The Mystery of Spending on Celebrations

The Case of Kyrgyzstan

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Abstract

Luxury spending in connection with festivals has been evidenced as a puzzle in the context of developing countries, and the motivation behind this behavior is still not fully understood. This paper tests three main hypotheses: peer effect, status seeking and risk pooling, to account for the celebration spending of families in Kyrgyzstan using the Life in Kyrgyzstan (LiK) dataset. A first contribution of this paper is to provide statistics comparable at an international level for a country which does not receive much academic attention. I describe here the basic characteristics of families and their subjective evaluations regarding festival spending, both own and of neighbors. The main focus of the analysis is on the determinants of celebration spending between 2011 and 2013 using a panel regression framework. I find evidence that celebration spending is heavily influenced by peers within neighborhoods, while the effect of status seeking and risk pooling are relatively small. Furthermore I find support for a marriage-market investment hypothesis, however not related to unmarried children in the household, as previously identified in the literature. In my data, it is the experience of divorce that increases the level of celebration spending at both the family and the community level.

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1 Introduction

When seeking to understand the behavior of individuals in reality, economic logic is sometimes not sufficient to conduct meaningful analysis. Pattern of spending is one such outlier. It has been recognized that families with limited resources often do not spend enough on nutrition and medical care, and this leads to further health risks (Subramanian and Deaton (1996); Marmot (2005)).

So the question arises, what is the nature of consumption? Banerjee and Duflo (2007) describe a snapshot of people living under extreme poverty. Beyond their relatively high consumption of non-food items including alcohol and tobacco, one interesting observation is their high level of consumption on festival celebrations. An earlier study by Rao (2001) depicts a celebration event in an Indian village for Mariamma's festival. During the festival, everyone in the village was wearing their best clothes. Flowers, paper, and balloons were used in festive decorations. Film songs were transmitted through two loudspeakers. When the procession began, musicians played aboriginal music and a bullock cart carrying an image of the goddess Marriamma was pulled by two large colorfully decorated bulls. Two priests tended the image, reciting prayers. The author finds that the average family in this village spends 15 percent of its annual income on festivals, both in the form of contributions to the Temple Committee and on private goods such as special clothes and food for the events. In fact, money spent on festivals is the single largest regularly scheduled expenditure made by these households. The only other events that cost more are weddings, but weddings occur two or three times in the lifetime of a household head while festivals occur every few months.

The reason why these people spend so much on celebrations is still unclear. Is it possible to understand extravagant and expensive celebrations as rational behavior? The paper tries to test three hypotheses on the motivation of celebrations based on existing studies with new measurements. Compared to Rao (2001) and Chen et al. (2012), the family perspective, the involvement of subject perceptions and the variety of risks are new features. The dataset was collected in Kyrgyzstan, a country which has not received much attention. Therefore, this study would also contribute to other studies in Kyrgyzstan and Central Asia. Above all, however, it is based on a nationally representative sample rather than data collected in a few case study villages. As such it can both test hypotheses generated by previous work and add a number of dimensions to earlier work.

The next section provides a review on impacts of public celebrations, the definition and measurement of social capital, and the motivation behind celebrations. There is also one subsection presenting possible innovations of this paper. Section 3 introduces a general background of celebrations in Kyrgyzstan and the dataset used in the paper. Section 4 presents some descriptive statistics of sampled families. Section 5 provides hypotheses to be tested, model specification, and estimation results using panel regression models. Section 6 concludes the paper, discussing limitations and potential extensions.

2 Literature Review

2.1 Studies on Impacts of Large Festivals or Events

A good start to examine the effect of private celebrations could be studies related to public celebrations observed on a larger scale. Festivals represent some of the most important days for people throughout the year, and they are also important topics for discussion by scholars as well. However, according to Getz (2010), there is no widely accepted definition of festivals, and "the term is often misapplied and commercialized."

While earlier studies on festivals have been mainly undertaken from the perspective of tourism and event management, in recent years interdisciplinary studies have become popular in this field. Festivals may have comprehensive impacts, including economic impacts, social and cultural impacts, personal impacts, environmental impacts, etc.

For economic impacts, this is the most welcomed effects of festivals. Festivals bring economic opportunities to local businesses and tax revenues for governments. Several studies have described these effects. Turco (1995) describes that the sponsorship from a government in an international festival can lead to a win-win situation for both the local business and the government. A later study conducted by Brown et al. (2002) described an input-output analysis of one music festival in Brazos County in the United States. They find that a single event generates $892,981 in total sales output, $324,942 (in 1998 US dollars) in personal income, and the equivalent of 21.8 jobs.

Although economic impacts are important, the focus here are impacts from social and cultural perspectives, which can be more varied reflecting the differences in communities. While earlier research on social impacts date back to the early 1970s, the systematic and theoretical framework of the analysis has only emerged in the last twenty years. Small et al. (2005) provided a six-step framework to evaluate the social impact of festivals and events based on subjective ratings from local residents. They also tested their framework in the setting of community-based festivals in Western Australia and Victoria, using factor analysis. Their research identified six dimensions of social impact, namely inconvenience, community identity and cohesion, personal frustration, entertainment and socialization opportunities, community growth and development, and behavioral consequences. The measurement of these impacts is relatively broad for one "mega event" within communities. More recently, Deery and Jago (2010) provided an overview of previous studies focusing on the negative impact of events (which they called "anti-social behaviors"). These anti-social behaviors include drunken, rowdy and potentially life and property threatening behavior.

2.2   Social Capital

It is hard to provide a universal definition of social capital, although it has become a well-discussed topic in recent years. The term "social capital" was previously a more familiar idea among sociologists than economists. Portes (1998) reviewed previous discussions of social capital from the sociological perspective and found that there is a growing consensus that "social capital stands for the ability of actors to secure benefits by virtue of membership in social networks or other social structures." Keeley (2007) defines social capital as "networks together with shared norms, values and understandings that facilitate cooperation within or among groups." There are several types of social capital based on functions and related agents.

In families with low income, the impact of a proper level of social capital seems to be particularly significant. As a result, social capital is sometimes regarded as "the capital of the poor." In terms of social capital at the community level, Saegert et al. (2002) separated the term into three layers: Bonding social capital within communities, bridging social capital among different communities, and the rela-

tionship with financial and public institutions. People can obtain emotional and instrumental support from their investment on social capital, especially bonding capital. In this book, the authors also mentioned advantages and disadvantages to promoting bonding capital. While individuals can benefit from increasing level of interaction between those who know each other well, they may lose the opportunity to build new connections with someone not in the existing network.

The influence of "social capital" can be considered at the macro, meso, and micro levels. At the macro level, social capital includes institutions and regulations settled by governments and other authorities. At the level of communities, families and individuals can be more useful in policy design for well-being improvements. One partial explanation why communities are regarded as the primary units of analysis is found in Woolcock and Narayan (2000). While Woolcock and Narayan (2000) defined social capital as "norms and networks that enable people to act collectively", they also allowed for the fact that social capital can be appropriated by individuals and households. The effect of the state appears mainly in the structuring process of the community.

As for the measurement of social capital, the main difficulty lies in the reliability of data since the extent of relations like social trusts and memberships are mainly based on subjective and post-event evaluations. To avoid severe biases, more indicators are needed to give a more accurate picture. In the Social Capital Implementation Framework (SCIF), the World Bank tries to classify the data into five dimensions: groups and networks, trust, collective actions, social inclusion, and information and communication.[1]While there is no clear solution regarding these measurements, the framework goes one step further and is generally followed by several projects. Narayan and Cassidy (2001) set up a similar framework measuring social capital at the community level. Their framework divides social capital into seven categories: group characteristics, generalized norms, togetherness, everyday sociability, neighborhood connections, volunteerism, and trust.

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[1]More information about World Bank's efforts on measuring social capital can be found at World Bank (2011).

2.3 Intrinsic Motivations for Social Investment

To understand the motivation behind social investments, one recent article by Chen et al. (2012) pointed out three types of motivations for private returns on social investment, using gift spending as their variable of interest. Firstly, the level of consumption on gifts is affected by peer effects, which means the consumption level of one household depended on the consumption of its neighbors. An earlier study by Brown et al. (2011) divided peer effects into two categories: One is that socially observable spending is motivated by status concerns (which is included in the second motivation by Chen et al. (2012)), and the other is a type of herding behavior.

Secondly, as described by Chen et al. (2012) the desire for status seeking also has a significant effect. As a result, the spending level of one family will match the spending level of others to show the family is at least not inferior. This idea is not a new one, and originates from Veblen (1899). Veblen commented that individuals need to satisfy their desire for social recognition by showing their economic status to others, and "conspicuous consumption" is among the variants. One recent empirical study by Charles et al. (2009) tested the hypothesis using U.S. data and found that relative income characteristics within reference groups can explain most racial differences of visible consumption. However, there is also an interesting research by Jin et al. (2011) that emphasized the effect of savings on social status using another Chinese dataset.

Thirdly, poor families with sons are more likely to spend relatively more than their rich counterparts, which has been illustrated in terms of marriage story. The hypothesis that ceremonies hosted by the household represent good chances for unmarried young people to find their ideal partner and has been illustrated in other articles. An earlier study conducted by Rao (2001) also examined the marriage hypothesis using cases from Indian villages. Nevertheless, the instrument used in this paper was the number of unmarried girls, which is from another angle of the marriage story. Moreover, Gertler et al. (2006) tested the role of the family and community in helping individuals to overcome unexpected negative shocks in the health of their family members. Although they used a rich set of indicators of social capital, they found little support that social capital is the capital of the poor.

Finally, they find little support that social capital is effective in helping the poor

for risk pooling. The idea of risk pooling or risk sharing has been tested in other studies. One of the earliest papers by Ben-Porath (1980) argued that the investment of resources specific to a relationship between identified parties can save transaction costs and boost the trade volume in family dealings. Later studies, including Udry (1994), transferred their focuses to the credit market and private monetary transfers. The study emphasized the role of informal loans through private networks in the case of North Nigeria and sets up a theoretical model to explain how families overcome income shocks. Fafchamps (1999) took the work of Udry (1994) forward and developed a quasi-credit model. The model was applied in Fafchamps and Lund (2003) in rural Philippines to verify the insurance effect of informal loans and even gift spending, although the extent of this effect can vary due to different kinds of risks experienced by families.

While the private return from social spending is still not a well-discussed topic, we may borrow some ideas from studies regarding large events and festivals. Since the theme of large events can be pretty clear, what we need to focus on are the common points described in previous studies. We have seen from previous literature that leisure and novelty are good explanations for large events and festivals, which have been verified by Wooten and Norman (2008). The need for socialization is also a common idea shared in household ceremonies. Another empirical study by Reid (2007) discusses the social consequences of rural events from the perspective of event stakeholders. This analysis offers a detailed list of motivations in categories, such as socialization, affection, learning and developing, economic concerns (costs and monetary benefits), and physical outcomes (e.g., effects on crime and traffic).

2.4   Possible Innovations from Previous Research

Compared to previous studies, I would like to point out some differences from the sample. Firstly, the dataset used for this thesis is a national survey, which would be persuasive for the general pattern of celebration spending than data only covering several villages. Secondly, the involvement of some middle-income and rich families is also worth noticing. While we often regard social capital as the capital of the poor, it would be interesting to see if there are consistent patterns across income groups.

For the main subject of the study, I use families rather than individuals, which

may provide additional insights on how families perform as a whole. Compared to considerations based on individuals, the perspective of families provides the chance to allow for variations in bargaining power of members within the family. I try to separate the effect of the family head by adding controls regarding his or her characteristics.

Another interesting point is the focus on families' perceptions rather than facts. It is well-understood that families may make decisions based on their own understanding of the world but this estimation may not be the same as the exact situation. Regarding this concern, I use subject evaluations in understanding their motivations and opinions on festival spending. Also, as for the effect of status seeking, I use an indirect indicator representing the level of relative well-being. The idea is partly different from previous studies of Rao (2001) and Chen et al. (2012). For Chen et al. (2012), authors attempted to construct the Deaton relative deprivation index to represent economic status. For Rao (2001), the paper used a similar self-reported parameter, but since the parameter did not consider the status of others, it might suffer more serious self-report biases. For another motivation, risk pooling, I use the idea of perceptions by involving the incidence of previous shocks as experience obtained by the family.

The introduction of the variety of shocks would also be regarded as an improvement. Since most literature including Chen et al. (2012) and Fafchamps and Lund (2003) mainly discussed income shocks, or in an alternative, regarded different kinds of shocks as the fuse of income shocks. However, we would expect that families may react differently toward different shocks.

Finally, it can hardly be ignored that the study discover an area that has great research interest that is still heavily unstudied. Kyrgyzstan, a region in Central Asia, has many characteristics that are similar to other transition countries in Eastern Europe. However, we witness a much lower interest in this region across all disciplines. According to Brück et al. (2014), searches for the term "Central Asia" received only around 626,000 hits on 7th November 2012, which was much lower than terms such as "Central Europe," "Central America," or "Middle East." The area was heavily influenced by the Soviet Union, which imparted several social norms and institutions. After the collapse of the Soviet Union, the economic outcome of countries in this area varied sharply. While countries such as Kyrgyzstan, Tajikistan, and Uzbekistan experienced stagnation, Turkmenistan and

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Kazakhstan exhibited much higher levels of GDP per capita.

If we consider the development side rather than growth, we find much more perspective. Compared with other transition countries, Central Asian countries perform quite well in some indicators, such as equality, life expectancy, and female educational attainment. Thus, it would be very interesting to discover how local residents behave in such a dynamic environment both economically and socially.

3 Background and Data Collection

3.1 Celebrations in Kyrgyzstan

Kyrgyzstan, officially the Kyrgyz Republic, is a landlocked and mountainous country located in Central Asia. The country is bordered by Kazakhstan to the north, Uzbekistan to the west, Tajikistan to the southwest, and China to the east. Although geographical characteristics help Kyrgyzstan to preserve its cultural relics, the country has been affected by the surrounding civilizations. Kyrgyzstan was part of the commercial route, known as the *Silk Road*, and was also part of the Soviet Union until its breakup in 1991. Kyrgyz is the main ethnicity in Kyrgyzstan. According to the National Statistics (2014) [2], Kyrgyz takes up 72.6% of the population. Other significant ethnicities are Uzbek (14.4%) and Russian (6.4%). The customs and traditions of Kyrgyzstan are largely influenced by its Turkic origin. Although a large share of the population migrated to large cities, there are still some people maintaining the nomadic traditions.

With reference to public holidays and celebrations, Kyrgyzstan has international holidays, national holidays, and religious holidays. The country observes international holidays like New Year's Day, International Women's Day, the International Workers' Day, Victory Day(Against Fascism), Children's Day, and locally, people also celebrate Valentine's Day and April Fool's Day. As The national holidays refer to holidays related to the independence of Kyrgyzstan and some other festivals dating back from the age of the Soviet Union. Some examples of national holidays are Fatherland Defender's Day (February 23), Day of National Revolution (April 7), Kyrgyz Language Day (September 23) and the Day of the Great October So-

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[2]Source: "Ethnic composition of the population in Kyrgyzstan 1999–2014." National Statistical Committee of the Kyrgyz Republic. Retrieved 14 April 2014.

cialist Revolution (November 7). Since main religions in Kyrgyzstan are Muslim and Russian Orthodoxy, the country also celebrates Eastern Orthodox Christmas, Nooruz (Persian New Year), Orozo Ait (the end of Ramadan) and Kurman Ait (Festival of the Sacrifice).

Besides the celebration of festivals, there are also some occasions that may incur luxury social spending. One of the most important of such activities is weddings. Although traditions are slightly different across oblasts and cities, the general pattern is the same. Before the engagement, the bride's parents need to send a dowry, and the groom's mother needs to put golden earrings on the bride's ears to confirm the engagement. As for the groom's family, they need to prepare for the wedding ceremony and pay the kalym to the bride's family. The wedding ceremony is followed by a dinner gathering for the young couple to receive gifts and money in envelopes. There is an old tradition of marriage in Kyrgyzstan, which is "bride kidnapping" (ala kachuu). Before the marriage ceremony, the groom-to-be can hide his future bride behind the curtain of his house for three days to confirm the marriage. In the beginning, the tradition was one type of forced abduction, but after years of evolution it has become a type of elopement arranged between the young couple to make parents on both sides consent. The behavior is formally illegal, but the civil law is hardly observed in rural areas where residents rely heavily on customary laws.

Another important event for Kyrgyz families is the birth of a baby. The parents will hold a feast for visitors when the baby is born (beshike salu'u) and again when the baby is one year old (tusho'o kesu'u). Straight after a baby is born, there will be a tradition called "jentek" to put melted butter into the baby's mouth. The parents of the baby invite their relatives and neighbors to the feast and give their blessings for the child. After the feast, an elderly woman who is respected and wise to put the baby into a prepared cradle. The parents then make a wish for the future of their child. When the child reaches one year old, the parents hold a celebration and blessing to wish the child to have the best. Guests invited by the parents have a meal and give blessing to the child. After that , a race competition for children takes place. The children race with their legs tied with a white and black striped woolen cord. Those who come on the first and the second have the right to cut the cords. All the children are given presents according to their performance.

Besides these two occasions, Kyrgyz families also hold private celebrations at an-

niversaries, when moving to a new accommodation, on remembrance day, etc.

3.2   Information about the Dataset

Most of the data comes from the "Life in Kyrgyzstan (LiK)" database. The LiK is conducted as a part of the "Economic Transformation, Household Behaviour and Well-Being in Central Asia: The Case of Kyrgyzstan" research project that is funded by the Volkswagen Foundation. The project serves several purposes including collection of nationally representative panel survey data in Kyrgyzstan, investigation of the well-being and behavior of individuals and households in this country, and the improvement of research capacity within the Central Asian region. The project runs from September 2009 through September 2013 and is a collaborative endeavor of DIW Berlin, the Humboldt University of Berlin, the Centre for Social and Economic Research (CASE-Kyrgyzstan), and the American University of Central Asia (AUCA), the latter two being based in Bishkek, Kyrgyzstan.

The LiK collected data from all seven Kyrgyz oblasts (i.e. Batken, Chui, Djalal-Abad, Issyk-Kul, Naryn, Osh, and Talas) and the cities of Bishkek and Osh. The households were drawn through two-stage random sampling. There were 16 strata used for the sampling, including Bishkek, Osh City and the rural and urban areas of the seven oblasts. At the first stage, a set of so-called population points were drawn in each stratum according to population size.[3] These population points can be either communities in rural areas, or quarters in urban areas. At the second stage, 25 families were drawn in each population point. These families were provided with the help of the National Statistical Committee (NSC) of Kyrgyz Republic and reserve families were also used when families on the original list were not found or declined to participate. Because of a relatively high rate of refusal, around 27 percent of households had to be drawn from the reserve list.

The panel survey collects data on about 3,000 households annually starting from 2010. The data covers information at the individual, household and community levels including contents regarding demographics, assets, expenditures, migration, employment, agricultural markets, shocks, social networks, and subjective well-being.

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[3]More details can be found on the codebook of LiK dataset by Steiner (2010).

Table 3.1: Sampling of the Life in Kyrgyzstan Dataset

Oblast /City	2011	2012	2013
Issyk-Kul	267	259	246
Jalalabad	472	461	419
Naryn	126	123	103
Batken	222	225	217
Osh	476	491	461
Talas	120	122	122
Chui	479	452	378
Bishkek	574	574	460
Osh City	127	107	111
Sum	2863	2814	2517

Considering the limited availability of data, the paper will mainly analyze from 2011 to 2013, while data in 2010 will be partly used in constructing lag variables. The reason why data for 2010 is excluded is that although variables for celebrations have been recorded from that year, subjective questions about motivations only start from 2011. From Table 3.1, we can receive a general picture of the dataset. Data were collected through interviews in each neighborhood of all seven oblasts and in two cities. There is a relatively high exit rate in 2013, especially for families in Naryn and Bishkek, although the extent of this is not serious. Increases in sample size may be due to two occasions: Firstly, there could be new families introduced into the dataset. Secondly, there were possibilities that families migrated from one region to another.

4 Descriptive Statistics: What Types of Families Spend More on Celebrations?

4.1 Spending on Celebrations

4.1.1 Overview

The core variable of interest is the level of spending on celebrations. Original data of expenditure on celebrations is collected in the household survey in each year by the average monthly spending on celebrations. It is worth noting that this indicator not only covers spending on celebrations but on rituals and funerals as well.
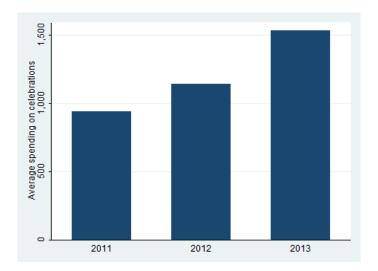
Figure 4.1: Average Monthly Consumption on Celebrations across Years

The average monthly expenditure in each category will be used further analysis in this study. [4]

There can be controversies about whether it is proper to include spending on funerals in this category. According to the majority of Kyrgyz tradition, funerals are important events that last for more than one year. Before the deceased person is buried, the funeral will follow the Islamic pattern with collective bathing of the dead body (Sookko kiruu), shrouding dead body in a white cloth and funeral prayers. In contrast with common Islamic burial rituals, the funeral is then followed by a *kara ash* with tea and dishes to treat the men coming back after the funeral. The Kyrgyz people mark 40 days after a person's death through meeting people, laying tables and preparing food. Also, a year after a person has died, there is another one-week ceremony called *ash* asking for contentment of the person's soul. Since the Islamic doctrine holds that human existence continues after death in the form of spiritual and physical resurrection, funerals may not be as "pessimistic" as they are commonly perceived to be.

Figure 4.1 presents the average level of spending on celebrations. Generally it shows an increasing trend in spending on celebrations. In 2011, an average family

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[4]Since the data only collects average data, the data is not available for detecting seasonal fluctuations and there would not be much loss of information by transferring yearly average to monthly average.

in Kyrgyzstan spent about 940.54 soms (the local currency in Kyrgyzstan) per month on celebrations, rituals, and funerals. The number rose to 1,142.99 soms per month in 2012 and 1,530.12 soms in 2013. The distribution of spendings is right-skewed with around 75% people spending less than their means.[5]The right-skewness shows that although most families spend some money on celebrations, only a few families can afford large expenditures. The variance is large, which may weaken the argument that spending on celebrations is increasing in all families. We can see that some families spend little on celebrations, while others spend much more than the average. To have a clearer picture, we also need to consider their capacity for attaining economic resources.

In order to compare the relative importance of spending on celebrations, three indicators are chosen to represent families' economic capacity. The first indicator is family income. This indicator includes all possibilities for families to get monetary inflow, including salaries, rents and even social transfers. The second indicator is aggregate non-food consumption, which includes expenditures on daily necessities and irregular expenditure such as construction and vehicles. The ratio of celebration spending to non-food consumption can be evidence showing the importance of celebrations with respect to other expenditures, since the consumption of food can be more consistent when families have enough resources. The last indicator is total consumption, which is the sum of food and non-food consumption. Since there are a significant number of families gathering non-tradable produce from their land, the value of agricultural production will also be transferred into aggregate expenditures to consider the "opportunity gain" of their production.

From Figure 4.2, we can see that the increasing trend is weakened by separating the effect through increasing income or consumption. There is even decrease from 2011 to 2012 when we compare the latter two income indicators. We can see that spending on celebrations takes up a rather stable share of non-food consumption as well as aggregate consumption.[6]

If we compare the result with previous studies, Kyrgyzstan's share of consump-

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[5]The distribution of celebration spendings can be found in Table A.1.

[6]From the figure it seems that the average income is lower than the consumption, however this is not really the case. One possible explanation for this is that low-income families spend much more on aggregate consumption than their income, which leads to a much larger share in income than in consumption if we assume that the shared difference in spendings is not as large across different income levels as the difference in income.
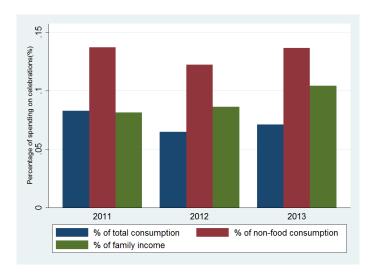
Figure 4.2: Percentages of Spending on Celebrations across Years

tion representing celebration spending is around the middle level across countries. Although there can be slight differences in measurements, the Kyrgyz result is slightly lower than the Chinese study by Chen et al. (2012) and the Indian study by Banerjee and Duflo (2007). The third wave of the Chinese study, which took place around 2010, showed that in all income groups over 10% of aggregate consumption was spent on gifts and festivals. In Banerjee and Duflo (2007), numbers were even higher at an earlier date (around 2005). Nevertheless, there were also many countries in which families did not spend much on celebrations, such as South Africa, Guatemala and Pakistan, which held a share of less than 5% (Banerjee and Duflo (2007)). In contrast with Chen et al. (2012), we do not see a clear increasing trend in the share of spending, there is instead a relatively stable trend with small fluctuations. The pattern may change if we observe the ratio over a longer period. To get more information about families of different wealth status, more detailed comparisons will be made between different income levels in the next section.

4.1.2 Spending on Celebrations and Income Classes

It is interesting to observe whether income affects families' behavior in relation to celebration spendings. Firstly, I start with a general overview of the distribution of family incomes. In Table 4.1, the families are divided into eight classes[7]: families with a monthly monetary inflow of, in soms, less than 5,000, between 5,000 and 10,000, between 10,000 and 15,000, between 15,000 and 20,000, between

20,000 and 25,000, between 25,000 and 30,000, between 30,000 and 35,000, and over 35,000. All intervals include families with income at the lower bound but not at the upper bound.

Table 4.1: Distribution of Household Income by Selected Income Classes

Income classes(Soms)	**2011**	%	**2012**	%	**2013**	%
All	2863		2814		2517	
less than 5000	350	(12.22)	229	(8.14)	182	(7.23)
5000-10000	817	(28.54)	575	(20.43)	472	(18.75)
10000-15000	657	(22.95)	644	(22.89)	488	(19.39)
15000-20000	394	(13.76)	476	(16.92)	396	(15.73)
20000-25000	279	(9.75)	333	(11.83)	322	(12.79)
25000-30000	124	(4.33)	179	(6.36)	191	(7.59)
30000-35000	96	(3.35)	121	(4.30)	154	(6.12)
over 35000	146	(5.10)	257	(8.98)	312	(12.40)

Table 4.1 presents the distribution of these income classes from 2011 to 2013. We can see that family income also has a similarly right-skewed distribution, although the skewness is not as high as celebration spendings. If families in both the upper and lower 50% income groups spend similarly on celebrations, we would expect the distribution to be similar as well. This finding of families with relatively higher incomes but relatively lower celebration spending suggests that poorer families spend more on celebrations. [8]

If we compare the percentage of families in each income group, another finding is that extremely poor or poor families were improving by a decrease in the numbers of families falling into the bottom two income classes. If we transfer the standard of \$1 per day into a monthly income in soms, the amount is around 2,000 soms per month per person. If we use the average size of the family, 4.90 persons, to estimate the poverty line for the family, it is reasonable to define the bottom two classes as extremely poor families. We see that as time passes, the income of poor families has improved, as they are shown to have a smaller share. At the same time, more families manage to enter the top three classes.[9]

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[7]The thresholds are calculated in the nominal currency.

[8]The fact that the poor spend more on celebrations is partly verified by a comparison of families' ranking in celebration consumption and income separately, which can be found in Table A.2.
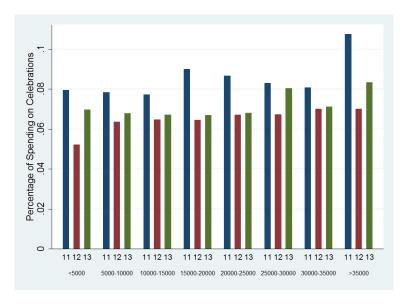
Figure 4.3: The Share of Spending on Celebrations across Income Groups (%)

This comparison of celebration spending across income classes can be made in another table. Figure 4.3 presents the ratio of celebration spending and consumption of families in each income group. From economic intuition, we would expect that richer families spend relatively less on celebrations, since if we treat celebration as a special kind of "investment", richer families would have more options to earn economic and social benefits, which would prevent them from investing more on celebrations. However, from Figure 4.3, we see an increasing trend for families in a higher income group. It would be useful to discover how this result has come about.

Two arguments emerge that need to be tested. One possibility to explain the above result is that "richer" families may not be exactly rich if the aggregate income is diluted by a large family size. To test this argument, I try to eliminate the effect of family size by categorizing by the income per capita. Another argument is that "richer" families may seek psychological benefits rather than material benefits, which are more likely to bypass the limitation of decreasing marginal returns. To put it in another way, richer families may have different motivations toward celebrations. Another characteristic worth mentioning is that large variations still

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[9]There can be concerns about inflation. Although the PPP conversion factor has increased about 3.57% per year on average during this period (Source: World Bank (2015)), it could not wipe out the increase in nominal income.
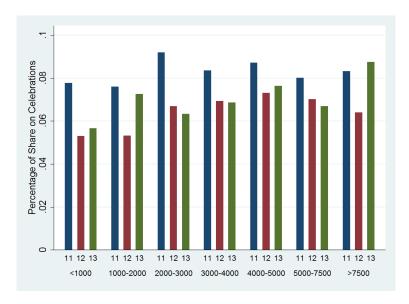
Figure 4.4: The Share of Spending on Celebrations by Income Per Capita (%)

exist among these families' shares of celebration spendings, although they are not as serious as the absolute value.

In Figure 4.4, the share of celebration spendings are presented as income per capita to see if the increasing trend still exists. We can see from the results in Figure 4.4 that the consistently increasing trend does not hold. It is more likely to be an inverse-U shape in this case, where families in the middle income groups spend the largest share.[10]The trend can be regarded as an indirect evidence for status seeking, since families in the middle income groups are those with both the motivation and the capacity to invest on networking behaviors. The data of 2013 is somewhat an anomaly, since individuals with the highest income per capita spend more on celebrations and the distribution does not follow a clear pattern. As for the second argument about different motivations, this will be discussed further when questions of families' perceptions are introduced.

4.1.3 Geographical Discrepancies

Since the data was collected in nine regions, there can be fixed regional effects. Table 4.2 presents the share of celebration spending across the nine regions. Firstly, we see that the share of celebration spendings varies a great deal. Oblasts like

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[10]The median per capita income is 2750 in 2011, 3200 in 2012 and 626 in 2013.

Table 4.2: The Share of Spending on Celebrations across Regions

Per capita income	2011 (%)	2012(%)	2013(%)	Average (%)
Issyk-Kul	5.97	4.60	6.32	5.61
Jalalabad	6.19	5.67	7.90	6.60
Naryn	5.19	4.14	8.77	5.85
Batken	11.46	8.47	5.74	8.37
Osh	10.43	7.66	7.71	8.51
Talas	22.36	11.68	11.33	14.95
Chui	7.08	5.85	6.44	6.46
Bishkek	5.44	5.38	4.91	5.24
Osh City	8.81	7.75	7.84	8.10

Issyk-Kul, Jalalabad, Naryn and Chui follows the average pattern, with their shares decreasing in 2012 but increasing in 2013. Some other oblasts including Batken, Talas and Bishkek have a decreasing trend during years between 2011 and 2013. Osh areas (including the oblast and the city) have a similar pattern as the first grouping, but the changes were only slight.

Secondly, if we compare the difference in average levels of celebration spendings, we see that residents spend much more on celebrations in Talas than in any other regions. For all three years of the survey, families spent more than 10% of their total consumption on celebrations, rituals or funerals. For families in Issyk-Kul, Naryn and Bishkek, the average spending on celebration was less than half of the level in Talas for most years.

Finally, we see a slight convergence among regions over time. In 2011, the ratio between regions spending the most and the least is around four, while in 2013, the ratio is only about two.

4.2 Basic Characteristics of Kyrgyz Families

4.2.1 The Structure of Families

Before analyzing the determinants of celebration spendings, it would be more practical to start with basic characteristics of Kyrgyz families. Since the data is unbalanced across years, one difficulty that needs to be solved when observing patterns by averages is the different weights of families. To put it in another way,

families are counted in different times when taking the mean as a whole. As a result, when comparisons are made across variables, it is a good option to choose one specific year to conduct the analysis. Therefore, this comparison will mainly focus on the sample in 2011. The reason for choosing this specific year of 2011 is that characteristics of families may not change very significantly across time and the sample in 2011 has the largest sample size. [11]

I start with analysis from the size of the family. Modes are a suitable option, in order to be representative, since the size of a family can only change by an integer. We see from Table 4.3. that the typical size of a family was four in both 2011 and 2012 and five in 2013. More details can be found from the distribution of family size. While the numbers of families with four or five members were rather close in 2011 and 2012, there was a significant increase in families with five members in 2013. [12]The increase in family size comes from newborn babies. This is verified by the modes of the number of children in the family. The pattern is consistent across regions with some minor fluctuations. Regions like Issyk-Kul and Bishkek tend to have a smaller family size, whereas in areas such as Jalalabad and Osh, a larger family is preferred.

Following this general analysis of family sizes, it is then interesting to focus on the individuals within the family. Usually the one who is most representative of the values of a family would be the head of the family. This effect can be seen in two ways: firstly, the head of the family receives a great level of respect from other family members and his or her opinions can be of great importance in decision-making; secondly, the views of other family members can be influenced through their upbringing (especially in younger generations) or their daily interactions (especially in couples).

The first factor that needs to be considered is the age of the head. From intuition, the age of the head can be expected to affect the pattern of the family network. Typically the heads of families within the sample are between 45 and 55 years old. This pattern does not change a great deal across different regions.

The second factor is the gender of the head. The effect of gender in building

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[11]Although results are not shown, patterns in section 4.2.1 and section 4.2.2 for years other than 2011 have been tested and they are comparatively stable over time.

[12]The statistics for this can be found in Table A.4.

social networks has been discussed in several studies. One study by Benenson (2007) says that males are more likely to have a larger social network and their positions in their networks are more highly linked with acceptance by their peer groups. For Kyrgyz families, over 70% of families in the sample have a male head. This ratio may in fact be even larger since the emergence of a female family head may come from the absence of a male head. From Figure A.1 and Table A.3, we can see that the female heads of over 75 % of such families are widowed or divorced. These families also have smaller sizes and less earners.

Furthermore, the ethnicity of the head can also be important because this can relate to different celebration patterns and different networks. One prominent study research by McPherson et al. (2001) discussed the homophily in social networks, showing that race and ethnicity create the strongest divides in comparison to all other factors. As a result, the ethnic status of the head may have a strong influence on the family to network socially . Within the Kyrgyz families, the two main minorities are Russians and Uzbeks, along with smaller minorities of Ukrainians, Tajiks, Uighurs and Dungans. We can see from the sample that the demographic composition is similar to the national statistics mentioned in Section 3.1. As for the distribution across regions, we can see patterns of ethnic agglomeration in Chui, Bishkek and Osh City.

Table 4.3: Basic Structure of the Families

	Statistics	2011	2012	2013
Size of family	Mode	4	4	5
Size of children	Mode	2	2	3
Head age	Mean	51.34	52.05	52.79
Male head of household(%)	Mean	72.13	71.57	71.59
Minority head of household(%)	Mean	33.50	33.65	32.46

4.2.2 Views about Celebration Spendings within Families

By using controlling factors like age, education or ethnicity, we can only get indirect evidence on how people decide their spending on celebrations. However, if we directly ask residents questions such as "How much do you spend on celebrations?" We can obtain answers from another angle as a great complement. Although the result may suffer from self-reporting biases, we can solve such problems by comparing these answers with other outcomes and understanding their motivations to

lie. One advantage of the dataset I use is that it provides several sets of questions revealing families' motivations. In Section 4.2.2, qualitative analyses will be made to partially understand the question from the perspective of the families themselves.

The most straightforward question emerging from the dataset is "In your opinion, what purpose do such festive events serve?". Four options were provided as answers: to keep ties with close people, to keep up with tradition, to show that I am not worse off than others and to demonstrate increased economic status. Interviewees were requested to present the value of their family and multiple answers were allowed for the answer. Results are shown in percentages in Table 4.4. From the table, we can see that more families select the first two options than those selecting the latter two options. One possibility is that the motivation to keep ties with others and to keep up with traditions are literally more "positive" than the latter two. Moreover, we see a slight convergence in the shares of families choosing options over time. More families are willing to pick up seemingly "negative" options and do not just focus on more "honorable" options. Have they lied in the interview, or do they become more objective over time and tell the truth? We may assume that it is the latter case since we would expect a larger difference if they still choose to hide their "vanity."

Other questions relating to the level of celebration spendings are questions about the trend of celebrations, or to put it another way, questions asking about their opinions on others' celebration spendings based on their own observations. There is one question collecting such information. This question includes four arguments which require interviewees' opinions. The attitudes toward these arguments are rated by a number from one to five, one is the highest level of agreement while five is the lowest. The results of this question are shown in Table 4.5. In general, families hold relatively neutral or even slightly negative attitudes toward these four arguments and scores have been rather consistent over time. On average, they thought that festive expenses were slightly higher than they expected. However, they still observed that celebrations were at least not simpler. This is somewhat a puzzle that needs further econometric analysis. Their attitudes toward regular celebrations were also slightly negative. Disagreement with bride kidnapping was consistently high in all survey years.

As for differences across regions, variations of subjective questions are much larger.

Table 4.4: Shares of Families Selected Each Motivation

Motivations of celebration spending	2011	2012	2013
Keep ties with close people	61.20	59.91	56.58
Keep up with traditions	77.19	68.66	68.81
Show I am not worse off than others	27.84	24.73	27.41
Demonstrate increased economic status	13.80	19.76	22.37

For the question about motivations, more families across Kyrgyzstan put traditions in front of keeping connections. This phenomenon is especially obvious in Jalalabad and Osh City. As for the third choice – "to show I am not worse off than others", relatively more families spent for this reason in Jalalabad and Naryn. Regarding the fourth option, families in Bishkek were more likely to utilize celebrations as a way to demonstrate increased economic status, although this was not a particularly large proportion compared to other options.

For the other question regarding observations, the pattern is more similar across regions than that for the question regarding motivations. While there is a universal aversion to bride kidnapping, the largest variation is found in the first argument, asking whether festive expenses are reasonable. In regions like Chui and Bishkek, the level of celebration spendings is considered more acceptable.

Table 4.5: Family-average Scores of Disagreements on the Four Arguments

	2011	2012	2013
Festive expenses are reasonable	3.25	3.52	3.63
Festives are becoming simpler	3.63	3.79	3.78
It's good to have regular festivities	3.54	3.20	3.34
Bride kidnapping is OK	4.46	3.69	4.02

It would be interesting to test if there is any correlation among answers of different questions. For the first questions regarding motivations, the four answers are almost independent. The correlation between the latter two options is the highest at 0.2779, which is still not large enough to verify that a correlation exists.[13] As for the trend question, correlations are generally higher. However, there is only one weak positive correlation between "Festive expenses are reasonable" and "Festives are becoming simpler." [14]

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[13]The distribution of combination of answers in the motivation question can be found in Table A.8.

[14]Correlation matrices can be found at Table A.7 and Table A.9.

5 Empirical Approach: Hypotheses and Econometric Specification

In the previous section, I presented a general view on the variations of celebration spending and some basic information about the structure and attitudes of the families. In this section, I extend the analysis from basic statistics to correlations between variables.

5.1 Testing Hypotheses

H1 (Peer Effect): The level of celebration spendings of neighbors has a positive effect on the celebration spending of the family.

From previous studies, I would expect spendings of neighbors to have a positive effect on the level of spending of the family. Since this information is not available for the dataset at the moment in order to define the relationship between families, the word "neighbor" is defined in a sense of geographical proximity, referring to all families within the same neighborhood (the "population point" in the data information section). The family is assumed to obtain information about the average level of celebration spending in their neighborhood.

H2 (Status Seeking): Families who are unsatisfied with the overall situation at present spend more on celebrations.

For the motivation of status seeking, I would like to focus on the self-reported evaluation regarding the overall situation. From intuition, this would be more effective than a more objective indicator since it is difficult to obtain a universal definition of social status. In addition, self-evaluations would be more direct evidence in decision-making.

H3 (Risk Pooling): Families who suffered more from unexpected shocks spend more on celebrations.

The motivation of risk pooling is hard to define in general terms since families may have different reflections on different kind of shocks. This situation has been verified by Fafchamps and Lund (2003). The LiK dataset used provides 27 kinds

of risks that involves natural disasters, lack of earnings, death of family members and other risks concerning the economic, social or political side. Shocks are clustered into several categories while some specific shocks are kept separate because of their specialty.

5.2   Estimation of Celebration Spending

To test the hypotheses in Section 5.1, the model works as follows:

$$ln(Celebration_{h,c,t}) = \alpha + \beta ln(Celebration_{-h,c,t}) +$$
$$\gamma Status_{h,c,t} + \delta Risk_{h,c,t} + \lambda X_{h,c,t} + \eta_t + Obl_c + \epsilon_{h,c,t}$$

where $Celebration_{h,c,t}$ is the level of celebration spending for family h in neighborhood c at year t; α is the intercept; and, $Celebration_{-h,c,t}$ is the average spending on celebrations of families other than h within the same neighborhood c. $Status_{h,c,t}$ represents self-report views regarding the overall situation of the family compared with others in the town or village.[15] $Risk_{h,c,t}$ shows all kinds of shocks families faced in the specific year t. Records of risks in the previous year are also used in this part for further comparisons.

Regarding controls, $X_{h,c,t}$ stands for all the control variables for family h in neighborhood c over time t. These controls include all of the variables mentioned in Section 4 regarding the basic characteristics of families, such as aggregate consumption, the gender of the head, the age of the head, the ethnic status of the head, the number of children, the number of adults and answers about motivations and opinions. Since the paper would discuss the effect of risks on celebration spendings, an additional variable is added representing risk attitudes. The variable is the average of self-evaluations made by each adult family members to report their willingness to take risks on a scale of one to ten. A rating of one is complete risk aversion, while ten is complete risk seeking.

As for fixed effects, η_t is the fixed effect over time t, which includes a set of year-specific dummies. Obl_c is the fixed effects over communities, constituting both regional dummies for oblasts [16]and one variable partially explaining the level

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[15]The average level of the household is mainly used in this indicator. However, the view of the head has also been tested and the difference is not significant. This also works for the variable about risk attitudes.

of social costs, which is the average level of dower within community c. Continuous variables including celebration spending, income and consumption are used in logarithmic scales to reduce the effect of skewness and heteroscadasticity.

The six columns in Table A.10 compare key coefficients in different settings. The first three are random effect (RE) models with different settings in time and regional fixed effects, the latter two are fixed effect (FE) models with similar setting as (2) and (3) and the last one uses the approach of pooled ordinary least square (OLS) which is comparable to (3) and (5). To test whether the RE model is suitable in this case, the Hausman test is used to compare (3) and (5). The p-value of the test is 0.0002, which shows that there is some correlation between independent variables and time-invariant fixed effects, which suggests that the FE model is more reliable in this case. Therefore, the paper will mainly use the FE model to test the hypotheses. One possible explanation for this could be omitted variable biases in the RE model, since it might be difficult to include all the factors that affect celebration spendings.

5.2.1 Peer Effect

Firstly, I start the analysis from the influence of peer effects on celebration spending. From Table 5.1, we can obtain a clearer understanding of how peer effects affect family celebration spending.[17] The existence of peer effects can explain a certain part of the consumption effects and there are clear differences over years. Using the data from column (4), we can see that one percent increases in celebration spending of others can lead to 0.320 percent increase in the celebration spending of the family itself and the coefficient is statistically significant at the significance level of 0.01. The effect is approximately two thirds of the effect of total consumption, which increases celebration spending by 0.484 percent from one percent increase in total consumption.

If we add answers to subjective questions regarding motivations for festival spendings, we can find that the scale of peer effect is much larger than any motivations

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[16]The word "oblast" is close to "province" in English and several neighborhoods were interviewed in one oblast. Therefore, oblast dummies can be the same in different neighborhoods of the same oblast.

[17]Controls without significant change under different settings are not reported. All variables related to status seeking and risk pooling are controlled, however, they will be shown in the next subsection.

Table 5.1: Peer Effect

VARIABLES	(1) FE	(2) FE	(3) FE	(4) FE	(5) FE
Celebration of others(log)	0.953***	0.329***	0.328***	0.320***	
	(0.0513)	(0.0225)	(0.0227)	(0.0227)	
Keeping ties			0.0620**	0.0664**	0.0692**
			(0.0290)	(0.0289)	(0.0300)
Keeping up traditions			0.0465	0.0474	0.0486
			(0.0298)	(0.0299)	(0.0315)
Showing not worse off than others			-0.0175	-0.0202	-0.0366
			(0.0315)	(0.0318)	(0.0332)
Increased economic status			-0.00307	-0.00158	-0.0115
			(0.0369)	(0.0369)	(0.0390)
Expense not reasonable				0.0157	0.0272**
				(0.0124)	(0.0128)
Celebrations has not become simpler				-0.00869	-0.00297
				(0.0133)	(0.0137)
Do not want to have regular festivities				0.0296***	0.0458***
				(0.0110)	(0.0112)
No bride kidnapping				0.000378	-0.00952
				(0.0108)	(0.0113)
Total consumption	1.266***	0.481***	0.483***	0.484***	0.574***
	(0.0630)	(0.0299)	(0.0298)	(0.0299)	(0.0314)
Year fixed effects	No	Yes	Yes	Yes	Yes
Observations	5,590	5,590	5,590	5,590	5,594
R-squared	0.417	0.919	0.920	0.920	0.914

Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

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recorded in the interview. Only the motivation of keeping ties with close people is statistically significant at the significance level of 0.05. A unit increase on the self-report score in this question leads to an increase of celebration spending of 0.0664 percent.

If we think about this from another perspective, peer effects can be one of the main reason behind the phenomenon of "reluctant consumption", which is observed when variables regarding trends of festival spendings are included.

From column (5) in Table 5.1, when the variable representing peer effects is not included, there are two variables in the set of trend variables that are statistically significant. When families think that the expenses of festivals are not reasonable, they surprisingly spend 0.0296 percent more than their counterparts. Admittedly, the significant coefficient may not have much economic implication because of the scale, it is reasonable to expect that families will not spend much less on celebrations even if they do not prefer luxury celebration spending. Similarly, families who hold the view that it is not good to hold regular festivities spend 0.0458 percent more than their counterparts per one unit increase in disagreement. Neither of them seems to be "rational" for families. However, after the peer effect is introduced, the first correlation is no longer significant. The second correlation is still significant, but the extent is weakened by approximately 33.3%. This result could corroborate the strong effect of peers on celebration spending. Those families who are not in agreement with luxury spending or frequent spending on festivals have to spend more largely because they have to compete with their neighbors.

5.2.2   Status Seeking

Secondly, the effect of status seeking is worth further discussion. The variable used for social status is the household average score for the question: "How would you rate your own current overall situation compared with other people in this town or village?" The question is asked after a series of questions about interviewees' views on the well-being of their families in aspects such as health, income, education, security, etc. Figure 5.1 shows the distribution of this variable. It can be seen that the self-evaluation is slightly left-skewed, which is consistent with behavioral findings that interviewees tend to overestimate their situation (Beyer (1990)). The correlation between this self-evaluation and other families' spending on celebrations is only 0.0041, which eliminates the concern of inter-correlations.
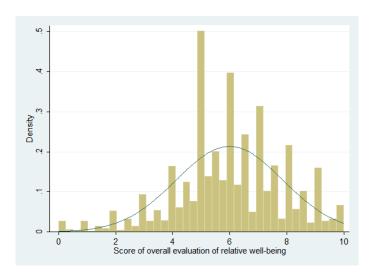
Figure 5.1: Self-evaluation of Relative Well-being

Table 5.2: Status Seeking

VARIABLES	(1) FE	(2) FE	(3) FE	(4) FE	(5) FE
Self-evaluated social status		-0.0252***	-0.0272***	-0.0238**	-0.0257***
(family average)		(0.00925)	(0.00928)	(0.00927)	(0.00929)
Total consumption(log)	0.472***	0.481***	0.483***	0.482***	0.484***
	(0.0292)	(0.0293)	(0.0293)	(0.0293)	(0.0294)
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Motivations	No	No	Yes	No	Yes
Trends	No	No	No	Yes	Yes
Observations	5,590	5,590	5,590	5,590	5,590
R-squared	0.919	0.919	0.920	0.920	0.920

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Upon including this consideration into regressions, which is shown in Table 5.2 [18], we find that the effect of social status seeking is significant, but the extent of the effect is very small, which may worth further scrutiny. The effect of social status is rather stable compared to peer effects. When only yearly fixed effects are included, one unit lower in scores on social status only leads to a 0.0252 percent increase in spending on celebrations. When questions regarding motivations and trends of celebration spendings are introduced, the difference in social status seeking is only around 0.0005 percent.

The extent is very small if we combine the result with the distribution of self-evaluation. Suppose a typical family spends at the median level on celebrations in the population, one unit increase in the average score means that they need to surpass 16% of the population, which can be regarded as a very large improvement in social status. However, the change in celebrations is merely around 0.0257 percent, which is less than 1% of the standard deviation of spending on celebration.

5.2.3 Risk Pooling

Thirdly, I focus on how records of risk affect celebration spendings. In the dataset, risks are recorded in 27 different kinds. The frequency of different risk types can be found in Table A.11. To simplify the model, I try to cluster risks into the following categories: natural disasters, income shortages, energy shortages, death, illness and conflicts.

Further, I separate familial shocks into current and past events. From one hand, families may adjust their spending because of a current shock. The death of a family member is a good example in this case. The reaction of families can be very passive, since if the level of spending has been determined by their motivation, they cannot reduce their spending. On the other hand, families may adjust their spending because of a past record of shocks. For example, if a family suffered from an inability to sell agricultural products last year, they may try to spend more on celebrations in order to strengthen their connections and reduce the negative outcome in the current year. Compared to the first case, families are here in a stronger position to choose their level of spending. Admittedly, I need to consider

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[18]Similar to Section 5.1, effects regarding peer effect and risk pooling are controlled.

the impact of a shrinking resource when they have already been affected by shocks before making their spending decisions.

I start by using direct evidence regarding past shocks that families form their perceptions only through their own experience. Table 5.3 presents the coefficients when introducing lag risk dummies.[19]The reason why I use lag dummies is that I mainly focus on perceptions instead of facts. Column (1) shows the fixed effect model without year dummies. Since shocks (especially natural disasters) can have a quite different pattern from year to year, these dummies may partially explain year fixed effects in the absence of year dummies. Four out of nine shock dummies are significant at the significance level of 0.05. However, when I control for yearly fixed effects, only three out of nine are significant. Income shortage is the only significant parameter in both cases. When families suffered one kind of income shortage (including inability to sell products, loss of a job or a fall of remittances from abroad) during the previous year, they spend 0.0920 percent less on celebrations. Looking at this from an alternative perspective, we can see that a shortage of income can lead families to spend less on socialization activities. Families need to reallocate some money away from spending on celebrations in order to release financial tension and to meet other basic needs.

From Column (2) in Table 5.3, we also see two positive correlations relating to previous records of illness and divorce. Past divorce leads a boost in present celebration spending by 0.206 percent. Recalling the marriage story of social investment provided in Section 2.3, there is a reasonable argument to be made here that when the divorced people returns to the marriage market, they need to socialize more in order to find a new relationship.

Regarding records of previous illness, we need to be very careful when explaining the coefficients since previous illness may result in death, which incurs extra spending on a funeral in the near future. To test this idea, I add two interactions between illness and death and between conflict and death. The new variable used for death is a dummy which equals to 1 when there is any death recorded in either the past year or the present year. We see that illness is no longer significant, neither by itself nor as interaction. [20]

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[19]Similar to Section 5.1 and 5.2, effects regarding peer effect and status seeking are controlled.

Table 5.3: Risk Pooling: Direct Effects

VARIABLES	(1) FE	(2) FE	(3) FE
Natural Disaster (lag)	0.317***	-0.00772	-0.00282
	(0.0821)	(0.0328)	(0.0314)
Destruction of Assets (lag)	-0.357***	0.0456	0.0354
	(0.136)	(0.0537)	(0.0538)
Energy Shortage (lag)	0.137*	0.0118	0.00927
	(0.0766)	(0.0296)	(0.0304)
Illness (lag)	-0.0995	0.104**	0.0625
	(0.133)	(0.0467)	(0.0630)
Income Shortage (lag)	-0.255***	-0.0920**	-0.0989**
	(0.0988)	(0.0394)	(0.0391)
Death (lag)	0.0395	-0.0118	
	(0.100)	(0.0401)	
Conflict and Violence (lag)	-1.323***	0.0403	0.0814**
	(0.0730)	(0.0337)	(0.0391)
Divorce(lag)	-0.0467	0.206**	0.175**
	(0.206)	(0.0919)	(0.0826)
Land Disputes(lag)	0.0604	-0.0240	-0.0310
	(0.257)	(0.106)	(0.0971)
Illness ×			0.0600
Past or current death			(0.0963)
Conflict ×			-0.190***
Past or current death			(0.0659)
Past or current death			0.255***
			(0.0578)
Year fixed effects	No	Yes	Yes
Observations	5,590	5,590	5,590
R-squared	0.427	0.919	0.920

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

If we consider the effect of risks from a different channel, we may assume that families can utilize past records from their neighborhood in decision-making. In reality, the source of shared information can include formal media such as newspapers, radios and television programs, or informal alternatives such as word of mouth. The celebration spending can be regarded as one kind of insurance to the family. If the family observes a larger share of families within the neighborhood being affected by a shock, it may increase their own expenses with insurance purposes. One advantage for this channel is that it eliminates the effect of past shocks on current resources possessed by the family.

The result of key variables for these indirect effects is summarized in Table 5.4.[21] Only one change is made from the original panel regression, which is that the shock dummies are substituted by the proportion of families suffering those shocks in the previous year. Compared to Table 5.3, we find the results differ slightly.

Firstly, we obtain similar results for shocks regarding conflicts and divorce. It is interesting to see that the positive correlation between celebration spending and past divorce is strengthened in the neighboring effect. When there are families within the neighborhood who have suffered divorce during the previous year, these families would spend up to 0.615 percent more on celebrations, a result which is statistically significant at the level of 0.05. One possible explanation is that families in the neighborhood are invited to more celebrations held by others. Regarding the conflict effect, the results remain inconsistent across years.

Secondly, we see that the effect of energy shortages within the neighborhood becomes significant. This factor remains significant with different variable settings and the effect is positive. When their neighbors suffered from energy shortages, the family spend up to 0.121 percent more on celebrations, an impact which is smaller than that relating to divorce. When I introduce the lag dummy of the the family's own experience on past energy shortages, we see that the neighboring effect still survives from Column (4). Therefore, the effect of energy shortages is only significant in the neighboring case.

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[20] As for the signs of variables regarding conflicts, although the result shows that both the variable and the interaction are significant, the pattern is not consistent across years if we test it using the method of Brambor et al. (2006). Therefore, I retain the conclusion that conflicts

Table 5.4: Risk Pooling: Indirect Effects

VARIABLES	(1) FE	(2) FE	(3) FE	(4) FE
Natural Disaster (share)	0.268**	-0.0445	-0.0272	-0.0275
	(0.114)	(0.0452)	(0.0429)	(0.0429)
Destruction of Assets (share)	-2.085***	-0.167	-0.192	-0.190
	(0.288)	(0.124)	(0.134)	(0.134)
Energy Shortage (share)	0.582***	0.111**	0.121**	0.170**
	(0.126)	(0.0481)	(0.0529)	(0.0658)
Energy Shortage (lag)				-0.0469
				(0.0382)
Income Shortage(share)	-0.0120	-0.126	-0.168*	-0.171*
	(0.227)	(0.102)	(0.0984)	(0.0984)
Illness (share)	-1.707***	0.0825	0.379	0.374
	(0.401)	(0.166)	(0.280)	(0.280)
Death (share)	0.474	0.230*		
	(0.315)	(0.129)		
Conflict and Violence (share)	-2.213***	0.0987*	0.183**	0.183**
	(0.0859)	(0.0547)	(0.0731)	(0.0731)
Divorce (share)	-1.126**	0.311	0.615**	0.611**
	(0.449)	(0.225)	(0.284)	(0.284)
Land Disputes (share)	-0.813	-0.167	-0.157	-0.152
	(0.698)	(0.277)	(0.291)	(0.291)
Illness × Past or current death			-0.999	-0.988
			(0.744)	(0.744)
Conflict × Past or current death			-0.357*	-0.356*
			(0.197)	(0.197)
Past or current death			0.556**	0.555*
			(0.284)	(0.284)
Year fixed effects	No	Yes	Yes	Yes
Observations	5,590	5,590	5,590	5590
R-squared	0.483	0.919	0.920	0.919

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

6   Conclusions and Limitations

The aim of this study was to discover the motivation behind spending on celebrations. I have utilized both subjective and objective indicators to explain spending on celebrations from the perspective of families. We saw that keeping ties with close people was the primary motivation among Kyrgyz families, which may support the idea that festival spending can be regarded as investment on what Saegert et al. (2002) mean by "bonding" social capital. As for the analysis under panel framework, while the peer effect exists on a relatively large scale, the effects of status seeking and risk pooling concerns seem not to be very significant. The study attempted to provide an overview of celebration spending in Kyrgyzstan, which may ultimately be compared with similar statistics at an international level.

This study also addressed the impact of the marriage market on celebrations. While past studies, including Rao (2001) and Chen et al. (2012), confirmed the effect of unmarried children on the level of social spending, I did not find similar results. The evidence of insignificance can be found in Table A.10. Nevertheless, I did find a significant effect of marital status of adults on social spending. Families having suffered divorce during the previous year spent more on celebrations and this effect is significant from both direct and indirect experience. More studies may follow to verify the fact that divorced adults are willing to spend more on socialization in order to find a better "placement" for themselves.

If we can fully understand the motivation behind the behavior relating to celebration spending, we will have the possibility to evaluate whether this spending is as useful as other kinds of spending which meet basic living requirements, such as health and nutrition, or rather other kinds of investment in either savings, durables or human capital. Policymakers are faced with the task of whether spending on celebrations needs to be corrected. The outcome of peer effects can be similar to a variant of the Prisoner's Dilemma, which leads to excessive levels of celebration spending. We have seen from Sections 4 and 5 of the study that maintaining ties with people who are close is the primary concern among families, but we did not verify any potential motivation to show off their wealth and status. Therefore, it would be interesting to investigate other alternatives for socialization in order to see if there are possibilities for reducing the waste relating to unnecessary com-

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are not significant in general. This result may refer to the turmoil in Kyrgyzstan around 2011.

[21]Similar to Section 5.1 and 5.2, effects regarding peer effect and status seeking are controlled.

petitions resulting from peer effects. For families, it would be a better option to have the chance to strengthen their ties whilst spending less.

Although this study has made a start in the analysis of the celebration spending, there are a number of improvements which could be made in further studies. Firstly, the core variable used in the study was the average spending on celebrations, but we do not have the detailed spending on each celebration activity held. Secondly, this study focused on geographical proximity to define peer effects although detailed descriptions of factors regarding the ties possessed by families would also be a useful addition in order to see if families react differently in different social networks.

A Appendix

Table A.1: Descriptive Statistics of Spending on Celebrations (Monthly)

	2011	2012	2013
Mean	940.54	1142.99	1530.12
Std. Dev.	1579.89	1953.11	2633.19
10 %	83.33	83.33	166.67
25 %	191.67	250	308.33
50 %	416.67	500	708.33
75 %	1000	1250	1666.67
90 %	2083.33	2500	3333.33

Figure A.1: The Marital Status of Female Heads in 2011

Table A.2: Ranking Ratios of Celebration Spendings across Years (Median)

Family income	2011	2012	2013
less than 5000	0.16	0.14	0.09
5000-10000	0.73	0.52	0.47
10000-15000	1.21	0.90	0.84
15000-20000	1.34	1.21	1.07
20000-25000	1.31	1.37	1.27
25000-30000	1.45	1.43	1.25
30000-35000	1.42	1.59	1.59
over 35000	1.34	1.67	1.38

The ratio is the percentile of income/the percentile of celebration spending. If the the family has similar rankings in these two variables, the ratio is assumed to be close to 1. By the result shown above, we can see that the least two income groups have a much higher ranking in celebration spending than income.

Table A.3: Comparisons of Families with Heads in Different Gender

	Total Size	Adult	Employed	%
Families with a male head	5.16	3.66	1.55	42.43
Families with a female head	3.80	2.82	0.42	15.02

Table A.4: Counts of Families with 4 or 5 Members across Years

	2011	2012	2013
Family Size=4	506	475	391
Family Size=5	504	470	446

Table A.5: Structure of Families in 2011 across Regions

	Statistics	Issykkul	Jalalabad	Naryn	Batken	Osh	Talas	Chui	Bishkek	Osh City
Size of family	Mean	4.01	5.28	4.96	5.30	6.20	5.07	4.52	3.30	5.57
Size of children	Mean	1.27	1.58	1.72	1.40	1.80	1.61	1.25	0.72	1.66
hline Head age	Mean	50.87	52.95	51.95	53.73	49.99	48.90	52.65	50.32	50.73
Male head of the household (%)	Mean	69.66	81.14	76.98	84.23	78.15	80.83	68.27	56.79	70.87
Minority head of household(%)	Mean	17.60	27.97	5.56	17.57	28.99	5.00	55.95	44.25	53.54

Table A.6: Answers of Subjective Questions across Regions in 2011

h431: In your opinion, what purpose dosuch festive events serve?										
	Stat	Issykkul	Jalalabad	Naryn	Batken	Osh	Talas	Chui	Bishkek	Osh City
Keep ties with close people	%	77.15	47.25	68.25	54.05	56.51	58.33	65.97	72.13	37.80
Keep up with traditions	%	79.40	73.30	96.03	80.18	84.45	54.17	72.65	76.13	79.53
Show I am not worse off than others	%	16.10	41.74	50.79	28.38	29.20	26.67	18.16	26.83	14.17
Demonstrate increased economic status	%	2.25	15.25	19.05	12.61	10.29	11.67	8.77	26.66	5.51
h432: How much do you agree with the following statements on a scale from 1 to 5?										
Festive expenses are reasonable	Mean	3.19	3.75	4.36	3.66	3.21	4.61	2.75	2.62	3.24
Festives are becoming simpler	Mean	3.78	4.07	4.32	4.07	3.16	4.63	3.50	3.40	3.57
It's good to have regular festivities	Mean	3.45	3.34	4.04	3.76	3.35	4.19	3.74	3.48	3.44
Bride kidnapping is OK	Mean	4.54	4.25	4.70	4.22	4.35	4.60	4.53	4.65	4.39

Table A.7: Correlation Matrix: Motivations about Festive Spendings

	Ties	Traditions	Not worse off	Economic status
Ties	1.0000			
Traditions	0.0391	1.0000		
Not worse off	-0.0659	-0.0823	1.0000	
Increased economic status	0.0260	0.0114	0.2779	1.0000

Table A.8: Distribution of Combinations of Motivations

Combination	Count	Combination	Count
None	452	2+3	353
1	907	2+4	146
2	1615	3+4	115
3	337	1+2+3	480
4	114	1+2+4	359
1+2	2317	1+3+4	84
1+3	219	2+3+4	200
1+4	101	1+2+3+4	395

Note: 1-Ties, 2-Traditions, 3-Not worse off, 4-Increased economic status

Table A.9: Correlation Matrix: Trends about Festive Spendings

	Reasonable	Simpler	Regular	Kidnapping
Reasonable expenses	1.0000			
Simpler festivals	0.5715	1.0000		
Regular festivities	0.1672	0.2860	1.0000	
Bride kidnapping	-0.0144	0.0629	0.2607	1.0000

Table A.10: Shortlist of Results of Controls under Various Specifications

VARIABLES	(1) RE	(2) RE	(3) RE	(4) FE	(5) FE	(6) Pooled OLS
Celebration of others		0.773***	0.320***	0.954***	0.320***	0.320***
		(0.0309)	(0.0143)	(0.0521)	(0.0227)	(0.0142)
Total consumption	1.313***	1.040***	0.537***	1.247***	0.484***	0.540***
	(0.0399)	(0.0377)	(0.0208)	(0.0632)	(0.0299)	(0.0198)
Number of Children	-0.107***	-0.0950***	-0.0269***	-0.0927*	0.00188	-0.0281***
	(0.0136)	(0.0130)	(0.00728)	(0.0545)	(0.0235)	(0.00673)
Number of adults	-0.0187	0.00338	0.0114	0.339***	-0.0137	0.0118
	(0.0141)	(0.0134)	(0.00766)	(0.0638)	(0.0255)	(0.00733)
Gender of the head	-0.138***	-0.117***	0.0155	-0.684**	-0.0236	0.0156
	(0.0426)	(0.0411)	(0.0235)	(0.314)	(0.122)	(0.0233)
Minority of the head	-0.154***	-0.216***	-0.118***	-0.847	0.0948	-0.118***
	(0.0421)	(0.0408)	(0.0242)	(0.634)	(0.277)	(0.0227)
Keeping ties	0.0236	0.00240	0.0698***	0.00470	0.0664**	0.0717***
	(0.0470)	(0.0451)	(0.0199)	(0.0746)	(0.0289)	(0.0201)
Keeping up traditions	-0.0110	-0.0425	0.0388*	-0.0324	0.0474	0.0383*
	(0.0546)	(0.0521)	(0.0219)	(0.0841)	(0.0299)	(0.0222)
Showing not worse off than others	-0.0817	-0.0382	-0.0231	0.00965	-0.0202	-0.0227
	(0.0547)	(0.0517)	(0.0223)	(0.0874)	(0.0318)	(0.0226)
Increased economic status	0.0831	0.0655	-0.0426	0.193**	-0.00158	-0.0436*
	(0.0634)	(0.0607)	(0.0267)	(0.0973)	(0.0369)	(0.0257)
Expense not reasonable	0.0712***	0.0535***	0.0146*	0.0920***	0.0157	0.0142*
	(0.0184)	(0.0179)	(0.00770)	(0.0315)	(0.0124)	(0.00820)
Celebrations has not become simpler	-0.0424**	-0.0838***	-0.00370	-0.0967***	-0.00869	-0.00374
	(0.0214)	(0.0204)	(0.00856)	(0.0358)	(0.0133)	(0.00945)
Do not want to have regular festivities	0.0218	0.0209	0.0149*	-0.0113	0.0296***	0.0138*
	(0.0184)	(0.0176)	(0.00760)	(0.0290)	(0.0110)	(0.00786)
No bride kidnapping	0.101***	0.111***	0.00516	0.200***	0.000378	0.00547
	(0.0190)	(0.0183)	(0.00795)	(0.0281)	(0.0108)	(0.00803)
Average dowry	0.555***	0.388***	-0.0566**	0.573***	-0.0633*	-0.0544**
	(0.0583)	(0.0539)	(0.0229)	(0.103)	(0.0339)	(0.0216)
Risk propensity	-0.0575***	-0.0466***	-0.00153	-0.0124	-0.00378	-0.00187
	(0.00985)	(0.00935)	(0.00438)	(0.0193)	(0.00760)	(0.00422)
Regional Fixed Effects	Yes	Yes	Yes			Yes
Year Fixed Effects	No	No	Yes	No	Yes	Yes
Observations	5,594	5,590	5,590	5,590	5,590	5,590
R-squared	0.346	0.411	0.919	0.430	0.920	0.883

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Controls without much change under different settings are not reported. Other variables of interest are included but will be shown in other tables.

Table A.11: Frequency of Shocks within Families

	2010	2011	2012	2013
Natural Disasters				
Drought	87	819	693	265
Too much rain or flood	424	540	377	348
Very cold winter	526	516	1403	630
Frosts	545	415	940	481
Earthquake	198	1057	76	265
Landslides	186	247	190	94
Pest or diseases	362	462	333	270
Destruction of Assets				
Fire	39	86	28	31
Theft of assets	83	146	41	46
Destruction of assets	49	99	35	16
Resource Shortages				
Insufficient water supply	601	771	663	487
Insufficient energy supply	589	335	439	214
Income Shortages				
Inability to sell agricultural and other products	264	247	204	156
Loss of job	179	160	75	96
Sharp fall of remittances from abroad	87	122	79	91
Death of Individuals				
Death of a major breadwinner	44	76	43	36
Death of other HH member	58	78	51	61
Death of close relative	226	232	191	158
Accident	59	68	29	38
Illness of Individuals				
Illness of a major breadwinner	125	161	94	137
Illness of other HH member	135	194	114	170
Conflicts and Violence				
Political riots	1654	646	222	321
Increased violence in the neighborhood	131	108	32	26
Border closure	623	520	288	208
Displacement	-	71	8	11
Others				
Divorce	77	92	46	69
Disputes on land issues	33	89	60	47
Families	2862	2863	2814	2517

The data of displacement in 2010 is not available since it is not clearly collected in the survey. The data of 2011 is recorded with two options for a "yes": "a little" and "very much", here is the aggregate number of the two. Since the data in 2010 is only used in lagged variables, only families who are available in 2011 are selected.

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