paribus*, a household’s real income decreases (increases). This change, in turn, would alter the consumption of all goods, since consumption patterns tend to change with a change in income. If the price of vodka rises, a heavy drinker would afford less meat and may begin eating more potatoes and lard. In accordance with consumer theory, as real income decreases, the consumer consumes fewer normal goods and more inferior goods. The normal/inferior status is contingent upon a predominant culture and consumption patterns. A rise in real income would reduce consumption of pork in the USA, where pork is an inferior good, but would help increase its consumption in Russia, where pork is a normal good (Szyrmer and Vishnevsky, 1994).

The Giffen phenomenon occurs when the price of an inferior good changes and the absolute size of the income effect is larger than the absolute size of the substitution effect. A large income effect due to a change in its price would occur only if a good accounts for a significant proportion of household spending. In Russia, for the period under examination, candidates for Giffen goods are bread, potatoes, cabbage, and vodka.

Household preferences are mapped by different utility functions and corresponding demand functions. These utility functions are used in their standard formats, to describe a nondecreasing monotonic income-consumption relationship (Liebhafsky, 1969). Spiegel (1994, 1997) and Di

Vita (2001) formulate a utility function with a Giffen good that is more flexible and not monotonic over its domain.⁴

Jensen and Miller (2008) identify several key conditions under which Giffenity may occur:

1. Households are poor enough that they face subsistence nutrition concerns.
2. Households consume a very simple diet; this diet includes a basic good (staple) and a “fancy” good.
3. This basic good is the cheapest source of calories available, thus comprising a large part of the diet’s budget, and does not have a readily available substitute.
4. Households cannot be so impoverished that they consume only the staple good.

McDonough and Eisenhauer (1995) claim that “...under the perverse behavioral assumptions of the Giffen legend, should producers have [...] set an asking price for potatoes above the market-clearing level [...] [then] consumers would have [...] gone to the market seeking more potatoes, thereby creating a shortage and bidding up the price indefinitely” (p. 750). These authors posit a Giffen demand curve as globally positive. In fact, any instability related to the Giffen phenomenon must be limited only to a finite region of an otherwise downward sloping curve. Giffenity makes demand curves non-monotonic by introducing an upward sloping region (see [Appendix A](#)). The occurrence of this region is contingent upon several conditions, such as those enumerated by Jensen and Miller (2008). Hence, the Giffen phenomenon is not inconsistent with market equilibrium. It involves no theoretical contradiction.⁵

A similar argument can be made for Veblen “snob” goods whose price increases make them more desirable in the eyes of some consumers. The high prices enhance the high social status that these goods provide (Veblen, 1911; Leibenstein, 1950). Veblen goods exhibit a demand function

⁴ Other studies such as those by Moffatt (2002) and Sorensen (2007) illustrate how utility functions can be postulated under Giffenity that satisfy the tenets of consumer theory and do not violate the axiom of convexity.

⁵ The contradiction here would be to previous studies such as those by Hicks and Allen (1934) which show that no demand curve can be upward sloping over its entire domain since at its extremes it must be downward sloping. If the good is inferior and low in price then the substitution effect outweighs its income effect. If the good is very high in price it becomes unaffordable and consumption declines.

with a positive slope. As in the case of Giffen goods, there are limits to this behavior. The price may rise so high that the commodity becomes either unaffordable or the consumer decides to substitute a similar item for it.

Furthermore, Giffenity has been applied to different types of goods such as money, securities, nutrients and calories, or narcotics.⁶ Gilley and Karels (1991) argue that Giffen behavior often occurs when consumers face calorie rationing under a rigid income constraint. For example, although consumers may prefer meat to potatoes, they end up opting for the latter because it provides more nutrition per unit of money.⁷ Under a very restrictive income constraint, if the price of potatoes rises, people consume more potatoes in order to satisfy their nutritional needs. Similarly, a heroin addict who requires dosages at a given threshold level, may exhibit a Giffen-like behavior while choosing between (an increasingly expensive) heroin and methadone (Stitzer et al., 1983; Gilley and Karels, 1991).

3 - Empirical evidence

Marshall (1895) believed that Robert Giffen identified wheat in the late eighteenth century England as an exception to the “Law of Demand.” Wheat, along with potatoes during the Great Famine in Ireland, 1845-52, became classic examples of Giffen goods. A number of authors have criticized the Giffen good concept. Using early twentieth century data, Stigler (1947, 1987) reviews the history behind the Giffen paradox and analyzes whether wheat had been a Giffen good. Giffen’s “investigation does not uncover any demonstration of the validity of the example of wheat and casts some doubts on the possibility of making such a demonstration” (p. 156). He concludes that although Giffen goods remain theoretically possible, the evidence for their existence is still unproven.

Koenker (1977) looks for Giffenity by estimating demand functions for bread, potatoes, and meat in late eighteenth century England and finds no evidence. Others, such as McDonough and Eisenhauer (1995), argue that the Giffen phenomenon is a “myth” and that the instance of Giffenity within the context of the Irish potato famine is “at worst a kind of hoax” (p. 747).

⁶ Giffen-type price-demand relationships also occur in the case of network goods – such as internet sites; assuming away congestion the more users join the network the more useful it becomes. Its marginal utility increases with the number of sites.

⁷ The calorie content, per pound, amounts to about 350 for potatoes and 1,000 – 1,600 for meat (Davies, 1994). Thus, if potatoes are 3-4 times cheaper than meat the price of each calorie is the same in both. In the early 1990s in Russia potatoes were 5-10 times cheaper.

While many studies have found evidence for and against occurrence of Giffen goods, economists remain divided on the issue (McKenzie, 2002, Garratt, 2005). However, Jensen and Miller (2008) find that poor households in China responded to changes in staple foods consistent with Giffen's expected behavior.⁸ Bopp (1983) shows in a regression analysis that kerosene in the United States, between 1967 and 1976, was a Giffen good, generally consumed by low-income households.

The very nature of Giffenitly makes providing empirical evidence for its occurrence difficult. It involves a comparative statics hypothesis about a price-quantity relationship. Its verification involves a sequence of comparable price-quantity combinations, which are hard to extract.

Measuring price changes over time is challenging, especially in the case of highly aggregated data during a period of rapid inflation combined with significant shifts in relative prices. Complex combinations of income and substitution effects occur. The choice of numeraire is arbitrary and selected from commodities or indexes. Candidates include the price of bread, index of food prices, consumer price index, average nominal wage, average total household income, etc. Depending on which *numeraire* is used, both the relative price and quantity consumed may increase or decrease.

Due to aggregation over time, commodity groups, consumer categories, and price data do not fully reveal the underlying demand functions. Successful identification of a Giffen good depends on the price interval at which the observations are made. If the data include the region of the demand function where the slope is negative, then one may fail to detect Giffenitly, even if it did occur in a different or narrower range of prices. Similarly, most of the existing data are aggregated over a large number of households. Even if some households face positively sloping demand functions, the aggregated data may not reveal it. Consecutive shifts in the supply curve may yield a set of equilibrium points that may be interpreted as an overall negative price-quantity relationship, even if a positive relationship occurred in some of the cases.

Another complication is the fact that consumers exposed to Giffenitly are often producers of the foodstuffs they consume – therefore their income tends to grow together with prices. In this situation, a positive income effect

⁸ Dougan (1982) arrives at a similar conclusion, he speculates that the probability of detecting a Giffen good is lower than the probability that it actually exists and attests that this is primarily due to the effects of shifts in the supply function.

is expected for both normal goods (due to the increase of income) and Giffen goods (due to the increase of price). In the case of aggregate data, both effects may occur at the same time (Walker, 1987).

Another difficulty emerges due to the *ceteris paribus* assumption. Consumer theory states that income and prices of all other commodities must remain unchanged as the price of the Giffen good shifts. One would be hard pressed to find a dataset in which incomes and relative prices of other goods did not change over time. Unlike Marshall's theory, consumer theory holds that the substitution and income effects are not directly observable and can only be derived from mathematical decomposition. Giffenity is defined as a positive correlation between price and the amount consumed. It is a relative concept. How commodity prices change relative to one another, rather than how absolute prices change, are key in demonstrating Giffenity.

Some researchers have designed special experimental techniques to test for Giffen behavior. Battalio, Kagel, and Kogut (1991) use rats for various experiments in a laboratory environment.⁹ They find that at "low income" levels, rats treat quinine solution as a Giffen good.

4 - Food consumption in Russia, 1990-95

The end of the Soviet system in Russia and radical market reforms began with *perestroyka*, or a restructuring, initiated in the 1980s and continued after the breakup of the USSR in 1991. As a result, the Russian economy went through a process of systemic transformations, combined with significant declines in aggregate output and consumption. Income inequality increased significantly during this period (Milanovic, 1998). Russia and other former Soviet republics became unruly market economies.¹⁰

This transition to a new economic system provided an opportunity for studying the Giffen phenomena. Due to chaotic institutional changes, the

⁹ They feed rats with two different types of food – a nutritious quinine solution and root beer. The rats prefer the beer. The quinine solution is an inferior good. In this experiment, both the "price" and the "income" level are changed. These changes generate subsequent shifts in consumption. At "low income" levels, rats treat quinine solution as a Giffen good. The study illustrates the data aggregation problem inherent in all empirical investigations of Giffenity. The rats show large variations in individual preferences for their consumption behavior over a range of incomes. See also: Silberberg, Warren-Boulton, and Asana (1987).

¹⁰ In March 1994, in Russia, the proportion of average income of richest 10 percent of the population to the average income of the poorest 10 percent was 16.4. Between 1991 and 1994 this proportion increased almost fourfold (Gavrilenkov, 1996).

Russian government introduced a relatively free market. Consumers maximized consumption subject to their budget constraints. The government abandoned most of its market interventions, food subsidies, price controls, and rationing of basic consumer goods. For low-income households, free choice offered by this market economy became severely constrained by basic nutritional needs. Many households had to limit their consumption almost entirely to such staples as bread and potatoes. Other foods turned into luxuries these families could not afford.

Selected price, consumption, and expenditure data for Russia, 1990-95, are provided in Table 1. Prices for four consumer goods are included: meat, fish, potatoes, and bread.

Table 1

Four consumer goods: meat, fish, potatoes, and bread, data on prices, consumption, and expenditures., Russia, 1990-95

	1990	1991	1992	1993	1994	1995
Prices, per kilogram						
<i>1a Nominal Prices (Rubles)</i>						
Meat	3.16	8.79	88.89	1102.44	3496.61	10658.00
Fish	1.05	3.11	34.78	456.57	2485.54	6745.57
Potatoes	0.43	1.39	16.60	113.28	527.62	1764.57
Bread	0.33	0.85	11.27	155.33	621.39	2123.11
<i>1b Relative Prices, Expressed as Percent of Average Monthly Income per Capita</i>						
Meat	1.47	1.89	2.22	2.44	1.69	2.00
Fish	0.49	0.67	0.87	1.01	1.20	1.27
Potatoes	0.20	0.30	0.41	0.25	0.26	0.33
Bread	0.15	0.18	0.28	0.34	0.30	0.40
<i>1c Relative Prices, Expressed in Kilograms of Meat</i>						
Meat	1.00	1.00	1.00	1.00	1.00	1.00
Fish	0.33	0.35	0.39	0.41	0.71	0.63
Potatoes	0.14	0.16	0.19	0.10	0.15	0.17
Bread	0.10	0.10	0.13	0.14	0.18	0.20

Quantities, monthly consumption per capita

Id Quantity Consumed, Kilograms

Meat	5.83	5.42	4.83	4.75	4.83	4.42
Fish	1.25	1.17	1.00	0.92	0.75	0.72
Potatoes	7.83	8.17	8.92	9.33	9.42	9.33
Bread	8.08	8.42	8.67	8.92	8.42	8.50

Ie Quantity Change, Percent, to Price Change, Percent (Elasticity)

Meat		-0.3	-0.6	-0.2	-0.1	-0.5
Fish		-0.2	-0.5	-0.5	-0.9	-0.9
Potatoes		+0.1	+0.2	-0.1	+0.4	-0.0
Bread		+0.2	+0.1	+0.1	+0.5	+0.0

If Relative Quantities Consumed, per Kilogram of Meat

Meat	1.00	1.00	1.00	1.00	1.00	1.00
Fish	0.21	0.22	0.21	0.19	0.16	0.16
Potatoes	1.34	1.51	1.84	1.96	1.95	2.11
Bread	1.39	1.55	1.79	1.88	1.74	1.92

Expenditures, monthly per capita

Ig Spending on Selected Food Items, Rubles

Meat	18.44	47.63	429.63	5236.59	16900.28	47072.83
Fish	1.31	3.62	34.78	418.52	1864.16	4834.32
Potatoes	3.37	11.36	147.99	1057.31	4968.44	16469.32
Bread	2.66	7.16	97.65	1384.99	5229.99	18046.41

Ih Percent of Total Income Spent on Selected Food Items

Meat	8.58	10.22	10.74	11.59	8.19	8.83
Fish	1.39	0.78	0.87	0.93	0.90	0.91
Potatoes	1.57	2.44	3.70	2.34	2.41	3.09
Bread	1.24	1.54	2.44	3.06	2.54	3.39

Ii Percent of Total Income Spent on Selected Food Items (Poorest 10 percent of households)

Potatoes	2.97	4.06	9.75	5.77	8.69	15.32
Bread	2.22	2.41	6.07	7.14	8.65	15.88

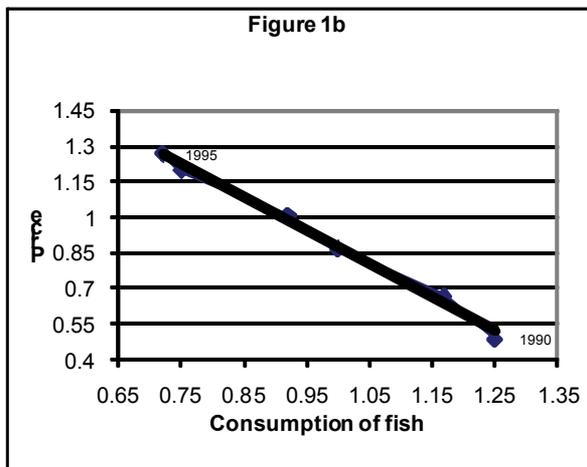
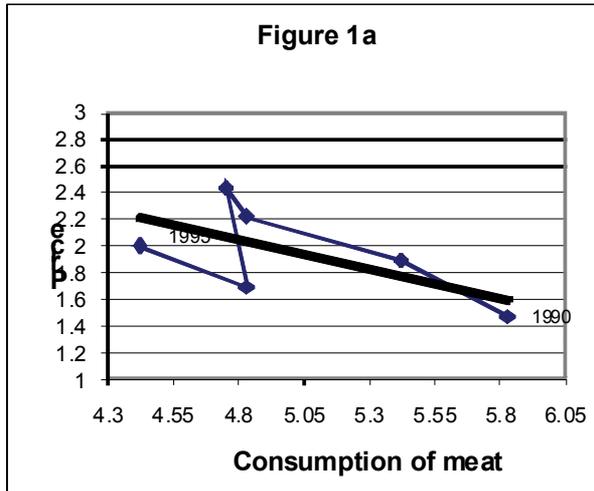
Source: Goskomstat

During this period of hyperinflation, nominal prices increased 3,000 to 7,000 times their initial levels. Nominal average household incomes also increased but failed to keep up with inflation. In 1990, an average Russian family would pay 1.47 percent of its monthly per-capita income for one kilogram of meat. By 1995 the price of meat increased to 2.00 percent (the maximum observation for the period was 2.44 percent in 1993). Similarly, from 1990 to 1995, the relative price, as a percentage of average monthly income, of one kilogram of bread almost tripled -- from 0.15 percent to 0.40 percent, respectively. During this period, the affordability of these foods declined every year except for potatoes in 1993 and for bread and meat in 1994. Prices of fish, potatoes, and bread tended to grow faster than the price of meat. The price-ratio of one kilogram of meat to one kilogram of bread decreased from almost ten to five from 1990 to 1995. Despite the fact that bread was becoming more expensive compared to incomes and meat prices, its consumption increased every year during this period, except 1994.

Calculations of price-quantity elasticities (ratios of percent changes in quantity consumed to percent changes in prices, the latter expressed in units of incomes per capita) provide interesting results. For meat and fish, all elasticity ratios are negative, i.e., prices and quantities change in opposite directions. When these foods became less affordable their consumption declined, and mapped into standard downward sloping demand curves. The situation with bread is different. Its price and quantity consumed change in the same direction. Therefore, its own quantity-price elasticity is positive. Its demand line is upward sloping. The equivalent calculations for potatoes give mixed results. The elasticity for potato is positive in three cases and negative (though close to zero) in two cases.

As shown in **Fig. 1a, 1b, 1c, and 1d**, ordinary least squares (OLS) trends are downward sloping for meat and fish, but are upward sloping for potatoes and bread. These signs are consistent with our expectations.

Figures 1a, 1b, 1c, and 1d Four consumer goods (meat, fish, potatoes, and bread): prices (percent of average monthly income per capita) and quantities consumed (monthly, per capita, kilograms), Russia, 1990-95



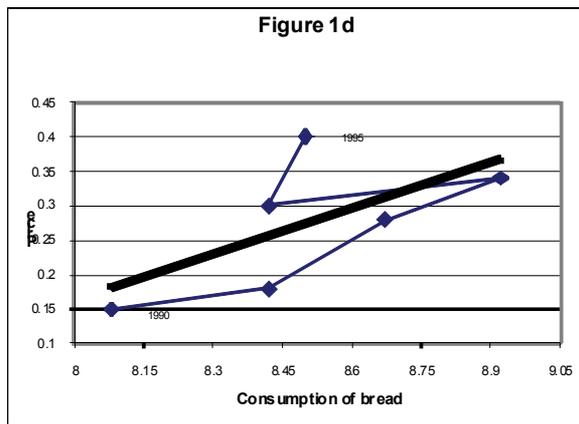
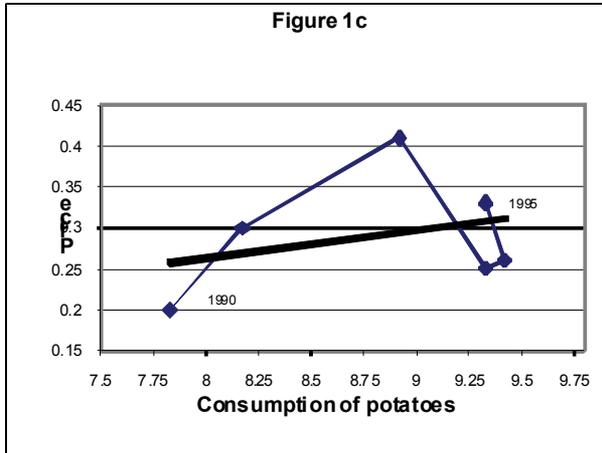
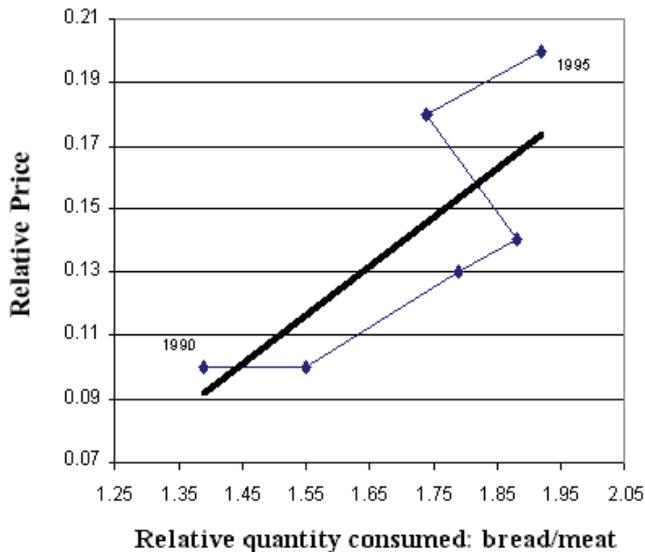


Table 1 also provides relative prices (price of each food to price of meat) and relative quantities (quantity consumed of each food compared with that of meat). The relationships between the relative price and relative quantity are as follows: a downward-sloping demand curve for fish and predominantly upward sloping demand curves for bread (**Fig. 2**) and potatoes. The positive relationships between relative prices and relative quantities of potatoes and bread are especially robust in the early period of the transition. Between 1990 and 1992, the relative price of potatoes increased by 36 percent

and quantity consumed increased by 13 percent. During the same period, the relative price of bread increased by 30 percent and the relative quantity consumed increased by 29 percent. This relationship, however, turned negative for potatoes in 1993 and for bread in 1994.

Figure 2



As emphasized above, the necessary (but not sufficient) conditions for Giffenity are: (1) a good must be inferior, and (2) a significant portion of household income must be spent on this good. Subsequently, the negative income effect of a price increase exceeds (in absolute value terms) the negative substitution effect. The total cost of bread and potatoes amounted to about 5-15 percent of total spending on food – a high enough proportion to influence consumption expenditures on all other foods. People reduced their consumption of less affordable meat and fish – despite a significant decline in their relative prices – and augmented their consumption of more affordable potatoes and bread – despite a significant increase in their relative prices.

The demand for all four foods was highly inelastic. For the period from 1990 to 1995, very large price changes (with respect to incomes) – 167 percent (bread), 65 percent (potatoes), 159 percent (fish), and 36 percent

(meat) – resulted in relatively small quantity changes – 5 percent (bread), 19 percent (potatoes), 42 percent (fish), and 24 percent (meat). Demand for meat was relatively more elastic (or less inelastic), while demand for bread was the least elastic.

Between 1990 and 1995, the combined monthly per-capita consumption of meat and fish in physical units declined by almost 2 kilograms, while the combined consumption of potatoes and bread increased by the same amount. Since the caloric content of meat and fish is higher than that of potatoes and bread, the calorie intake of Russian population during this period declined. These data reflect increased malnutrition among the low-income portion of the Russian population.

The situation was extremely difficult for the poorest families, whose combined expenditures on potatoes and bread grew from 5.6 percent of average total household income in 1990 to 31.2 percent in 1995 (Table 1). The latter figure translates into about 40-50 percent of total food expenditures. In this case, the crowding out effect was very strong. The rapidly increasing relative prices of bread and potatoes, combined with very significant decreases in real household incomes, forced the poorest families to limit their diet to these two foods, with all other kinds of foods becoming barely affordable.

The data presented in this paper are highly aggregated. The time series are short and suffer from low statistical significance. The commodity groups include a broad set of changes in consumer demand and consumption patterns in Russia for different socio-economic groups. The data cover a period of dramatic structural changes. Consumers themselves produced some food categories, which further obscures the price-quantity-income relationships. These problems with the data do not allow for a solid statistical evidence for Giffenity in Russia. Yet, some support for the Giffenity hypothesis is unquestionable.¹¹

The Russian income data provide an even better empirical support for Giffenity. Table 2 presents the number of kilograms of selected food items that could be purchased by the average income per capita of poorest households (the lowest 10 percent) and by the minimum wage.

¹¹ In fact, at the micro-level we do possess empirical evidence for the occurrence of Giffenity in several Moscow families, interviewed by the authors in the mid-1990s, whose almost entire consumption was limited to bread, potatoes, and cabbage. More work with detailed household consumption data would be necessary to provide broader statistically significant evidence.

Table 2

The number of kilograms of selected food items (meat, fish, potatoes, and bread) that could be purchased by the average income per capita of poorest households (the lowest 10 percent) and by the minimum wage

	1990	1991	1992	1993	1994	1995
<i>2a Poorest 10 Percent of Households</i>						
Meat	29.7	27.1	14.8	14.8	14.9	9.4
Fish	89.5	76.5	38	35.7	20.9	14.8
Potatoes	218.6	171.2	79.5	143.9	98.6	56.7
Bread	284.8	280	117.1	104.9	83.7	47.1
<i>2b Minimum Wage</i>						
Meat	22.2	20.5	10.1	13.3	5.9	5.7
Fish	66.7	57.9	25.9	32	8.2	9
Potatoes	162.8	129.5	54.2	129.1	38.9	34.3
Bread	212.1	211.8	79.9	94.1	33	28.5

Source: Goskomstat

For example, in 1990, the minimum monthly wage was 70 rubles and the average price of one kilogram of bread was 33 kopecks. Thus, an earner of the minimum wage could afford 212 kilograms of bread per month. For 1995, the respective figures were minimum wage – 60,500 rubles; price of one kilogram of bread – 2,123 rubles; number of kilograms per minimum wage – 28.5. Hence, in 1995, a minimum wage earner could afford 1 kg of bread per day and nothing else or half a kilogram if he supported another family member with no income. Given that there were a significant number of people whose only income was the minimum wage, a Giffen-type phenomenon occurred.

Hyperinflation affected various regions of Russia differently. While, for example, in Moscow, in the spring of 1995, the ratio of average wage to an official survival minimum was 1.9, in the Pskov province and the Republic of Tuva this ratio was below 1.0. In these regions, male life expectancy in rural areas was about 50 years (58 years for Russia as a whole). Furthermore, average wages in several sectors of the Russian economy (agriculture, healthcare, education, and culture) and average pension for the entire country

remained below the bare minimum (Golovachov, 1995; Gavrilencov, 1996; Latsis, 1996).

5 - Conclusion

The post-Soviet transition of the 1990s imposed a severe test on various neoclassical concepts that were often viewed as universal economic laws. A critical economic analysis of the transition did not invalidate these laws. This conclusion is in contrast to the opinion of some opponents of market reforms in former Soviet bloc countries. The severe test imposed on neoclassical concepts helps define their boundaries. Giffenitly belongs to these concepts. In our opinion, Giffenitly should warrant the attention of economists. Its market effects are pervasive in poor countries and in countries undergoing rapid radical transformations.

Giffenitly in Russia exposes the cost of the Russian transition to a market economy. The welfare and sovereignty of Russian consumers were wrecked again, this time by powerful rent-seekers combined with incompetent and ineffective policies (Woodruff, 1999). High food subsidies undermined both public finance and reforms in agriculture. They contributed to fiscal deficits, hyperinflation and a large-scale pauperization. Removal of the subsidies without true privatization and restructuring of agriculture led to a gradual devastation of this mismanaged sector. Low productivity and high transaction costs resulted in very high food prices. Low-income families had to reduce their diets to basic foodstuffs that increased the demand for these necessities.

Higher prices and increased poverty resulted from the combined effect of high demand, local monopolies in food production and distribution, lack of transparent ownership rights in agriculture, high demonetization, etc. Consequently, many families had to spend most of their income on food, with little demand left for non-farm products. As a result, the low domestic demand for industrial goods and services contributed to additional economic decline and elevated poverty. A severe economic and financial crisis occurred in August-September 1998. Similar to the famine in the 1840s in Ireland and in the 1930s in Ukraine, certain regions of Russia found themselves at the brink of mass starvation. At the end of the 20th century, in Russia and elsewhere, Giffen goods remained a painfully real phenomenon.

Appendix A: Extended demand function incorporating a Giffen good

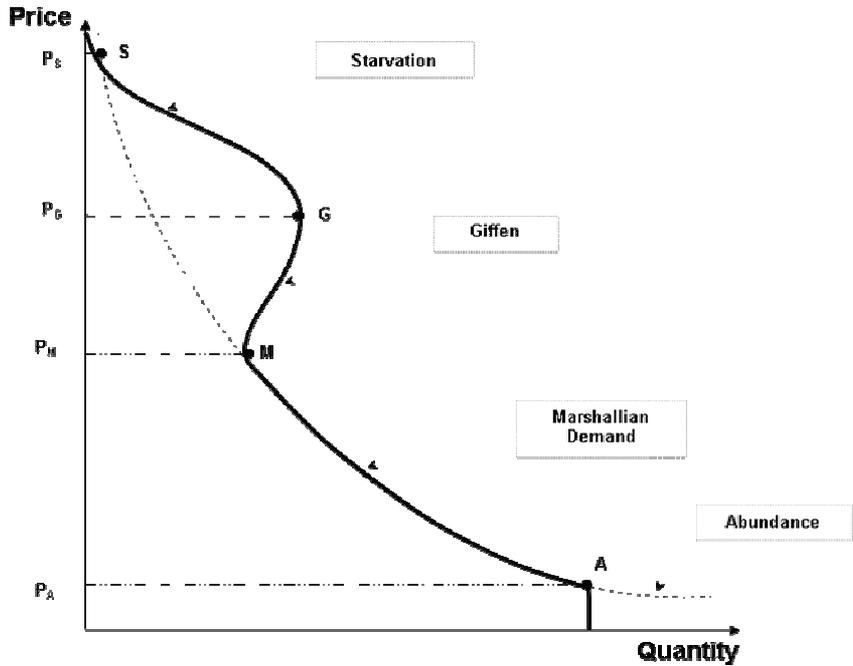
The extended demand function for “Giffenable” goods looks like a stylized “Z” (Fig. 3). When the price of such a good is very low (less than P_A), the good is almost free and its demand curve is very steep. When the price exceeds P_A , the demand curve is less steep but remains downward sloping. The consumer can enjoy making choices in accordance with his/her preferences. This is the “standard” Marshallian segment of the demand function. When prices are higher than P_M but lower than P_G the function is upward sloping. This is the Giffen segment, or the “crowding-out” segment, where people increase the consumption of a basic (inferior) good at the expense of other goods. Here the positive income effect of a price increase is greater (in absolute value terms) than the negative substitution effect. Point G is a point of extreme monoculture. The consumer spends almost his/her entire income on one good (potatoes in 19th century Ireland) in order to meet dietary requirements. Beyond this point, *ceteris paribus*, a higher price must lead to a reduction in consumption. Point S denotes starvation. Due to very high prices, a starving consumer cannot afford to purchase the food that would satisfy even minimum nutritional survival requirements.¹²

One can assume that in the case of Russia in the early 1990s, the consumption of bread was located somewhere between the points M and G . Bread had a monotonic upward sloping demand curve at that time. Potatoes were likely to remain in the vicinity of point M , in some cases above M (upward slope), while in some cases below M (downward slope). The demand for meat and fish followed the downward sloping curve, between points M and A . Alternatively, one may assign the different segments of the demand curve of Figure 3 to different income groups in their demand for bread. For high-income families in Russia, the cost of bread is a very low fraction of their income – they are located below point A . Middle-income families would be located somewhere between A and M , whereas low-income families between M and G . At the same time, many unemployed people and pensioners ended up somewhere between points G and S .

¹² Many regions in countryside of soviet Ukraine in winter 1932-33 climbed along this kind of demand function. The food was cheap and abundant in the fall, yet Ukrainian peasants could not safely store it, since any stashed food discovered by the authorities was confiscated and its owners punished. In mid-fall the prices of food (potatoes) began growing gradually reaching the levels M , G , and S . By early spring 1933, several millions of Ukrainian peasants starved to death (Magocsi, 1996).

Figure 3

Demand function for a Giffenable good



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