Once or Twice a Month? The Impact of Payment Frequency on Consumption Behavior*

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Abstract

We study how the number of payments within a month affects the consumption behavior of benefit recipients. In Finland, the payment dates of national pension benefits were based on the initial of the recipients' last name, whereas earnings-related pensions were paid at the beginning of the month. This generates as-good-as-random variation in payment dates and frequencies over the month, providing a unique setup to analyze the causal impact of payment frequency on consumption patterns. We find smoother consumption choices within a month for those with two monthly payments instead of just one. However, we find no impact on the consumption of unhealthy and addictive goods such as alcohol, tobacco and gambling.

Keywords: social benefits, consumption, consumption smoothing, present bias, self-control

JEL classification codes: D12, D91, E21, H55

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I. Introduction

Social benefits and cash transfer programs form the backbone of the welfare system in most developed countries, affecting the lives of millions of low-income individuals. For example, in Finland, income transfers paid to individuals are equivalent to roughly 20–25% of the GDP. Nevertheless, there is limited evidence of how these programs affect consumption behavior and welfare of the targeted individuals.

In particular, it is of key importance to know how, if in any way, benefit and cash transfer payments affect household consumption behavior. There is evidence from various contexts that individual decision-making is affected by behavioral factors such as self-control problems and present bias (Berneheim, DellaVigna and Laibson, 2018), suggesting that payment dates could induce behavioral effects among benefit recipients. In principle, the frequency of benefit payments is a choice that the policy maker can easily influence. This simple feature of the welfare system can thus affect both the timing and composition of consumption and the welfare of benefit recipients. Therefore, it is important to know whether payment dates induce behavioral consumption responses, and whether more smoothed payment schedules can actually help to alleviate these potential issues.

The traditional life-cycle/permanent-income hypothesis suggests that individuals are able to smooth their consumption between and across benefit payment dates. In other words, predictable changes in income should have no impact on consumption patterns (see e.g. Hall, 1978). However, recent empirical literature on benefit payments has clearly challenged this view by showing that spending and consumption of basic needs such as food tends to peak right after benefit payment dates (see e.g. Stephens, 2003; Shapiro 2005; Mastrobuoni and Weinberg, 2009;). This evidence implies that payment schedules can have a significant impact on the consumption behavior of benefit recipients.

In this paper, we utilize as-good-as-random variation in payment schedules to show how payment frequency affects spending choices of benefit recipients. In Finland, the payment dates of national pension benefits, one of the biggest cash transfer programs in Finland, was based on the initial of the recipients' last name:

those with their surname starting with A-K received their benefits on the 4th day of each month, and those with surnames starting with L-R on the 14th, and those with S-Ö on the 22nd. Earnings-related pensions were paid at the beginning of each month. Therefore, the first payment group (A-K) received most of their monthly incomes in the beginning of each month, while other groups received payments twice a month.

This unique setup enables a novel and convincing analysis on the causal impact of payment frequencies on spending patterns. We contribute to the literature by providing the first direct test on whether more smoothed payment schedules can actually lead to smoother consumption behavior among benefit recipients. Detailed consumption survey data combined with high-quality administrative data on social benefits and other earnings enable an analysis on the timing of spending as well as the composition of spending of basic needs such as food and medicine, and unhealthy and addictive products such as alcohol, tobacco and gambling. This evidence paints a picture of the broader impact of payment date frequencies on the welfare of benefit recipients, and provides applicable policy implications on the detailed design of benefit and cash transfer programs.

In our empirical analysis, we first show that the income receipts of the first payment group clearly concentrate on the beginning of each month. In contrast, for the other groups the payments are more dispersed over the month. In addition, we show that there is no selection into the payment groups other than the last name initial, as the benefit recipients in all groups are very similar in terms of received total benefits, income and other key characteristics.

We find that payment frequency affects consumption behavior. First, we find that monthly consumption of the first payment group is more concentrated on the beginning of the month. We find an average increase of 7–9% in daily consumption when comparing the periods right before and after benefit payments for this group, but not effects for those who received their income twice a month. However, we find no differences in the consumption of unhealthy and addictive goods such as alcohol, tobacco and gambling, and no differences in medical spending. These findings suggest that the payment schedule differences are not likely to have clear implications on health-related outcomes.

Our results add to the scarce literature examining the impact of benefit pay-

ment dates on expenditures. In a seminal study, Stephens (2003) shows that daily consumption on necessities such as food increases by 10–20% after pension benefit payments in the US. Relatedly, Shapiro (2005) and Mastrobuoni and Weinberg (2009) show evidence that benefit recipients consume as much as 30% less calories right before benefit payments than after them in the US. Furthermore, Aladangady et al. (2019) document that spending peaks for EITC recipients after they received this annual tax credit to their disposal. For other countries, Stephens and Unayama (2011) and Aguila et al. (2017) find that spending jumps right after benefit payments also in Japan and Mexico, respectively. In addition, our work relates to the growing literature studying food consumption levels and composition effects among those receiving food-purchasing assistance (see e.g. Hastings, Kessler and Shapiro 2018).[1]

In addition to consumption and spending responses, a few studies have analyzed the impact of payment dates on other outcomes. Foley (2011) finds that financially-motivated criminal activity increases in US cities over the course of the month due to the fact that benefit payments received in the beginning of the month are spent very quickly after they are received. Dobkin and Puller (2007) find that benefit payment dates are linked to dramatic increases in drug abuse, hospitalization and mortality among certain subgroups of benefit recipients in the US. Relatedly, Evans and Moore (2012) find evidence that mortality increases after benefits are paid.

We contribute to this literature in three important ways. First, we provide direct causal evidence of the impact of different payment schedules on spending patterns using as-good-as-random variation in the payment dates among similar benefit recipients. This setup enhances the credibility of the analysis in relation to the earlier literature that typically focuses on documenting spending peaks after payment dates among all benefit recipients. Also, we are able to more convincingly test whether two monthly payments instead of just one can actually lead to smoother consumption patters.

Second, we study consumption responses to payments in a welfare state con-

[1]Furthermore, Stephens (2006) shows that consumption peaks right after receiving the paycheck in the UK, and Berniell (2018) shows that those wage earners who received their wages in a more frequent manner have smoother consumption patterns in the US.

text. Previous literature comes mainly from the US where social insurance coverage and benefit levels are relatively low. It is not obvious that consumption would strongly respond to payment dates when the overall income levels of benefit recipients are higher. Indeed, we illustrate that more concentrated payment schedules have a smaller impact on daily consumption in Finland where the benefit levels are relatively large. Finally, we provide contradictory evidence that payment dates and payment frequency have no impact on the consumption of unhealthy and addictive goods (alcohol, tobacco, gambling), at least in the context of a European welfare state.

This paper proceeds as follows: Section II. presents the relevant institutions and the payment schedule system. Section III. presents and describes the data. Section IV. provides the empirical evidence, and Section V. concludes.

II. Finnish pension system and payment dates

In this paper, we focus on the consumption patterns of pension benefit recipients in Finland. The Finnish pension system consists of two main pillars: i) employment pensions (earnings-related pensions) that are accrued from mandatory pension contributions over the working history, and ii) national pensions that guarantee a minimum pension level for those with little or no employment history.

In many cases, low-income pensioners receive a combination of the two pension incomes.[2] In 2017, 94% of Finnish pensioners had earnings-related pension income and 39% had national pension income, and 33% of pensioners earned both types of pension income (Finnish Centre for Pensions, 2018).

Until 2013, national pensions were paid out on different dates of the month depending on the surname initial of the recipient. Individuals with surname initials between A–K, L–R and S–Ö were paid their national pension on the 4th, 14th and 22nd day of the month, respectively.[3] This procedure was established in order to

[2] In 2019, a pensioner earning less than 56 euros per month of employment pension income receives the full national pension (629 euros per month for singles and 558 euros per month if living with partner), after which national pension is reduced by 50 cents for each additional euro of employment pension income. This means that positive amounts of national pension are earned up until 1,150–1,300 euros per month of employment pension income.

[3] S–Ö includes S–Z, and the Scandinavian letters Å, Ä, and Ö. If the scheduled date falls on a

avoid overly high traffic in the Finnish banking system on one particular day. In 2013, the payment dates were harmonized and all national pension recipients were paid on the 7th day of the month. We exploit the old system in our analysis, as the surname initial grouping provides us exogenous and as-good-as random variation in the within-month timing of national pension payments, which we discuss in more detail below.

In contrast to national pensions, no such payment dispersion exists for employment pensions. They are managed and disbursed by pension insurance companies and public sector pension providers. Payment dates are not regulated, but majority of payments occur in the first days of the month, typically on the first banking day (see Table 1). As mentioned above, it is fairly typical for a low-income Finnish pensioner to have both national and employment pension income, and hence the national pension payment procedure based on surname initials provides exogenous variation in the frequency of pension payments within the month.

Because of the different payment dates of national pensions, pensioners who have both employment and national pension income have different pension income flows within the month. Those with surname initials between L–R and S-Ö received pension income twice a month: their contributed pension were be paid at the beginning of the month (first banking day) and national pension on the 14th or 22nd of the month, respectively. Those with surname initials between A–K received all their pension income at the beginning of the month: contributed pension income on the first banking day and national pension on the 4th day of the month. In addition, pensioners who only have contributed pension income or only national pension income received pension income once a month.[4] Other social benefits can also be paid at different times of the month. Many benefits by the SII have been paid on the same date as national pensions and hence been dispersed based on surnames.[5]

weekend or banking holiday, pensions were paid on the previous banking day.

[4]Note that pensioners who have worked for the state and earned a contributed pension from there form an exception, as their payment date is the 20th of the month. These pensioners could either have a single pension payment around the middle of the month (14th–20th–22nd), or, if they have other contributed pension income, or also national pension income and surname initials between A–K they would receive income twice a month (beginning of month and 20th). However, majority of the pension payments are not state contributed pensions.

[5]These include survivors' benefits (a pension benefit on the event of a parent or partner deceas-

In the next section, we illustrate that the initial-based pension payments provide compelling exogenous variation to study the impact of payment date frequency on spending patterns. In our analysis, we focus on benefit recipients who are likely to receive a large part of their total income in the form of national and employment pensions, for whom which we encounter variation in the monthly payment schedule (payment once or twice a month). In addition, pensioners can have other benefit income as well as earnings paid on different dates of the month, but these are likely to form a smaller share of their total income, and are also paid similarly to all recipients regardless of their surname (on average).

III. Data and descriptive statistics

In order to study consumption patterns, we use the Household Budget Survey (HBS) carried out by Statistics Finland. The HBS includes detailed consumption data over a two-week calendar period at the household level. First, the participating households are interviewed by phone or in person, after which they keep an expenditure diary and collect all their purchase receipts during a two-week survey period, both of which are submitted to Statistics Finland. The data set provides information on aggregate consumption expenditure over the two-week period across over 900 consumption categories (based on the COICOP-standard).

In a study such as ours, purchases of non-durable goods such as food are of particular interest, as these can be more directly linked with actual consumption within the two-week survey period. In our analysis, we study the impact of payment frequency on consumption using three baseline consumption measures: total spending, non-durable spending and instant consumption. Total consumption includes the items reported within the two-week calendar period. In addition,

ing), child supplement (for pensioners with under 16-year-old children), front-veterans' supplement and veterans' disability supplement, disability allowances, pensioners' care allowance and pensioners' housing benefit. Pensioners' housing benefit payment date was harmonized to the 4th of each month for all recipients in 2007. SII's guarantee pensions (a benefit for lowest-income pensioners) have been paid on the 22nd of the month since their introduction in 2011. Other benefits, such as housing benefit and student allowance, have their particular payment dates that do not depend on the recipient's surname. Some benefits, such as unemployment and sickness allowance, do not have fixed payment dates but are paid at fixed intervals based on when the entitlement to the benefit has started.

the HBS measures larger purchases of durable goods, such as cars and furniture, and regular costs such as housing costs by asking the households to report their annual spending in these categories. Thus, we are unable to link these spending categories to the payment dates in a meaningful manner, and therefore we excluded them from the analysis. Non-durable spending includes items that are more clearly consumed within a short time period, excluding items such as small household appliances and equipment from total spending. Finally, instant consumption includes only food, drink, fuel, travel and culture spending within the two-week period.

We use 9 rounds of the survey between 1985–2012, which together include 32,413 unique households, of which 12,392 are pensioner households.[6] Most pensioner households (70%) included in the HBS received both national and contributed pension payments: 11% of pensioner households had only national pension, and 19% only earnings-related pension income.

We link surname initial information from the Population Registers, detailed administrative data on national pensions and other benefits paid by the Finnish Social Insurance Institution (SII) and administrative income tax data to the HBS survey data. Based on the surname initials and SII disbursement rules, we know the date when each benefit paid by the SII is disbursed. This allows us to estimate how large a share of total income the pensioners received on each payment date.

In our analysis, we focus on households that received both employment and national pension income, and where each family member belongs in the same payment date category (i.e. all surnames within the same grouping A–K, L–R, or S–Ö), giving us a baseline sample of 7,665 pensioner households. Based on surname initials and household pension income composition, 39% of households in this sample received pension payments only in the beginning of the month, and 61% two times a month.

Furthermore, the as-good-as-random variation stemming from surname initials implies that the three payment groups are otherwise very similar to each other in all key characteristics, as can be expected. Table 2 shows that there are no

[6]The surveys were conducted in 1985, 1990, 1994, 1995, 1996, 1998, 2001, 2006, and 2012. Sample sizes vary between 2,000-8,000 households per round. The older HBS survey rounds are slightly larger in sample size compared to the most recent rounds.

significant differences in key characteristics between the groups. All groups have similar amounts of pension income – around 430 euros per month of national pension and 1,280 euros per month of employment pension. Furthermore, as we focus on households receiving pension benefits, the average household heads are relatively old (mean 65 years), and there are typically no children living in these households. In addition, Table 3 illustrates that there are no temporal differences in the distribution of surnames, either over survey years or over the monthly distributions of survey periods. As a further illustration of the suitability of the variation, the three most common surnames in Finland (Korhonen, Mäkinen, Virtanen) belong to different surname initial groups.

Figure 1 illustrates the typical differences between the payment receipts of the three groups. All households received approximately 60% of their total income in the form of pension payments (approximately one-third of the pension payments being national pensions). For the initial group A–K, this income flow is concentrated at the beginning of the month. For the other two groups, income flows are more dispersed across the month. Notice also that the actual temporal distance between the two payments for the A –K group is often even shorter than what is depicted in the figure. This is because weekends and holidays push the first payment forward in time and national pensions backward in time.[7]

IV. Results

A. Spending paths within the month

Estimation.

Instead of analyzing spending patterns between payments, we model within-month spending paths for all three surname-initial groups. This allows us to examine potential differences in the within-month spending patterns between the three groups facing different payment schedules. We first pool daily consumption into three time periods following the payment dates of national pensions. The first period

[7] As an example, imagine that the first-of-the month is a Thursday or a Saturday. In these cases, employment pensions (paid in the first banking day) and national pensions (paid on the 4th and earlier if it is a weekend/holiday) are paid in two consecutive days for the A –K initial group.

includes consumption between the 4th (first payment date) and 14th (second payment date) of the month, the second 14th to 22nd (third payment date), and the third from 22nd to 4th of the month.

Taking into account the two-week measurement period in the consumption survey data, we estimate the following equation:

$$c_{i,T} = \beta_1 D_i^{4to13} + \beta_2 D_i^{14to21} + \beta_3 D_i^{22to3} + \varepsilon_i, \tag{1}$$

where the left-hand side variable denotes the 14 days spending period observed in the data. The right-hand side variables D denote the counts of the diary days that fall within each of the three spending periods. For example, the first term D_i^{4to13} is the count of days within the 14-day survey period that fall between the first payment date (4th) and the second payment date (14th). If the survey period would be, for example, between 6th–19th of the month, then $D_i^{4to13} = 8$, $D_i^{14to21} = 6$, $D_i^{22to3} = 0$. Therefore, parameter β_i delivers us an estimate for the average impact of an additional day within the survey periods which falls into the specific time window, translating into average daily consumption within the period. Finally, in order to study the differences between the three surname-initial groups, the right-hand side variables are interacted with group indicators.

In order to identify a causal impact of payment frequencies on spending behavior, there can be no selection on survey start dates over time or based on surname initials. Overall, in a given survey year, there are 28 consecutive two-week survey periods, which typically start in mid-January. Figure 2 shows that survey period start days are smoothly distributed both across the surname groups and over the course of the month, allowing us to identify the impact of payment dates on average daily consumption within a month.

Monthly spending paths.

The results for total spending, non-durable spending and instant spending are illustrated in Figures 3–5. The figure underlines that there are noticeable differences in spending patterns between the payment groups. Those households who received a large share of their income in the beginning of the month increased their spending after this payment, and decreased their spending towards the end

of the month. This spending difference between the beginning of the month and the end of the month is equivalent to approximately 7–9% of daily consumption relative to the mean, and statistically significant at the 10% level. In contrast, no such distinctive spending effects are observable for the other two groups who received their income in a more dispersed manner over the month, and the differences in spending periods are not significant for these two groups. Overall, this patter is similar in all three spending categories, but more pronounced both economically and statistically when analyzing total spending. Finally, Table 4 shows the associated regression estimates and standard errors.[8]

Heterogeneity.

In order to study potential heterogeneity behind our baseline results, Figure 6 shows the monthly spending paths and Table 5 the associated regression estimates for non-durable spending for three subgroups of households. First, graph (a) shows the results for households where a larger majority (>75%) of total gross income comes from pension income (national pension and earnings-related pension). This subgroup is more heavily affected by the differences in payment schedules compared to the average household (pension share of 60%), as the potential impacts of other income sources on spending patterns are likely to be less relevant for them. Indeed, compared to Figure 4 above, we find a more pronounced spending increase after the 4th of the month for those pensioners who received their pension income between the 1st and 4th of the month (15% vs. 8% increase in daily spending relative to the mean). However, the variance of spending increases as the sample size is reduced, which is visible from the more scattered spending estimates for the other two payment groups. Therefore, we are not able to draw very strong conclusions for this subgroup.

Second, graphs (b) and (c) show the spending patterns for single households and households with at least two adults. The graphs illustrate that the average effect mostly stems from couples instead of single households. However, due

[8]We have also estimated linear spending models where we regress the linear spending paths after payment dates. Similarly to the results discussed above, we find larger reductions in spending further away from the payment dates of national pension for the first payment group, but no significant responses for the other groups who received their pension income twice a month.

to the relatively small overall sample size, we have no straightforward approach to analyze the underlying sources of this difference in greater detail. Nevertheless, this difference could stem from at least two sources. First, it could be that single households are more able or prone to plan and smooth their consumption more carefully within the month, compared to households with two adults making spending decision. Second, this finding could stem from gender differences in responding to payment dates, as single households in our sample mostly comprise of women (73%). Therefore, the differential spending response could be potentially related to the fact that women are typically observed to be more risk averse and less overconfident than men (Croson and Gneezy, 2009), which could result in more careful household budgeting and spending plans.

B. Composition of spending

In addition to overall spending paths, the frequency of payments could affect the composition of spending. Earlier evidence from the US shows that payment dates of social benefits are linked to increases in severe health-related outcomes such as increased drug abuse and mortality (Dobkin and Puller 2007; Evans and Moore 2012). To study this issue, we utilize detailed spending categories of the HBS and our surname initial-based variation to provide novel causal evidence of how both the overall level and monthly patterns of spending on unhealthy and addictive goods, such as alcohol, tobacco and gambling, are affected by differences in payment schedules.

First, Figure 7 shows the results when we estimate equation (1) by replacing the level of consumption as the left-hand side variable with the share of consumption on alcohol and tobacco. This allows to analyze whether households spend a larger share on alcohol and tobacco right after the payment dates. The figure shows that there are no meaningful differences in consumption shares on different times of the month for any of the payment groups. The results allow us to rule out larger than 0.1 percentage-point changes in the relative share of alcohol and tobacco spending between the time periods for each payment group.

Figure 8 shows the overall spending shares on alcohol, tobacco, gambling and medicine for the three payment groups. Overall, there no significant differences

in spending on these categories between the payment groups. This suggests that a more concentrated payment schedule does not appear to induce an (observed) increase in the consumption of unhealthy and addictive goods. Furthermore, payment dates do not appear to affect medicine expenditure either, suggesting that an increase in spending right after benefit payments for the first group is not linked to a reduction in the overall consumption on necessities. This could incur if there would be no money left to purchase necessities after an excessive spending period in the beginning of the month.

Nevertheless, the results on unhealthy and addictive goods need to interpreted with at least some caution, as it is likely that the Household Budget Survey does not sufficiently cover households with more severe addictions or alcoholism. Also, it could be that households underreport their spending on unhealthy goods in the survey. However, it is unlikely that there would be reporting differences for households with different surname initials, therefore allowing us to still detect any potential causal differences in *observed* spending between the payment groups.

V. Discussion

Using convincing and transparent causal variation in benefit payment schedules, we study how the frequency of payments affects the consumption behavior of benefit recipients in Finland. We find more concentrated consumption for those who received most of their income once in the beginning of the month, compared to those who received their incomes twice a month. This result supports the notion that splitting payments within the month could lead to a smoother consumption pattern. However, we find no effects on spending on unhealthy and addictive goods or medicine, suggesting that more concentrated payment schedules do not induce direct health implications, at least for the majority of pension benefit recipients.

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Figures

Figure 1: Monthly pension income flows of different surname initial groups by day of the month

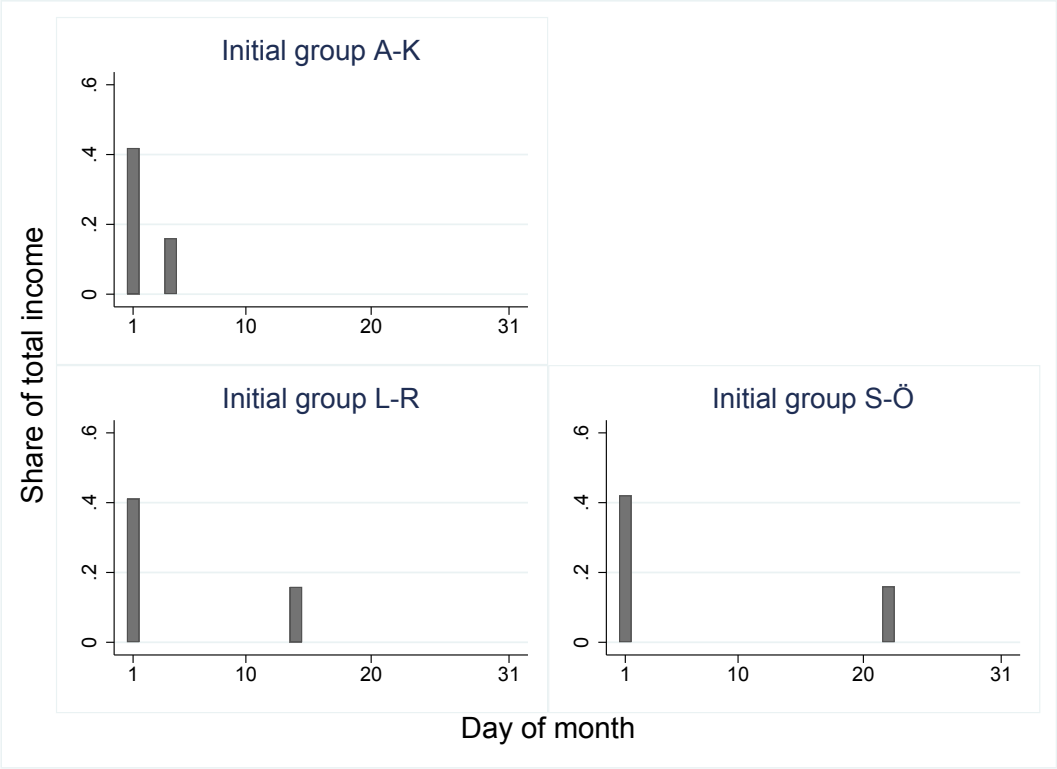


Figure 2: Consumption survey period start dates in the pensioner sample by the surname group

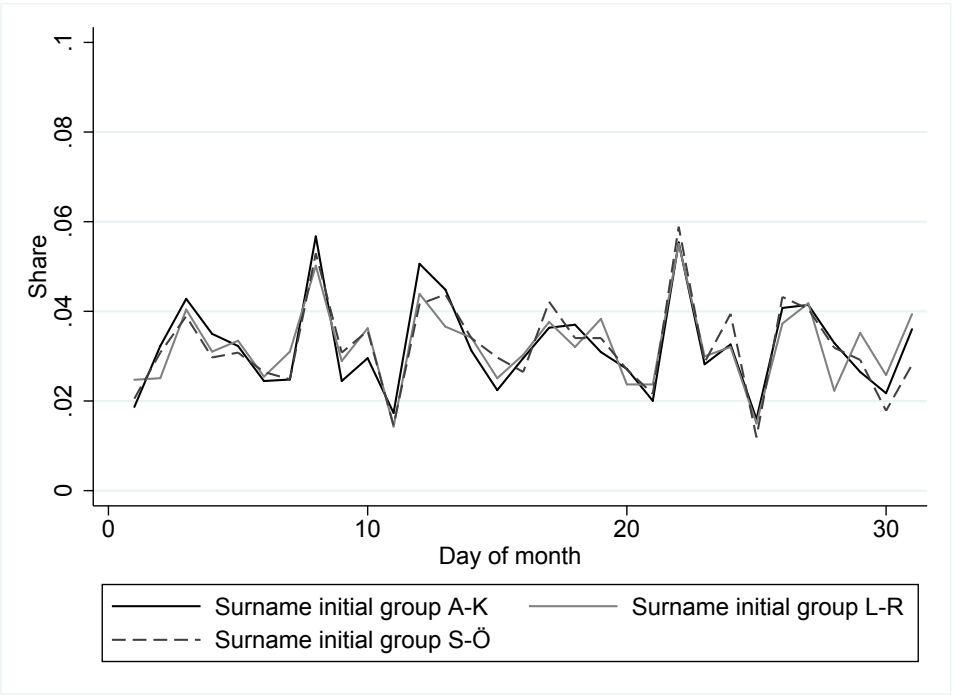
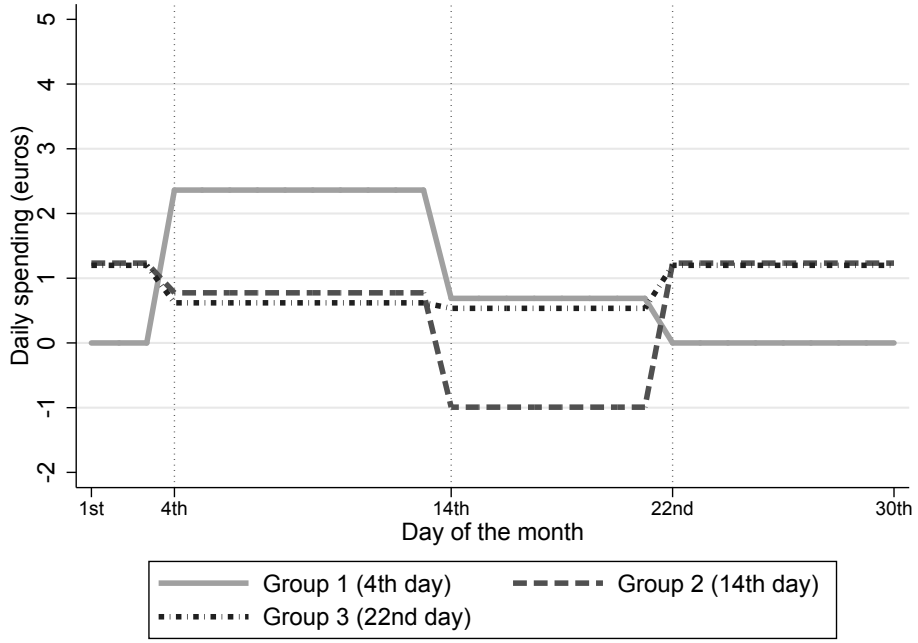
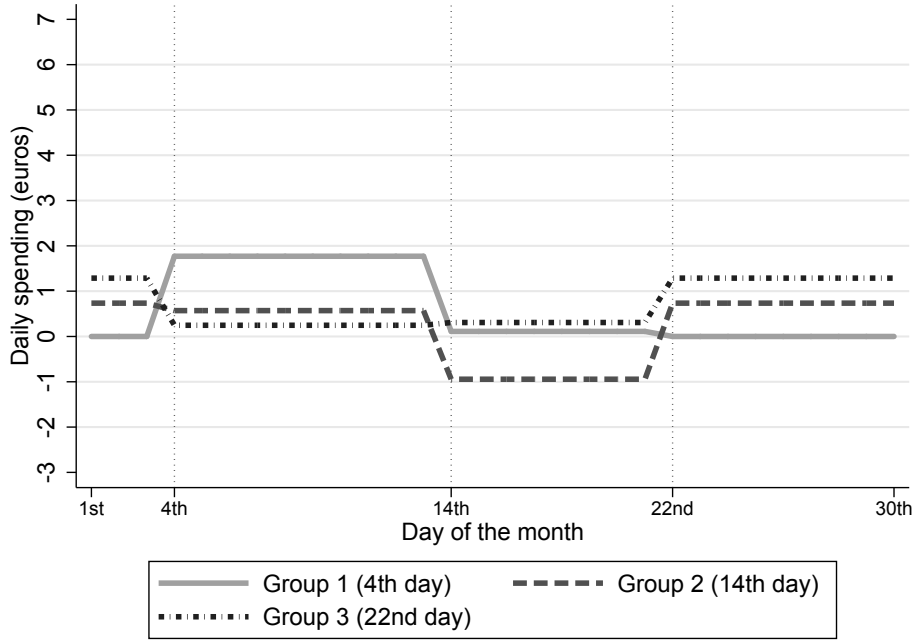


Figure 3: Within-month total spending (euros per day) patterns for three payment groups



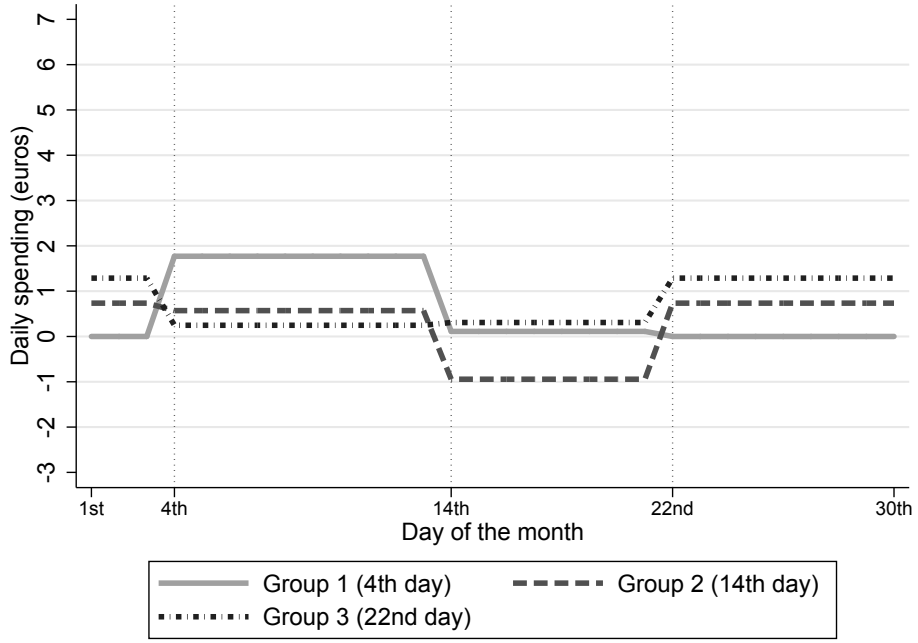
Notes: This figure plots the regression estimates from equation (1) for total spending for the three surname initial groups. The figure denotes daily spending relative to the third period consumption of group 1 (22nd-3rd), which is set to 0. Average daily total spending in the esimation sample: 27 euros.

Figure 4: Within-month non-durable spending (euros per day) patterns for three payment groups



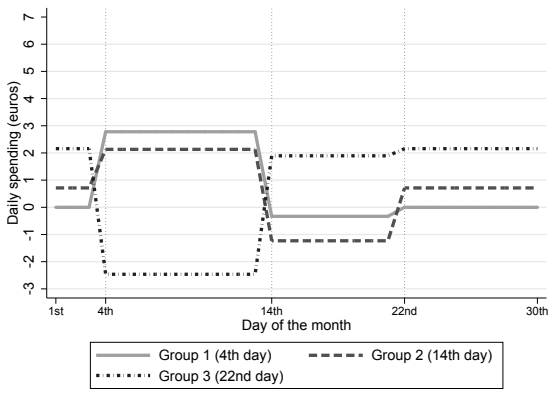
Notes: This figure plots the regression estimates from equation (1) for non-durable spending for the three surname initial groups. The figure denotes daily spending in relation to the third period consumption of group 1 (22nd-3rd), which is set to 0. Average daily non-durable spending in the esimation sample: 23.50 euros.

Figure 5: Within-month instant spending (euros per day) patterns for three payment groups

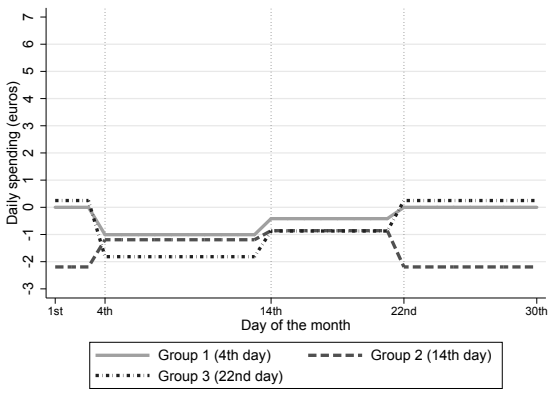


Notes: This figure plots the regression estimates from equation (1) for instant spending for the three surname initial groups. The figure denotes daily spending in relation to the third period consumption of group 1 (22nd-3rd), which is set to 0. Average daily instant spending in the esimation sample: 17.70 euros.

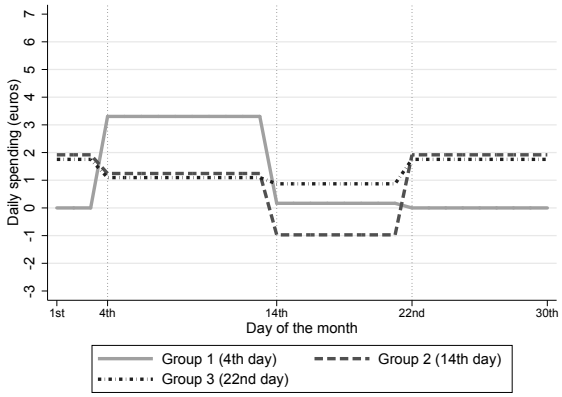
Figure 6: Heterogeneity in within-month spending patters



(a) Large share of pensions (>75%)



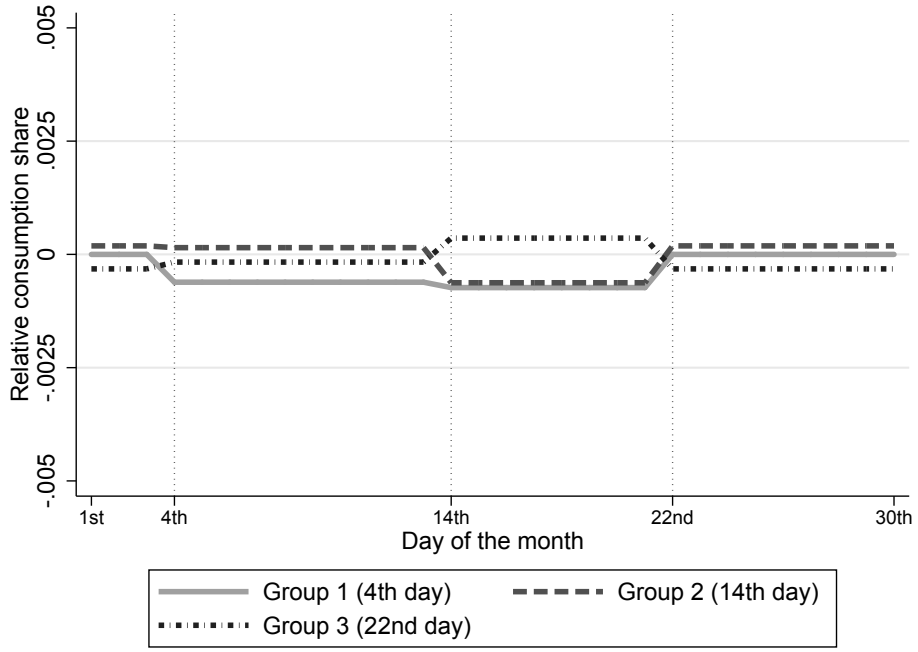
(b) Single households



(c) Households with two adults

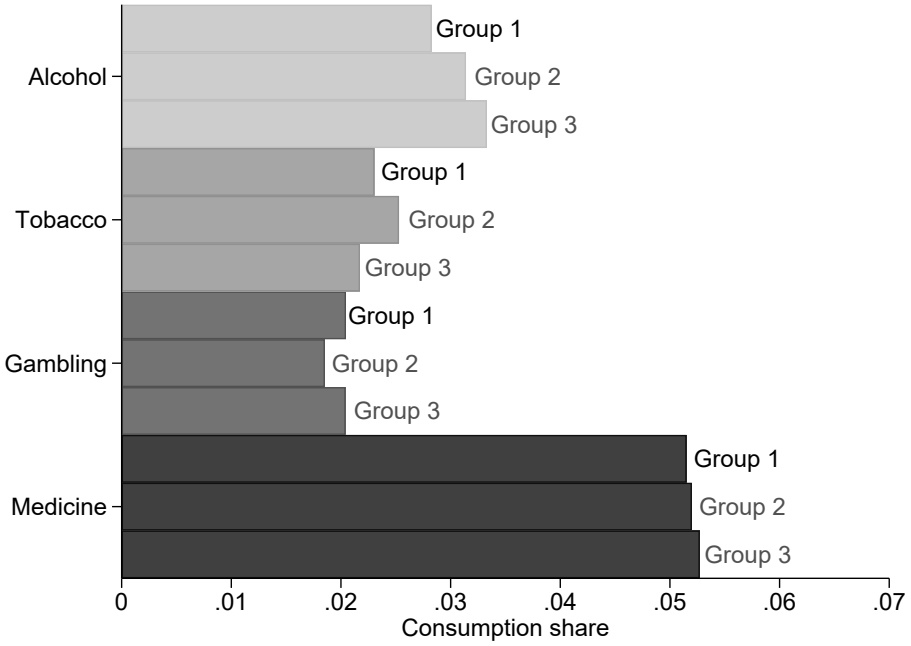
Notes: This figure plots the regression estimates from equation (1) for non-durable spending for the three surname initial groups for three subgroups: a) those with share of pension income > 75%, b) single-adult households c) households with two adults. Each graph denotes daily spending relative to the third period consumption of group 1 (22nd-3rd), which is set to 0. Average daily spending for the groups are 18, 13 and 24.50 euros, respectively.

Figure 7: Consumption shares on alcohol and tobacco



Notes: This figure plots the regression estimates from equation (1) for the share of spending on alcohol and tobacco for the three surname initial groups. The figure denotes consumption share in relation to the third period of group 1 (22nd-3rd), which is set to 0. Average spending share on tobacco and alcohol is 5.4%.

Figure 8: Consumption shares on alcohol, tobacco, gambling and medicine



Notes: This table shows the spending shares on alcohol, tobacco, gambling and medicine for the three surname initial groups. There are no statistical differences in the consumption shares between the groups.

Tables

Table 1: Finnish pension providers and pension payment dates

Employment pension providers	**payment date**
Church pension fund	first banking day of month
Eläke-Fennia	first banking day of month
Eläke-Tapiola	first banking day of month
Etera	first banking day of month
Ilmarinen	first banking day of month
Keva[(a)]	third day of month[(c)]
Mela	second banking day of month
Pensions Alandia	first banking day of month
Sea farers' pension fund	last banking day of month
SII pension fund[(b)]	first banking day of month
State pension fund	20th day of month[(c)]
Varma	first banking day of month
National pension provided by SII:	
Surname initial	**payment date**
A–K	4th day of month[(c)]
L–R	14th day of month[(c)]
S–Ö	22nd day of month[(c)]

[(a)] Keva is the local government pension provider. In the 2010s, it started managing the pension disbursement of former state employees (2011), church employees (2012) and SII employees (2012). The payment dates are the same under Keva as they were previously under the original institutions.

[(b)] This refers to SII's employees' earnings-related pensions, not the national pension benefits we use in our analysis.

[(c)] If a specific payment date falls on a weekend or a banking holiday, pensions are paid on the previous banking day.

Table 2: Descriptive statistics of the surname initial groups.

	(1) A–K	(2) L–R	(3) S–Ö	p-values (1)vs.(2)	p-values (1)vs.(3)
Income					
National pension, monthly	429	435	426	0.42	0.78
Other pensions, monthly	1,284	1,261	1,285	0.40	0.97
Equivalent gross income, monthly	1,960	1,979	1,987	0.52	0.36
Household type					
Female-headed household	0.40	0.39	0.39	0.44	0.41
Age of household head	65.2	64.8	65.7	0.22	0.20
Single adult, no children	0.29	0.28	0.29	0.39	0.89
Two adults, no children	0.47	0.46	0.49	0.30	0.29
Single adult, with children	0.02	0.03	0.03	0.23	0.67
Two adults, with children	0.09	0.10	0.09	0.50	0.87
Other	0.12	0.13	0.10	0.12	0.12
Housing type					
Own house	0.54	0.54	0.52	0.83	0.16
Own apartment	0.27	0.28	0.31	0.34	0.01
Rented	0.17	0.16	0.16	0.12	0.18
Other	0.01	0.01	0.01	0.86	0.89
Consumption					
Household spending, 14 days	380	379	374	0.92	0.44
Non-durable spending, 14 days	329	329	326	0.98	0.66
N	2,944	2,870	1,851		

Notes: Pooled sample from HBS rounds in 1985–2012. All variables are presented at the household level. Monetary amounts in 2016 euros.

Table 3: Descriptive statistics of the surname initial groups (continued).

	A–K	L–R	S–Ö
Year:			
1985	0.19	0.17	0.18
1986	0.01	0.01	0.01
1990	0.22	0.22	0.21
1991	0.02	0.02	0.02
1994	0.06	0.06	0.06
1995	0.06	0.07	0.06
1996	0.06	0.06	0.07
1997	0.00	0.00	0.00
1998	0.11	0.12	0.12
1999	0.00	0.00	0.00
2001	0.09	0.09	0.08
2002	0.03	0.02	0.03
2006	0.08	0.07	0.07
2007	0.01	0.01	0.01
2012	0.07	0.07	0.08
2013	0.00	0.00	0.00
Month:			
Jan	0.10	0.09	0.10
Feb	0.09	0.09	0.10
Mar	0.08	0.09	0.09
Apr	0.08	0.08	0.08
May	0.09	0.09	0.09
Jun	0.07	0.07	0.07
Jul	0.07	0.07	0.06
Aug	0.09	0.09	0.09
Sept	0.08	0.08	0.08
Oct	0.09	0.08	0.08
Nov	0.08	0.09	0.09
Dec	0.09	0.08	0.08
N	2,944	2,870	1,851

Notes: The table displays the year and month of the date when the two-week consumption survey was started. We use survey rounds of 1985, 1990, 1994, 1995, 1996, 1998, 2001, 2006, and 2012, but the diary periods of each round are typically distributed from January of year y to January of year $y+1$.

Table 4: Regression estimates: within-month total spending, non-durables and instant spending

	Total spending		Non-durable		Instant	
β_{A-K}^{4to13}	**2.36**	**(1.14)****	**1.77**	**(0.93)***	**1.16**	**(0.67)***
β_{L-R}^{4to13}	0.77	(0.94)	0.57	(0.82)	0.52	(0.55)
$\beta_{S-\ddot{O}}^{4to13}$	0.62	(1.16)	0.25	(1.02)	0.07	(0.70)
β_{A-K}^{14to21}	0.69	(1.25)	0.11	(1.05)	-0.02	(0.74)
β_{L-R}^{14to21}	-0.99	(1.13)	-0.94	(0.99)	-0.49	(0.63)
$\beta_{S-\ddot{O}}^{14to21}$	0.53	(1.36)	0.31	(1.18)	-0.23	(0.77)
β_{L-R}^{22to3}	1.23	(0.88)	0.73	(0.78)	0.18	(0.52)
$\beta_{S-\ddot{O}}^{22to3}$	1.20	(0.98)	1.29	(0.87)	0.94	(0.57)*
	N=7,665		N=7,665		N=7,655	

Robust standard errors in parentheses. Control variables: Household head gender, household head age, age (third polynomial), household type dummies (17), housing tenure dummies (6), year dummies, and month dummies. (*) denotes significance at 10% level, (**) at 5% level and (***) at 1% level.

Table 5: Regression estimates for different subgroups

	Pens. share>75%		Singles		Couples	
β_{A-K}^{4to13}	**2.78**	**(1.21)****	**-1.01**	**(1.30)**	**3.30**	**(1.24)*****
β_{L-R}^{4to13}	2.13	(1.13)*	-1.19	(0.96)	1.24	(1.10)
$\beta_{S-\ddot{O}}^{4to13}$	-2.46	(1.40)*	-1.82	(1.32)	1.09	(1.34)
β_{A-K}^{14to21}	-0.33	(1.42)	-0.41	(1.36)	0.16	(1.42)
β_{L-R}^{14to21}	-1.23	(1.36)	-0.86	(1.10)	-0.97	(1.34)
$\beta_{S-\ddot{O}}^{14to21}$	1.89	(1.71)	-0.87	(1.70)	0.87	(1.51)
β_{L-R}^{22to3}	0.71	(1.15)	-2.19	(0.92)**	1.91	(1.02)*
$\beta_{S-\ddot{O}}^{22to3}$	2.16	(1.35)	0.25	(1.05)	1.75	(1.16)
	N=2,330		N=2,407		N=5,433	

Regression results on non-durable consumption for three subgroups: i) pension income share >75% of total gross income, ii) single households, iii) households with at least two adults. Robust standard errors in parentheses. Control variables: Household head gender, household head age, age (third polynomial), household type dummies (17), housing tenure dummies (6), year dummies, and month dummies. (*) denotes significance at 10% level, (**) at 5% level and (***) at 1% level.