
Influence of Households' Borrowings on Consumer Spending During the Escalation of the Crisis

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Abstract:

This article investigates the relationship between the borrowing activity of Russian households and their current consumer expenditures in the period of escalation of the social and economic crisis.

The analysis was conducted on the basis of data provided by the Russian Longitudinal Monitoring Survey, RLMS-HSE for 2015.

The paper proposes and implements an approach that makes it possible to assess the impact of borrowings on inequality in consumption and poverty among households.

It was revealed that the need of repayment results in saving on food, medical treatment and other vital needs for an overwhelming number of households. This is especially acute among families being beyond the poverty threshold.

Keywords: *Credit behaviour, households, poverty, inequality, consumer spending, hidden income.*

JEL Classification Codes: *C10, D14, G02, I32.*

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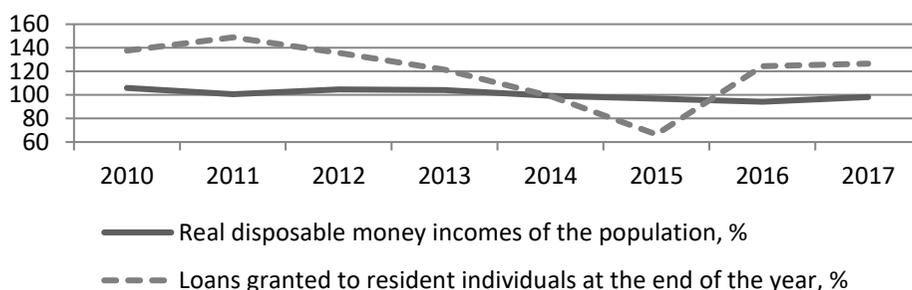
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1. Introduction

Lending to the population has received an impetus to growth since the early 2000s, when the country entered a phase of a long economic recovery supported by high energy prices. The increase in real incomes of the population created the basis for positive expectations and contributed to the formation of a consumer boom underpinned by massive advertising from manufacturers of goods, sellers and financial institutions offering various types of loans and credits facilities.

Figure 1. *Growth rates of real incomes and loans of the population, 2010-2017⁴*



The most active phase of lending began in 2010 and continued until the crisis year of 2014, when lending volumes increased by 3.4 times. Since mid-2014, the credit activity of the population has declined, and the fall was especially noticeable in 2015 (Figure 1). The decrease in lending to the population during the deepening crisis was also observed in all regions of the Russian Federation, but the decline in lending activity was uneven due to differences the regional development (Nivorozhkina, 2018; Tregubova, 2016).

Since 2016-2017, lending began to grow again, the annual growth in lending amounted to about 25% (Figure 1). In 2017, the volume of credits to the population exceeded the volume of lending in 2013-2014. The household behavior in the sphere of consumer lending, the dynamics of indebtedness are sensitive indicators of the economic and social well-being of society (Nivorozhkina, 2017a). On the one hand, the credit allows the households to enjoy the benefits without necessity to save money for their purchase which may take a long time. It also reduces the level of deferred demand, satisfying the immediate needs. And in periods of sustainable economic growth, the population begins to actively borrow, hoping that improvements will last long. On the other hand, the low financial literacy of a large part of the population, the unsatisfied consumer “thirst” of many people living during the era of total deficit results in the desire to have “all and now” and

⁴Data available at:

<http://cbr.ru/statistics/UDStat.aspx?Month=07&Year=2018&TblID=302-02M>,

http://www.gks.ru/free_doc/new_site/population/uov/uov_12kv.doc

contribute to the formation of population groups. The trajectory of consumer behavior of these groups is completely determined by their borrowings and does not take into account the real financial resources of the family, the likelihood of a crisis (Grima and Caruana, 2017). Credit debt repayment for a certain period reduces the household's available monetary income and the amount of funds that is available for consumption. As a result, the usefulness of goods or services purchased on credit often becomes very doubtful, and the credit debt burden can become intolerable pressure.

Consumer loans are a sphere of active borrowing of households with low incomes, often without the financial cushion in the form of savings. Thus, even a relatively small decrease in revenues accompanying this negative macro forecasts in the media lead to a sharp reduction in current lending, while retaining borrowings still outstanding. As at the end of 2013, loans to individuals reached 17% of the total assets in the banking sector of the Russian Federation, however, the contribution to the net profit of the banking system due to loans from individuals amounted to more than 30%⁵. Such profitability initiates financial institutions to increase loans to citizens with no assets.

As of February 1, 2014, the total indebtedness of individuals for loans amounted to about 9.9 trillion rubles, which was approximately US\$2000⁶ per inhabitant of Russia. The crisis processes that began in 2014 resulted in the decrease in the volume of credits received with continued debt growth. According to the Bank of Russia⁷, as of January 1, 2015, consumer lending declined to 8.625 trillion rubles and the debt rose to 11.295 trillion rubles, as of January 1, 2018, the total debt on loans reached a maximum value of 12.135 trillion rubles, exceeding the volume of lending by 1.3 times (Figure 2).

The growing interest in household debt problems has been intensified since the global financial crisis of 2008, when a high level of debt relative to the value of household assets and/or their disposable income has become one of the causes of the collapse of the housing market in the USA (Thalassinos et al., 2015). Recent empirical studies on the USA have revealed that a high level of borrowing relative to household assets has a negative impact on household consumption expenditures (Dyner, 2012). Similar results are presented for a number of European countries (Benito, 2007). According to the studies of Canadian statisticians (Hurst, 2011), if the cost of repaying the credit exceeds household income by more than 40%, then debt service may become impossible for the household. The impact of credit debt on the elasticity of consumption can be evaluated in two ways: either as a result of the fact that households will not exceed some fixed level of the ratio of loans to

⁵ http://www.cbr.ru/analytics/bank_system/obs_1303.pdf

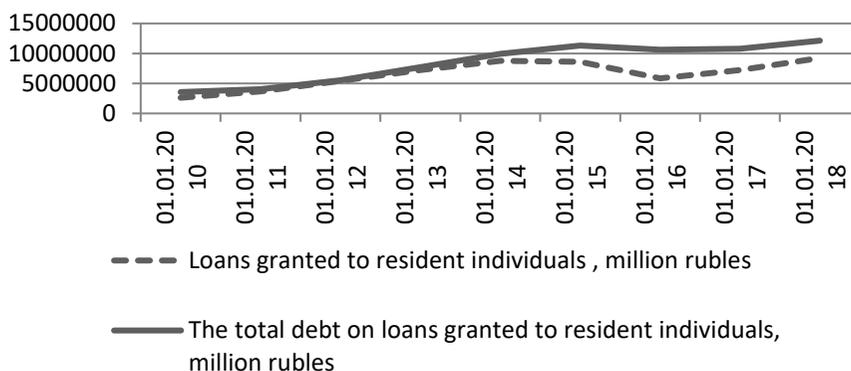
⁶ Calculated from data: http://www.gks.ru/free_doc/new_site/population/urov/urov_12kv.doc

⁷ Data available at:

<http://cbr.ru/statistics/UDStat.aspx?Month=07&Year=2018&TblID=302-02M>

incomes/assets, or if financial institutions impose restrictions on high-debt households lending.

Figure 2. Loans and total debt on loans granted to resident individuals, January 1, 2010- January 1, 2018⁸



2. Methodology

The overall picture of a sharp decline in lending and debt growth during the aggravation of the economic crisis in 2015, represented by macroeconomic and banking statistics, does not allow to see how the results of this processes on a household, microlevel. What is the relationship between the credit debt of households and the possible reduction in current consumption due to debt repayment obligations? How much do households burdened with loans have to cut their consumer spending? Does credit debt increase inequality in consumption and poverty among households?

Traditionally, to address the issues raised, analysts are turning to household income indicators. However, an important aspect of measuring inequality and poverty in Russia at the microlevel is that there is a stable bias in household surveys, in which household spending often exceeds their incomes. It should be noted that information on incomes and expenditures during the survey is usually presented for the month preceding the survey. This significantly limits the opportunities of analysis, however, as the world experience shows, attempts to consider longer horizons for receiving money and spending it worsen the quality and reliability of information. Therefore, the inconsistencies in current household income and expenditures are often explained by the fact that many items of income and expenditure do not fall within the interview interval. This is indeed true, but a number of studies (Nivorozhkina, 2017b; Murashov, 2016) indicate that some households have incomes their sources and sizes not indicated in the survey, but they are

⁸Data available at:

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“highlighted” when estimating consumption. For example, this happens, in the case when the family has the balance of unprocessed funds at the end of the month, and often this excess of income over expenditure is not attributed to savings, but to the current balance of cash that is not declared. Such residual income is expended at the discretion of the consumer in the next period. This is turnover cash spent on consumption, which can shift the accountable balance of income and expenses next month. Thus, a significant portion of the underreceived funds present in the household income and expenditure assessment is a serious scientific and practical problem requiring separate research and refinement. Therefore, when studying the impact of lending on the well-being of households, it is methodologically more reasonable to refer to their consumer spending (Nivorozhkina, 2016a).

To analyze the impact of household credit borrowing on current consumer spending, the data of the Russian Longitudinal Monitoring Survey, RLMS-HSE⁹ was used. The data was collected to study various aspects of the economic situation and health of the population of Russia. The data collection has been conducted since 1992 on a nationwide Russian sample. According to the purposes of the study, data on households for the year 2015 were used. This year was characterized by both a decrease in the real money income of the population and a sharp, one-stage drop in the volume of loans extended to individuals. Households residing in rural settlements were excluded from the sample, as the structure of incomes and consumer spending of rural residents is quite different due to the presence of income in kind in such families (which also affects the amount of consumer spending, especially the cost of food).

The disposable income of households was estimated by means of the answers to the questions: “How much money net of taxes and other contributions has your family received for the last 30 days? If payment was made in the form of goods or services, estimate how much will it be approximately in rubles?”. Household consumption expenditures were estimated on the basis of the answers to a block of questions about household spending on food, alcohol and non-alcoholic beverages, clothing and footwear, household items, household appliances, vehicles (cars, motorcycles, etc.), building materials for repairs, spending on recreation and cultural events, restaurants, charges for communication services, housing and transport services, medical expenses, etc. The availability of the loan was determined by answering the question “Has your family spent money on repaying loans for the last 30 days?”. The sample size was 5 215 households.

⁹Russian Longitudinal Monitoring Survey, RLMS-HSE», conducted by National Research University “Higher School of Economics” and OOO “Demoscope” together with Carolina Population Center, University of North Carolina at Chapel Hill and the Institute of Sociology of the Federal Center of Theoretical and Applied Sociology of the Russian Academy of Sciences. (RLMS-HSE websites: <http://www.cpc.unc.edu/projects/rlms-hse> and <http://www.hse.ru/org/hse/rlms>).

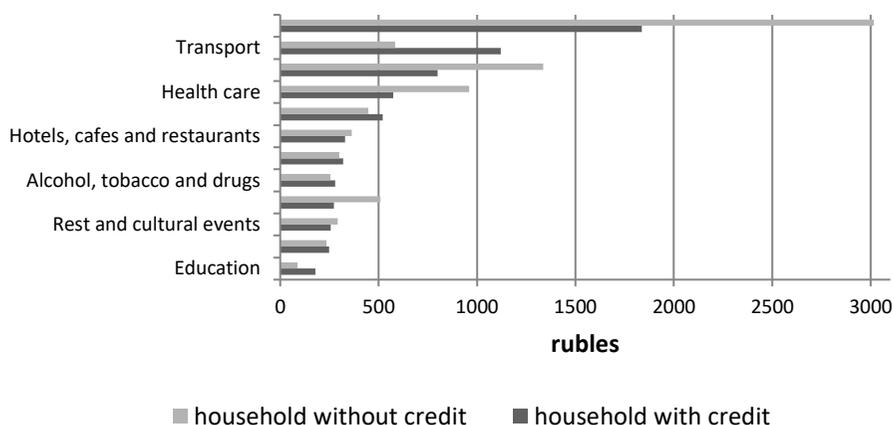
3. Results

Almost 30% of households claimed that they had spent money on repaying loans for the last 30 days. Further analysis of consumer spending and funds for repayment of loans per capita was carried out in the context of two groups: households with loans (those families that made money to repay the loan within the last 30 days) and without loans.

The average amount of consumer spending per capita in the household was 7899.15 rubles. It should be noted that average consumer spending per capita in households with loans turned out to be significantly lower than in households that were unencumbered by credit payments (6737.7 and 8388.6 rubles, respectively). The average amount of per capita food expenditure in households that spent money on repaying the loan was 40% lower than in households without loans. The amount of expenditure on health and housing services was also 41% lower in households encumbered with credit payments. Other expenses also decreased on average by 37% compared to families without loans. At the same time, the expenses for transport and education per capita were almost twice as higher in families with loans (Figure 3).

Thus, there was a significant reduction in consumer spending on food, housing and health services per capita in households with loans in 2015. This reduction was most likely in favor of repayment costs and it can be assumed that it was this circumstance that made households save on food, health, and also housing services (either consuming less or paying for these services later). For example, expenses on loan repayment per capita averaged 4270.81 rubles, or 63.4% of current household consumer spending per capita (the average household consumer spending was 14578.74 rubles, the loan payment was 12192.74 rubles).

Figure 3. Average per capita household consumption expenditure, rubles



It should be noted that the monthly cost of loan repayment exceeded consumer spending in some households. A third of households (34%) had higher costs of loan repayment per family member than their consumer spending per capita. At the time of the survey such families mostly lived in regional centers (55%), they had a cottage or other house, a garden cottage (73%). Only 7% of such families said that they had been making their savings for the last 30 days, while another 6% had been lending money.

The majority of families (83.5%) whose monthly expenses for loan repayment per capita exceeded their per capita consumer spending had credit debts. Other households (16.3%) had outstanding bills for housing and utilities. Another 7.4% of families argued that they had been borrowing money from individuals for the last 30 days. In such families, compared with those in which the monthly spending on loan repayment per capita did not exceed consumer spending per capita, the amount of deferred savings was less by 66%, consumer spending per capita was half as much (especially for food and housing services), and costs of loan repayment, on the contrary, were 2.4 times higher.

On the one hand, the presented results support the hypothesis of hidden earnings and turnover cash (otherwise how the household will survive with negative consumer spending). On the other hand, the results support the hypothesis that the burden of credit payments for many households becomes unbearable on deterioration of their financial position. If the amount of payment for a credit is high, then families are forced to reduce their consumer spending (costs of food, housing, health), as well as deferred savings (it can be assumed that these funds are used to repay loans). Such high differences in consumption costs allow making an assumption that this will affect the inequality indicators. To test this hypothesis, the Gini index was calculated and its decomposition was performed between households with and without loans (Shorrocks, 1984) (Table 1).

Table 1. *Inequality decomposition by the presence of credits in households*

Household with credits	Gini index	Households share	Consumption expenditure share	Absolute contribution	Relative contribution
No	0.5076	0.7035	0.7471	0.2668	0.5185
Yes	0.5215	0.2965	0.2529	0.0391	0.0760
Within Beetwin Overlap				0.3059	0.5944
				0.0436	0.0847
				0.1651	0.3209
Population	0.5146	1.0000	1.0000	0.5146	1.0000

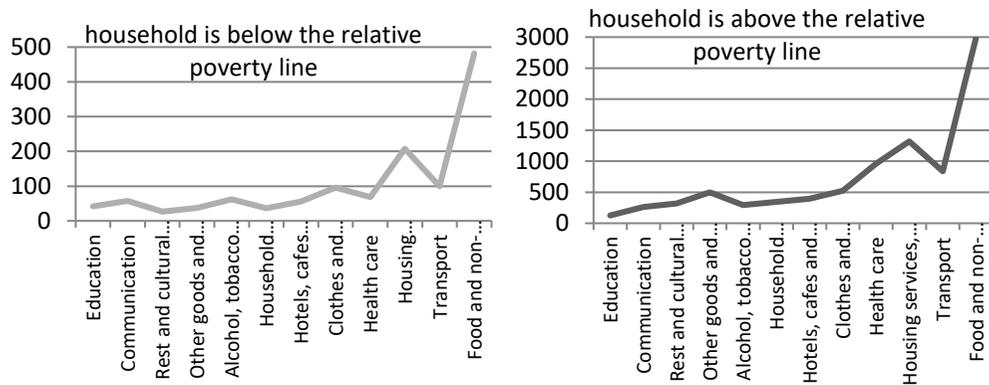
Gini index for the whole set of households was 51.46%, the index values are higher among households with loans than for those who do not have them (Table 1). The result indicates a general high level of inequality among Russian households. The existence of loans can explain 7.6% of the general inequality in consumer spending.

The intergroup contribution to the value of Gini index was 8.47%, intragroup contribution was 59.44%. Thus, the results indicate that the availability of credits in the household increases the inequality in consumer spending, but this gap does not appear to be critically high. This is due to the fact that there were both low- and high-income families among households that have credits and loans. Expensive credits, mortgage loans increased the credit debt burden of these families, narrowed the horizon of survival, but in general they are more financially sustainable, many of them had additional earnings. As for low-income borrowers, as a rule, their loans are short-term and their number is decreasing in the crisis period. In general, these two seemingly multidirectional trends resulted in the fact that the presence of credit in the household did not become a significant factor of inequality when comparing two identified groups (Nivorozhkina, 2017c).

Previous calculations have indicated that cash income and expenditures per capita in households with credits are lower. Is this related to the poverty level of households? To answer this question, the level of relative poverty was defined as 60% of the median cash resources per capita. The choice of such a threshold measure of poverty is due to the fact that it is closest to the official subsistence level. Relatively poor families were indicated as the ones their average amount of consumer spending per capita not exceeding 60% of the median cash resources per capita. In accordance with the chosen measure, 12.6% of households were classified as relatively poor. In absolute terms, the poverty threshold was 1800 rubles.

Consumer spending per capita in households varied significantly: consumer spending per capita in “relatively poor” families was 85% lower on average! Expenditure on food and housing services per capita differed most significantly in the “poor” and “non-poor” households (see Figure 4).

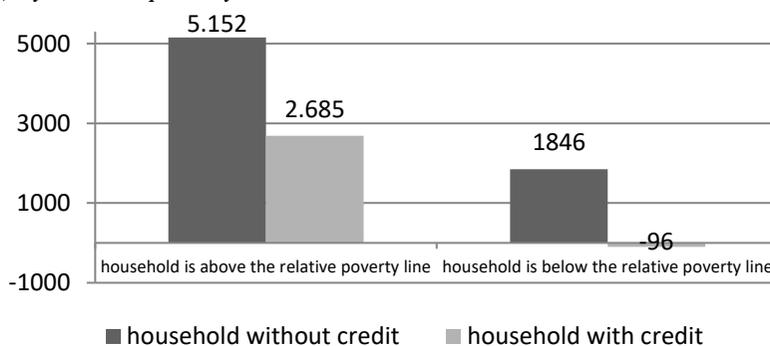
Figure 4. Average household consumer spending per capita by relative poverty level, rubles



The average level of cash resources per capita in households with loans net of the amount of the monthly loan payment was 2267.91 rubles, while this amount in families without loans was twice as large (4769.31 rubles). It should be noted that 31% of households with credits and being above the poverty threshold had a negative level of cash resources per capita, while this share in families below the poverty line is even higher – 46%. At the same time, 84% of these families claimed that currently they have credit debts! About 20% of families had unpaid bills for housing services. The obtained data demonstrates the intolerable pressure of the credit burden for such families (Nivorozhkina, 2014; Nivorozhkina, 2015).

Estimating households that are above the level of relative poverty, the average level of cash resources per capita in families without credits is over twice as much than the level of cash resources per capita in families with loans (Figure 5). If we consider the families below the level of relative poverty, then the availability of credits makes the gap between the average level of the families' cash resources per capita enormous. Moreover, the average resources per capita turned out to be negative in “relatively poor” families with credits (Nivorozhkina, 2016b).

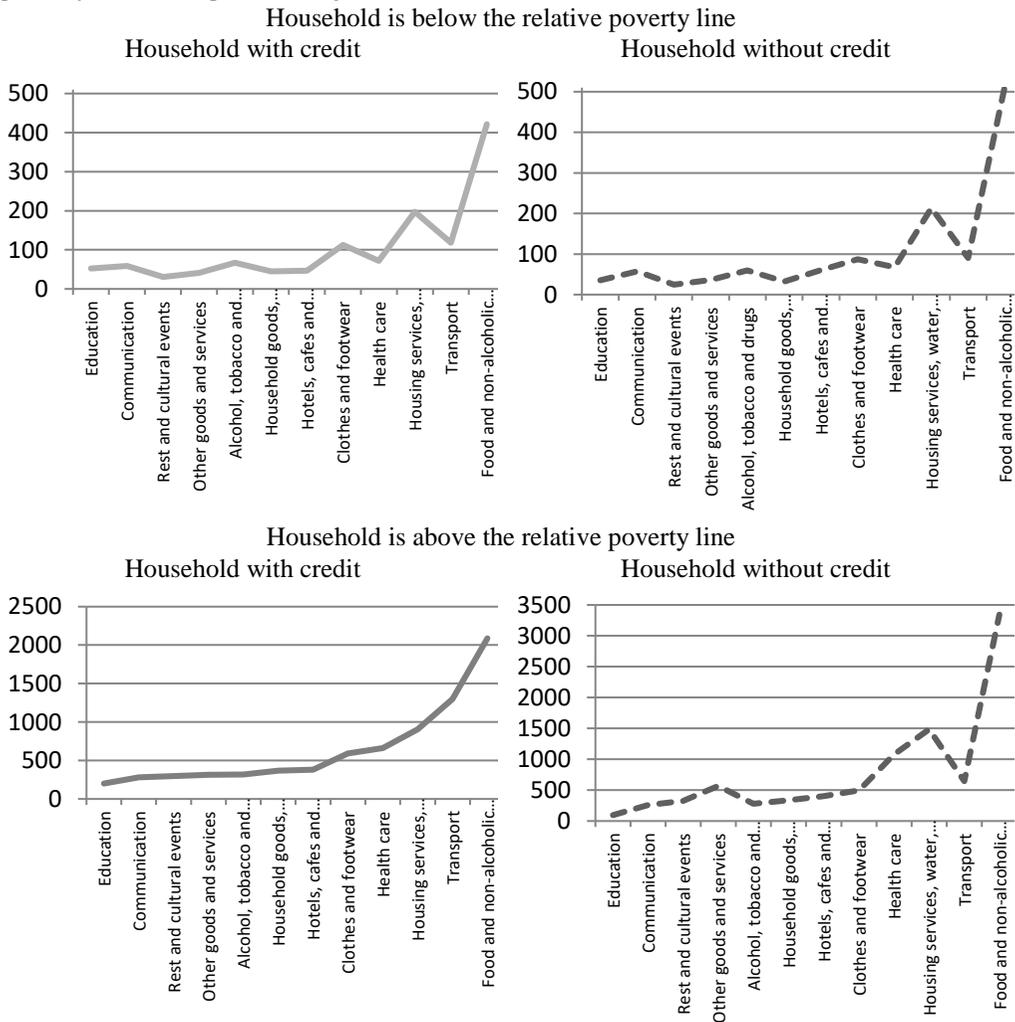
Figure 5. Average household cash resources per capita (net of the amount of credit payment) by relative poverty level, rubles



Credits in households that are above the level of relative poverty are also an important factor affecting the size of consumer spending per capita. Thus, expenditures for food, housing services and health care are much lower (by almost 40%) in “relatively non-poor” families with credits. The cost of food and housing services also turned out to be even lower in “relatively poor” families with credits than in families without loans (by 19% and 8%, respectively). Nonetheless, health care expenditures averaged slightly higher (by 6%) in “relatively poor” households (Figure 6). It should be noted that consumer spending per capita in “relatively poor” households is quite small, the differences in expenditure rates, depending on the presence or absence of credit in families, are not so noticeable. At the same time, the gap in the amount of food expenditures was critical – “poor” families with loans save, cutting their food costs. The gap in consumer spending was more significant in “non-poor” families – families with credits sharply cut spending not only on food,

but also on housing services, health care and expenditures for other purposes. Higher transport costs in families with loans can be explained by the purpose of lending (for example, car loans or consumer loans, if its funds are expended for travel, transportation, etc.).

Figure 6. Average household consumption expenditure per capita by relative poverty level and presence of credits, rubles



Thus, the variation in consumer spending per capita is manifested both in families with credits and without them, but these differences become most visible in “non-poor” families. At the same time, both “poor” and “non-poor” families with loans save primarily on food, most noticeably reducing the amount of this item of consumer spending.

The obtained results indicate that the grouping of households relative to the poverty threshold determined by income is not very informative because the availability of credit payments often becomes such a heavy burden for the family that even “non-poor” families look extremely needy for their consumer characteristics. As for the “poor” families, those being beyond the physical survival, according to the results of the survey are assumed to have non-accountable sources of income.

4. Conclusion

The presented analysis of the relationship between borrowings of Russian families and their current consumer expenditures conducted on the basis of the Russia Longitudinal Monitoring survey, RLMS-HSE for 2015 made it possible to test a number of hypotheses about the behavior of households at the time of aggravation of the social and economic crisis. The entry into the phase of the macroeconomic crisis generates not only financial difficulties, but also leads to an increase in social tension, negative expectations that are realized in the mass refusal of lending, a sharp decline in the volume of credits given, while maintaining a high overall debt. The financial position of the household by the time it enters the crisis period has a significant impact on how it survives the challenging times of a general fall in real incomes. Savings will help to survive these times, and the burden of credits and loans, on the contrary, will exacerbate the difficulties of the crisis period. Consumer loans in Russia cover mainly middle- and low-income families who turn to credit borrowings, since they do not have savings to purchase durable goods. Any, even short-term, deterioration of their financial situation jeopardizes the possibility of regular current payments. And, judging by the presented results, many households find themselves unable to pay off their loan debts. Repayment of credit payments turns into rationing on food, medical treatment and other vital needs for an overwhelming number of households regardless of whether they are formally below the poverty line or not.

The analysis revealed a high level of inequality in consumer spending among all income groups of the population, although the contribution of the credit groups was not so high. This is due to the fact that there were many households that are paying the mortgage, car loans. These are, as a rule, financially stable households, their loans are of a long-term nature, and the crisis has not reduced their solvency. As for low-income borrowers, as a rule, their loans are short-term and their number is decreasing in the crisis period. In general, these two seemingly multidirectional trends resulted in the fact that the existence of credit in the household did not become a significant factor for inequality. An important result of the presented analysis is evidence that hidden income is especially common among households that pay credits. A relevant methodological task which requires further investigation is identification of sources and nature of these hidden incomes, which for low-income families can, assistance from relatives, temporary loans and in-kind forms of income that were not indicated in the survey.

Acknowledgments:

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