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Lost time or won time?

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Abstract

Since most of the human activities to establish living conditions are not carried out on the place of residence, people have to travel. Most travellers are free to decide which activities they are doing while travelling. This time should not be considered “wasted” time, since it is not sure if they would spend time doing the same activity, if not attached to a place due to travelling. In contrast, they can time this activity specifically to the trip. There was a survey conducted in Hungary in autumn 2016 to understand how people spend time while travelling between settlements. It can be concluded that for a very large part of travellers, travel time is not a waste of time. Rather a time when can be carried out activities that people presumably would not do in any other moment during the day. The extent to which new technologies can contribute to increase the value of the time spent traveling is particularly interesting: browsing on the internet, listening to music or to radio, watching movies, or even reading online. Further research can go into examine in an international comparison how different transport providers help to ensure that the time spent traveling is not a waste of time, even promoting this way the use of public transport instead of individual transport. It seems to be reasonable to repeat the survey, as the penetration of electronic devices and related services on board transport services is increasing rapidly, and changes may be remarkable in a few years.

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1. Introduction

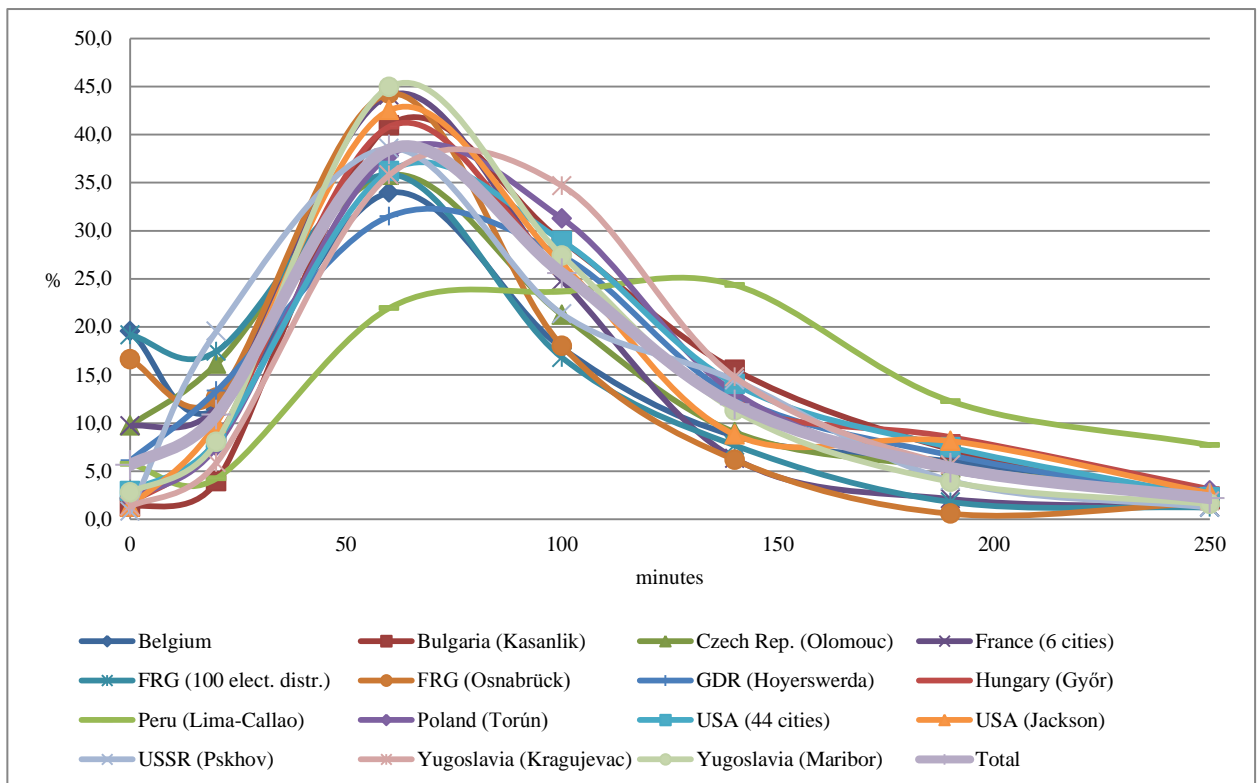
Since most of the human activities to establish living conditions are not carried out in the immediate vicinity of the place of residence, people have to travel. These trips are sometimes longer or shorter, done by foot or even by airplane. This is for sure: people spend up to two hours a day travelling to and from work or school; this may have been true since the prehistoric age, and it is even true nowadays.

Earlier it was not the practice to prepare so detailed and accurate statistics regarding on the use of time of the population. Although the use of travel time was not studied by detailed and accurate surveys, distance of and space between settlements indicate that travelling took similar amount of time in former days like in our age. Maybe journeys were shorter. It may be observed that, on the basis of surveys A. Szalai et al. (1972.), the distribution of time spent travelling per day is similar everywhere in the world.

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Although this survey dates back to the 1960s, it can be stated that –regardless of economic development, political scheme, and geographical location– people spend travelling roughly the same period of time during the day (1. figure). The research question of this paper is how to consider this travel time: lost time or won time?



1. figure: Distribution of employees in different continents and countries, according to the daily travel time (in minutes).

2. Activities while travelling

It is evident that most travellers are free to decide which activities they are doing while travelling. On the one hand, there are public transport services in some parts of the world that are so overcrowded that the number of options is low, sometimes limited to making efforts to reach safely the destination (2. figure).

On the other hand, many commuters can travel comfortably and quickly from one place to another by car, bus, train or other means of transport. In this case, one may raise the question whether this travel time should be “wasted” or not. In this context, “doing nothing” or relaxing may also have great value; the activity itself is taking a rest with eyes open or closed. However, in most cases, travellers are talking, reading, perhaps working, talking on the phone, or even eating. It is not uncommon either that they listen to music, watch movies, TV programs on special devices, or on their smartphones, tablets, laptops. It is clear that this time should not be considered “wasted” time, since it is not sure if they would spend time doing the same activity, if not attached to a place due to travelling. In contrast, they can time this activity specifically to the trip.

Results of a survey done in Hungary in autumn 2016 are presented below, to understand how people spend time while travelling between settlements, provided that the respondent is not driving the vehicle.



2. figure: Travelling in India; http://utikritika.hu/india/hasznos_informaciok#fotok

3. What people were doing while travelling – Household survey in Hungary, 2016

The survey aimed at updating the last large-scale travel survey, which included households from nearly the half of Hungarian subregions in 2008. Although the new survey covered all regions of the country, and it can be considered representative as well, less subregions are included and therefore the number of elements is lower in some regions and higher in others in the sample. Accordingly, regional comparability is expected to be lower than in the previous case.

3.1. Survey sample

A total of 4,707 households were surveyed regarding travel habits of household members. In total, 9,281 people were questioned, who submitted information regarding 20,332 trips. Out of these, 12,377 trips were done within and 7,955 between settlements. Taking into consideration trip characteristics, a sample of 4,385 trips (3,374 on weekdays, 1,011 on weekends) are analysed in this paper who were travelling by public transport or as a passenger in private cars between settlements.

Respondents represent quite well the population of Hungary by gender, age groups and in terms of the size of their places of residence. As proportions in the sample and in the total population match only by a probability of 78.8 to 94.9%, responses are weighted in order to make it representative to the travel habits of the population in Hungary. Weights are selected in line with the number of men and women in the different age groups of Hungarian regions, as well as, sample characteristics. The distribution of the total population of Hungary by gender and the sample may be seen on table 1. **table**

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The distribution by age groups, in comparison with the distribution by gender, is more deviated. (2. table) This is partly due to surveying mainly adults, so the proportion of children was indeed lower in the sample than in the total population. In contrast, other age groups are overrepresented in the sample, in comparison to the census of 2011.

1. table: Gender distribution of the sample (2016) and in Hungary by the time of the census (2011)

Region	Male 2011, census %	Female 2011, census %	Male 2016, sample %	Female 2016 sample, %
South Plain	47,5%	52,5%	46,3%	53,7%
North Plain	47,8%	52,2%	48,0%	51,7%
North Hungary	47,5%	52,5%	47,2%	52,8%
South Transdanubia	47,4%	52,6%	47,0%	53,0%
West Transdanubia	48,2%	51,8%	49,0%	51,0%
Central Hungary	48,2%	51,8%	46,8%	53,2%
Total	47,8%	52,2%	47,2%	52,8%

It is assumed here that not only travelers' age and gender, but also their education level, economic activity, size of place of residence, and even the means of transport, frequency and purpose of a specific trip can influence what activities they are doing while travelling. Thus, sample characteristics are presented below in all these aspects. Frequency of the different activities while travelling would presumably be low (lower than the number of elements required for statistical tests) on regional level; therefore, data are analysed on national level.

2. table: Distribution of age groups in the population sample (2016) and in Hungary by the time of the census (2011)

Region	5-19 years old 2011, %	20-29 years old 2011, %	30-44 years old 2011, %	45-59 years old 2011, %	over 60 years 2011, %	5-19 years old 2016, %	20-29 years old 2016, %	30-44 years old 2016, %	45-59 years old 2016, %	over 60 years 2016, %
South Plain	16,6%	12,4%	23,0%	22,1%	25,9%	7,7%	11,7%	23,7%	24,9%	32,0%
North Plain	18,8%	13,3%	23,3%	21,8%	22,7%	5,4%	16,7%	25,7%	28,0%	24,1%
North Hungary	18,0%	12,6%	22,1%	22,3%	24,9%	6,2%	16,0%	21,4%	26,0%	30,5%
South Transdanubia	16,5%	12,3%	22,7%	23,1%	25,5%	6,2%	13,8 !	21,8%	26,9%	31,3%
West Transdanubia	15,8%	12,3%	24,4%	22,6%	24,8%	6,3%	15,9%	25,3%	25,5%	27,1%
Central Hungary	17,6%	12,5%	25,9%	21,2%	22,8%	7,1%	15,5%	28,7%	25,3%	23,4%
Total	17,3%	12,6%	23,8%	22,1%	24,2%	6,9%	14,8%	25,7%	25,6%	27,1%

Relatively high proportion of people with low education level in the sample is that children attending primary school (218 respondents) or not yet attending school at all (163) are both included in this group. (3. table) Others in this group are mainly above 60 years of age (75). Out of a total of 1904 people with primary education, i.e. no more than grade eight, 253 were attending secondary school by the time of the survey.

3. table: Level of education in the sample (2016) and in Hungary by the time of the census (2011)

Maximum education level	Total population 2011, %	Sample 2016, %
0- 7 years, basic	12,4 %	14,8 %
8 years basic	19,3%	23,1 %
Professional	25,2%	27,3%
Graduated in secondary school	25,0%	25,8%

University degree	18,1%	9,0%
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Distribution of the respondents by economic activity also differs from the total population of Hungary. (4. table) Proportion of students of primary and secondary schools, as well as, proportion of university and college students are almost identical to the proportion of “dependent” in the population. Employees and entrepreneurs represent a much higher, pensioners and inactive people a lower proportion in the survey sample as in the total population. Partly this is due to the declining unemployment rate in Hungary between 2011 and 2016 (from 11.0% to 5.1%).

4. table: Distribution by economic activity of the population in the sample (2016) and in Hungary by the time of the census (2011)

Economic activity, total population 2011, %		Economic activity, sample 2016, %	
Dependant	35,4 %	Elementary, secondary school pupil, student	34,0 %
Employed, entrepreneur	39,7 %	Independent entrepreneur	1,2 %
		Company owner, leader personal	0,5 %
		White collar employee	13,6 %
Inactive	24,9 %	Blue collar employee	30,8 %
		Inactive ex. retirees	5,9 %
		Retiree	14,0 %

More than half of the respondents travelled by public transport: 8.6% by train, 42.6% by bus (regular PT services or employee transportation); 40.8% of the sample used individual means of transport (mainly they are car passengers). Slightly more than half of the daily trips (54.4%) in the survey was commuting or other work related travelling (to/from workplace or school, job related travelling), 23.6% was for leisure or visiting friends and relatives; 12% shopping. Three out of four (74.9%) travel on a frequent basis, i.e. do the trip more than once a week (most of them on every working day). One out of ten (10.7%) do this trip rarely or for the first time. A majority of the trip on weekends (65.15) is done on a monthly basis. Proportion of infrequent travellers (10.3%) is similar to those of working days. In terms of the size of place of residence, the distribution of respondents approximately follows normal distribution. About 3.8% of people live in settlements with less than 500 inhabitants; 5.1% live in towns or cities above 50,000; 42.9% live in towns of 5000 to 50,000; and 48.2% in settlements of 500 to 5,000 inhabitants.

3.2. Use of time while travelling

The study focused on trips between settlements. These tend to be longer than urban trips, thus people may have more options and do in-depth activities. Travel time in urban context may indeed be larger than between two settlements, especially if done by car, but the survey was not intended to reveal urban trip characteristics, so this kind of journeys have not been included in the database.

5. table: Distribution of activities while travelling, by gender

Gender	Reading	Working	Learning	Talking	Listening to music, to radio	Phone, texting, chat	Browsing, playing, watching film	Eating / drinking	Relaxing	Nothing
Female	4,9%	0,2%	2,4%	40,8%	15,3%	3,3%	1,2%	1,0%	11,7%	19,2%
Male	3,3%	0,6%	1,8%	37,1%	17,0%	4,5%	2,1%	1,2%	14,1%	18,3%
Total	4,2%	0,4%	2,2%	39,2%	16,1%	3,8%	1,6%	1,1%	12,8%	18,8%

Respondents could select multiple options from the list of activities. It has to be emphasized here that the

interviews were conducted in the autumn of 2016. Portable devices, especially smart devices spread explosively in all age groups and all over the world, including the case study country, Hungary. Distribution of activities by gender may be seen on table 5. table

Talking with others has the highest proportion in both groups, followed by a variety of entertaining activities (listening to music, reading, etc.). There is a considerable proportion of people who report “doing nothing” while travelling; they may perceive travel time as lost time. In sum, they are one third of respondents –nearly equally in both gender groups–, including those who answered relaxing, as this may be a more positive interpretation of “doing nothing” while travelling.

6. table: Distribution of activities while travelling among different age groups

Age	Reading	Working	Learning	Talking	Listening to music, to radio	Phone, texting, chat	Browsing, playing, watching film	Eating / drinking	Relaxing	Nothing
6-18 years	3,6%	0,1%	4,9%	39,3%	23,5%	6,2%	2,8%	1,0%	4,3%	14,3%
19-30 years	5,3%	-	4,2%	32,6%	21,8%	7,1%	2,7%	1,4%	10,3%	14,5%
31-45 years	3,7%	0,7%	0,3%	39,2%	14,3%	2,8%	1,2%	1,2%	16,9%	19,8%
46-60 years	5,0%	1,1%	0,4%	40,9%	9,9%	1,4%	0,2%	0,8%	17,2%	23,2%
over 60 years	4,4%	-	-	47,9%	3,9%	-	-	0,6%	16,2%	27,0%
Total	4,4%	0,4%	2,2%	39,3%	16,0%	3,9%	1,6%	1,0%	12,3%	18,9%

Considering responses by age (6. table), talking with others while travelling was the most common activity within each group. Only young adults (between 19 and 30 years of age) are slightly below average, who tend to chat/ talk on the phone, listen to music, and read more than the average. Middle aged and older people talk to other travellers during the trip above average, being below average especially in terms of listening to music or radio.

7. table: Distribution of activities while traveling by the level of education

Educational level	Reading	Working	Learning	Talking	Listening to music, to radio	Phone, texting, chat	Browsing, playing, watching film	Eating / drinking	Relaxing	Nothing
0 - 7 years (primary school)	1,4%	0,2%	2,3%	44,5%	20,6%	2,7%	1,8%	0,8%	8,9%	16,8%
8 years (primary school)	3,6%	-	3,0%	42,4%	18,2%	5,4%	2,4%	0,8%	9,1%	15,1%
Vocational training	2,7%	0,4%	0,2%	42,6%	11,9%	1,6%	0,6%	1,1%	19,1%	19,8%
Graduated in secondary school	5,9%	0,5%	3,7%	32,1%	16,6%	5,2%	1,7%	1,4%	12,3%	20,5%
University degree	10,4%	1,1%	1,2%	32,4%	14,5%	4,5%	1,9%	1,0%	10,2%	23,0%
Total	4,2%	0,4%	2,2%	39,2%	16,1%	3,8%	1,6%	1,1%	12,7%	18,7%

Doing nothing while travelling is prevalent especially among these older age groups (above 45), and these

respondents tend to be less dependent on devices. Approximately one out of three respondents below 30 years of age carried out activities that require the use of a smart device; among respondents of 31 to 45, this is one out of five; among the middle-aged respondent from 46 to 60, one out of eight; and among the elderly above 60, one out of twenty-five. The latter tend to talk, relax or read while travelling.

Distribution by the level of education indicate that more educated people spend less time talking during the trip and reading is prevalent, followed by relaxing and idleness (7. table). A higher proportion of low educated or still studying respondents and skilled workers talk with others (42.4 to 44.5%) than the respondents who at least graduated from high school (32.1 to 32.4%).

8. table: Distribution of activities while travelling by economic activity

Economic activity	Reading	Working	Learning	Talking	Listening to music, to radio	Phone, texting, chat	Browsing, playing, watching film	Eating / drinking	Relaxing	Nothing
Pupil, student	3,8%	0,1%	5,6%	35,9%	23,6%	7,0%	2,9%	1,2%	6,4%	13,6%
Independent entrepreneur	6,8%	0,8%	-	34,6%	9,6%	5,1%	-	1,0%	10,8%	31,2%
Owner of business	5,5%	5,1%	-	33,0%	19,4%	7,8%	2,5%	2,5%	5,1%	19,1%
White collar employee	9,8%	1,0%	0,5%	29,1%	15,0%	4,4%	1,5%	1,1%	13,6%	24,1%
Blue collar employee	3,0%	0,4%	0,3%	39,8%	13,7%	2,1%	1,0%	1,2%	19,6%	18,9%
Inactive ex. pensioner	2,0%	-	-	58,6%	15,1%	2,5%	0,4%	0,7%	4,5%	16,2%
Pensioner	3,6%	-	0,2%	49,8%	5,6%	-	-	0,6%	15,4%	24,9%
Total	4,2%	0,3%	2,1%	39,4%	16,2%	3,9%	1,6%	1,1%	12,6%	18,6%

In terms of economic activity, it may be observed (8. table) that white collar workers and entrepreneurs read in a higher proportion than the average but talk much below the average of inactive people. Students talk below average as well; they learn during the trip and listen to music or use their mobile devices for browsing or chatting. The latter activities, connected to internet are relevant among entrepreneurs, too. And, of course, they are the ones who are engaged in working while travelling. Relaxing and doing nothing has relatively high proportion among private entrepreneurs, employees (both blue and white collar workers) and retired people.

9. table: Distribution of activities while travelling by different means of transport

Travel mode	Reading	Working	Learning	Talking	Listening to music, to radio	Phone, texting, chat	Browsing, playing, watching film	Eating / drinking	Relaxing	Nothing
Car	0,2%	1,2%	0,3%	74,8%	9,1%	2,1%	0,8%	0,9%	6,7%	4,0%
Other ind.	-	-	0,4%	0,4%	3,5%	1,2%	-	-	5,8%	88,8%
Train	15,8%	0,6%	8,1%	19,6%	14,3%	6,1%	4,7%	1,0%	12,7%	16,9%
Coach	3,3%	0,5%	1,5%	37,9%	15,6%	3,4%	1,5%	1,8%	21,1%	13,4%
Local publ.	6,9%	0,1%	0,5%	11,0%	7,5%	2,2%	1,2%	0,1%	4,8%	65,7%

Other	-	-	-	10,3%	22,2%	-	-	4,1%	11,7%	51,8%
No answer	18,5%	-	-	24,5%	-	16,6%	-	-	13,0%	27,4%
Total	4,2%	0,4%	2,2%	39,2%	16,1%	3,8%	1,6%	1,1%	12,8%	18,8%

Mode choice seems to be influential on the activities during the trip. (9. table) A large majority of passengers in cars talk with others. For them, listening to music or radio is the only other relevant option. Some of them report on being able to relax while travelling in a car. Users of other individual modes (bike, motorbike, etc.) have a limited number of options, such as listening to music or “relaxing” while travelling. Train passenger can select from the widest range of activities: they read, listen to music or radio, use their mobile phones (talking by phone, browsing, watching movies, etc.). Relaxing and doing nothing is, indeed, prevalent among them. Most learning students travel by train, as well. Passengers on regional buses –probably due to the low quality of roads– read, learn or use their mobile devices, i.e. do activities that require the use of eyes, in a lower proportion. They talk, listen to music or radio and many of them relax or “do nothing” instead. On-board urban services short travel time makes the selection limited; if doing any activity, people read, talk, listen to music or radio.

10. table: Distribution of activities while travelling by trip purpose

Purpose of travel	Reading	Working	Learning	Talking	Listening to music, to radio	Phone, texting, chat	Browsing, playing, watching film	Eating / drinking	Relaxing	Nothing
Home	3,6%	0,1%	1,2%	39,2%	16,1%	4,4%	1,9%	1,7%	14,0%	17,8%
Workplace	6,2%	1,0%	0,4%	32,1%	12,9%	2,2%	0,9%	0,4%	19,9%	24,0%
Working act.	4,5%	4,3%	-	37,6%	18,8%	0,9%	1,1%	0,8%	11,6%	20,5%
School	5,5%	-	11,5%	31,4%	24,0%	5,8%	2,0%	0,6%	4,0%	15,2%
Shopping	2,3%	-	0,2%	52,6%	15,7%	2,7%	-	0,3%	8,7%	17,4%
Administration citizens' duties	0,5%	-	-	39,8%	12,3%	3,0%	-	-	11,2%	33,3%
Health issues	4,6%	-	-	43,0%	4,1%	0,4%	-	-	18,8%	29,0%
Visit	5,3%	0,3%	1,5%	44,6%	14,7%	3,5%	2,6%	0,6%	9,6%	17,3%
Leisure	2,9%	0,8%	0,3%	49,2%	18,1%	3,8%	2,5%	1,3%	9,0%	12,1%
Without goal	-	-	-	88,7%	-	-	-	-	-	11,3%
Other	3,1%	-	-	53,6%	11,3%	4,4%	-	-	3,0%	24,7%
No answer	-	-	12,8%	41,4%	-	-	-	-	10,2%	35,6%
Total	4,2%	0,4%	2,2%	39,2%	16,1%	3,8%	1,6%	1,1%	12,8%	18,8%

Activities seem to be linked to trip purpose as well (10. table): work-related activities are conducted primarily by people on their trips to/from work or doing other work related trips. Similarly, a relevant proportion of travellers learned on the way to school, and many respondents with “no answer” for this item about trip motivation tend to learn while travelling, as well. Travellers to school listening to music, send messages or chat in the highest proportion. The majority of passengers travelling without a purpose was talking during the trip. A significant proportion of people who travelled for doing errands or going to hospital were relaxing or doing nothing during the trip. People going to shopping were talking, relaxing or listening to music.

3.3. Clusters of travellers by activities

After the one-dimensional grouping of data, on the basis of the large number of elements in the sample, cluster

analysis was carried out. Responses have been split into weekday and weekend trips, as these are different in terms of motivation, transport means, and frequency. In these two groups five (weekdays) and four (weekend) clusters may be identified, on the basis of the following initial grouping criteria:

- gender;
- age group;
- education;
- economic activity;
- purpose of travel;
- first mentioned activity during the trip;
- means of transport;
- frequency.

The clusters may be characterized as follows.

1. On weekdays, the first group:

- 2450 journeys,
- mainly (67.3%) trips by public transport,
- gender and age distribution is the average of the sample,
- distribution of activities by trip purpose is the average of the sample.

2. On weekdays, the second group:

- 37 journeys,
- mainly (70.3%) trips by public transport,
- proportion of women and people under 30 years of age above average,
- trips to educational institutions and shopping above average, commuting below average

3. On weekdays, the third group:

- 19 journeys,
- share of trips by passenger car (47.4%) and by local public transport (15.8%) is over the average,
- the proportion of trips of women (78.9%) and of older people (31.6%) is higher than average,
- no answer on trip purpose by half of the respondents, proportion of shopping is above the average.

4. On weekdays, the fourth group:

- 240 journeys,
- share of trips by bicycle (37.5%) and by passenger car (42.1%) is higher than average,
- gender distribution is in line with the average of the sample, but the proportion of people between 31 and 45 years of age is much higher than the average,
- distribution of trip purpose is the average of the sample.

5. On weekdays, the fifth group:

- 671 journeys,
- almost exclusively (94.5%) trips by public transport, individual means of transport were not used at all,
- proportion of women exceeds the average; they are mainly over 45 years of age,
- distribution of trip purpose is the average of the sample.

6. At the weekend, the first group:

- 286 journeys,
- trips made mainly (68.8%) by car,
- trips made typically by women (69.6%), whose age distribution is the average of the sample,
- mainly (94.4%) leisure trips.

7. At the weekend, the second group:

- 569 journeys,
- trips made mainly (67.4%) by car
- trips made typically by women (69.8%) whose age distribution is the average of the sample,
- mostly (63.5%) shopping trips or trips to work (22.4%).

8. At the weekend, the third group:

- 141 journeys,
- trips by public transport above average (51.8%),
- proportion of women is higher than average (68.1%) and they are older (51.1%) than the average,
- distribution of trip purpose is the average of the sample.

9. At the weekend, the fourth group:

- 11 journeys,
- trips made mainly (81.8%) by car,
- gender distribution is the average of the sample, mainly (72.7%) young people between 19 and 30 years of age,
- mostly leisure trips.

11. table: Distribution of activities while travelling on weekdays, by clusters

Activity during working day	Cluster number					Total
	1	2	3	4	5	
Reading	8,1%	5,4%	0,0%	0,0%	0,0%	5,9%
Working	0,6%	5,4%	0,0%	0,0%	0,0%	0,5%
Learning	2,4%	10,8%	0,0%	0,0%	0,0%	1,8%
Talking	51,4%	29,7%	0,0%	0,0%	0,0%	37,2%
Listening to music, to radio	12,5%	10,8%	0,0%	0,0%	0,0%	9,1%
Phone, texting, chat etc.	2,6%	2,7%	0,0%	0,0%	0,0%	1,9%
Browsing, watching film	0,5%	8,1%	0,0%	0,0%	0,0%	0,5%
Eating / drinking	0,5%	0,0%	0,0%	0,0%	0,0%	0,4%
Relaxing	21,4%	27,0%	0,0%	0,0%	0,0%	15,7%

Other	0,0%	0,0%	0,0%	1,7%	0,4%	0,2%
Nothing than traveling	0,0%	0,0%	94,7%	95,0%	97,8%	26,4%
No answer	0,0%	0,0%	5,3%	3,3%	1,8%	0,6%

Clusters of travellers on weekdays (11. table) can be characterized by the following activities. More than half of the members in Cluster 1, who represent a large part of the sample, were mostly –more than half of them– talking to their peers. In addition, a significant proportion of members in this cluster were relaxing, many of them listening to music or radio, and reading. The largest group of the members in Cluster 2 (29.7%) were also talking, and the same proportion was “relaxing”. Many people in this Cluster were learning, or listening to music or radio. These are the people who use their mobile devices for browsing, watching movies, etc., as well. Almost all members of the other three clusters (Cluster 3 to 5) reported on not doing anything while travelling. This is partly justified. For example, members of Cluster 4 are basically using individual means of transport (bicycles and motorcycles), i.e. the variety of activities is very limited. Approximately 50% of them travel without a purpose, therefore it can be assumed that they wanted to fully disconnect. Members of the small Cluster 3 are different from the average by their “concealing” (not revealing their trip purposes); they are possibly going home. The members of Cluster 5 are incommunicative anyway, as they have not mentioned any other activity, even though some of them are travelling to work or home, go shopping, do errands or visit friends and relatives.

12. table: Distribution of activities while travelling on weekends, by clusters

Activity during weekend	Cluster number				Total
	1	2	3	4	
Reading	5,6%	4,4%	0,0%	0,0%	4,1%
Working	0,3%	0,0%	0,0%	0,0%	0,1%
Learning	1,0%	0,9%	0,0%	0,0%	0,8%
Talking	74,1%	72,8%	0,0%	45,5%	62,7%
Listening to music, to radio	9,1%	10,4%	0,0%	18,2%	8,6%
Phone, texting, chat etc.	0,7%	1,2%	0,0%	0,0%	0,9%
Browsing, watching film	0,3%	0,4%	0,0%	0,0%	0,3%
Eating / drinking	0,0%	0,2%	0,0%	0,0%	0,1%
Relaxing	8,7%	9,8%	0,0%	36,4%	8,4%
Other	0,0%	0,0%	2,8%	0,0%	0,4%
Nothing than traveling	0,0%	0,0%	95,0%	0,0%	13,3%
No answer	0,0%	0,0%	2,1%	0,0%	0,3%

Clusters of passengers on their weekend trips can be characterised as follows (12. table). The vast majority of members of Cluster 1 (74.1%) was talking to others while travelling. In addition, a remarkable proportion of people listening to music or radio, relaxing or reading may be observed in this group. Cluster 2 consists essentially of those who spending their time talking (72.8%). Furthermore, members of this group listen to music or radio, read and/or relax. What makes Clusters 1 and 2 different is trip purpose: trips in Cluster 1 were mainly for leisure, while those of Cluster 2 were related with work or school. Cluster 3 members are almost exclusively “doing nothing” while travelling. Members of the small (1.1% of all respondents) Cluster 4 were talking to peers, listening to music or radio and spending their time by relaxing. This differs from Clusters 1 and 2 by the share of activities. In Cluster 4 more people are relaxing and less talking to others.

4. Conclusion and future research directions

In summary, we can conclude that for a very large part of travelers, travel time is not a waste of time. It is rather a time when they can carry out activities that they would presumably not be able to do in any other moment of the 24 hours of a day. The extent to which new technologies can contribute to increase the value of the time spent traveling is particularly interesting: browsing on the internet, listening to music or radio, watching movies, or even reading online.

Further research can go into, at least, two directions. First, to examine in an international comparison how different transport providers help to ensure that the time spent traveling is not a waste of time, even promoting this way the use of public transport instead of individual transport, especially passenger cars. Second, it seems to be reasonable to repeat the survey in Hungary, as the penetration of electronic devices and related services on board transport services is increasing rapidly, and changes may be remarkable in the range of only a few years.

References

The use of time; (ed.) A. Szalai, 1972. Mouton & Co., The Hague – Paris, page 820 (data; figure: own design)