The effect of "Roam like at home" rules on consumption of mobile services in the European Union

by

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Abstract

This study looks at the effect of Roam Like at Home policy which was implemented in June 2017 in the European Economic Area. Roam Like at Home policy has abolished all roaming surcharges on voice calls, SMS/MMS messages, and data consumption. In the paper I use differences-in-differences estimation method in order to identify the effect of this policy on data consumption and the amount of calls and texting. Diff-in-diff, controlling for tourism and GDP per capita, showed positive effect of the policy on data consumption growth, however no significant effect was found for minutes of use for calls or texting. This confirms both precautions of focusing on data demand of the European Committee and adds to currently limited amount of empirical analysis of the RLAH implementation.

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Table of contents

CEU eTD Collection

List of Tables

CEU eTD Collection

List of Figures

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Introduction

In this thesis I analyze the effect of Roam Like at Home policy (RLAH) on consumption of data, voice calls and texting in the European Economic Area. Currently, there's a limited empirical analysis of the event, mainly due to the scarcity of data and small period of time that has passed since the policy has gone in force. However, studying this policy is of a particular interest due to visible yearly seasonality of data, which is most apparent for data traffic. Thus, in this paper I identify the contribution of Roam Like at Home policy on the functionality of mobile services in the EU

The first chapter describes the process which the EU went through: from 2006 first caps on retail consumption on calls, and further surcharges on texts and data traffic roaming have been implemented. Through the number of Regulations and criticism from both telecom lobbyists and consumers, the EU managed to apply the Roam like at home rule making it one of the most significant events in single market history of the European Union.

Second chapter describes data, its source, data cleaning process that addressed the issues of outliers and some limitations. For this particular study three metrics were chosen: data traffic, minutes of use and SMS messages.

Overall, even initial raw statistical data that were revealed by the Body of European Regulators for Electronic Communications (BEREC) for the third quarter of 2017 (or first quarter of RLAH) showed strong growth of data consumption, while results for voice and messages were considerably lower. One of the main explanations of the latter is increasing popularity of over-the-top instruments, such as WhatsApp or Skype. Consequently, lower growth for calls and SMS is not surprising, while significant additions in data traffic are justified.

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In the third chapter I describe the model and implement diff-in-diff estimation strategy in order to identify the effect of RLAH on the mobile services consumption. I include controlling factors, such as the number of tourists in the country and GDP per capita and discuss results for each of the three chosen variables.

Results show that there's a significant growth of data usage by consumers in the treated countries, whereas there's no significant effect on voice calls and SMS messages. Chapter 4 concludes and provides some policy implications.

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Chapter 1. Roaming in the European Union and Literature Review

According to the World Tourism Organization, number of world international tourists hit 1.25 Billion in 2016 and has been consistently growing since 2008 at an average year-on-year 5% rate. In 2017 GSMA Intelligence reported that number of unique mobile subscribers in the world more than doubled in last 10 years and surpassed the mark of 5 Billion. Despite this, usage of voice, SMS, data and other mobile services in a different country known as "roaming" was not in favor of users due to high caps and possible bill shocks. For instance, according to February 2014 press release of European Commission on roaming in the European Union, almost half of the travelers would not use data services while traveling in the EU, and 28% chose to switch off their mobile phones completely while in another country. Considering this, in April 2014 European Parliament approved proposition of the EC to establish a single market for electronic communications within the EU and to gradually end roaming charges. In this chapter we discuss the history of retail roaming in the EU until June 2017 "roam like at home" rules, when extra charges for retail roaming were switched off.

1.1 First steps of the calls, messages and data roaming regulation in the EU

The first intervention of the EC happened in 2006, when it proposed a regulation[1] on roaming with the aim to substantially reduce "the level of mobile roaming charges across the Community in a harmonized manner". The proposal was approved by the European Parliament in June 2007 and set the "Eurotariff" cap on any roaming call made to 0.49 EUR per minute and to 0.24 EUR per minute for any call received. It has also set the ceiling to be further reduced

[1]Proposal for a Regulation of the European Parliament and of the Council on roaming on public mobile networks. The European Commision's website. Available at: (http://ec.europa.eu/information_society/activities/roaming/docs/regulation/regulation_en.pdf)

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in August 2008 and August 2009 to 0.46/0.43 EUR for outgoing and 0.22/0.19 EUR for incoming calls respectively. New prices covered all consumers, except for those that opted out for special packages of their operators. The regulation also required operators to send traveling customers a text message with details on charges that apply for usage of roaming services.

In 2008 the EC proposed to further reduce voice call caps and added a ceiling of 0.11 EUR for an outgoing SMS message[2]. Impact assessment of this regulation according to the EC in pessimistic scenario resulted in drop in industry profits of 168 Mn EUR, significantly outweighed by an increase in consumer welfare of 884 Mn EUR[3].

The cap on messages was introduced in July 2009, while planned for 2010 and 2011 caps on incoming and outgoing calls were reduced even further to 0.39/0.35 EUR and 0.15/0.11 EUR respectively. At the same time, the European Parliament introduced per second billing for outgoing calls starting for 31st second and per second billing for incoming calls starting from 1st second[4].

To avoid bill shock of data usage while roaming, in July 2010 the EU introduced a 50 EUR limit, unless another limit was chosen by the consumer. Data transfer regulation however did not start until July 2012, when 1 Mb of usage was capped at 0.7 EUR with billing interval per 1 kilobyte. According to the EU calculation, together with calls and SMS messages, new regulation on data would lead to increase of consumer savings by 75% in comparison to 2007[5].

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[2]Proposal for a Regulation of the European Parliament and of the Council on roaming on public mobile networks. The European Commision's website. Available at: (http://ec.europa.eu/information_society/activities/roaming/docs/regulation/reg_en.pdf)

[3]Proposal for a Regulation of the European Parliament and of the Council on roaming on public mobile networks. Impact Assessment. The European Commision's website. Available at: (http://ec.europa.eu/information_society/activities/roaming/docs/regulation/impact_en.pdf)

[4]Press Release. July, 2009. The European Commision's website. Available at: (http://europa.eu/rapid/press-release_IP-09-1064_en.htm?locale=en)

[5]Press Release. May, 2012. The European Commision's website. Available at: (http://europa.eu/rapid/press-release_MEMO-12-316_en.htm)

1.2 Roam like at home rules

In 2013 cap rates were reduced for outgoing calls to 0.24 EUR, SMS messages to 0.08 EUR and data transfer to 0.45 EUR. According to the EC, data roaming became 91% cheaper in 2013 than in 2007, while "the volume of the data roaming market has grown 630%", though the effect of wider usage of smartphones shouldn't be dismissed[6]. July 2014 saw another reduction of caps: calls to 0.19 EUR, messages to 0.06 EUR, while data was almost halved to 0.2 EUR. New rates were valid until April 2016.

At the same time the EC proposed to establish a single market for electronic communications[7], where "citizens and businesses can access electronic communications services wherever they are provided in the Union, without cross-border restrictions or unjustified additional costs". Proposition was approved in April 2014 by the European Parliament and within this framework of single market it was decided to "abolish retail roaming surcharges" to allow users to "Roam like at home" (RLAH).

The principle of RLAH was established in October 2015 when the European Parliament adopted Regulation (EU) No. 2015/2120. The principle required roaming operators not to apply any surcharge to domestic retail price on roaming customers starting from June 15 2017, unless Fair Use Policy is breached.

Furthermore, new Roaming Regulation set a transitional period from the end of April 2016 until 14th June 2017, where RLAH was activated, however operators could apply extra

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[6]Press Release. May, 2012. The European Commision's website. Available at: (http://europa.eu/rapid/press-release_IP-13-611_en.htm)

[7]Proposal for a Regulation of the European Parliament and of the Council on roaming on public mobile networks. The European Commision's website. Available at: (https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013PC0627&from=EN)

charges to their domestic prices. Caps for calls and data were cut to 0.05 EUR, for messages to 0.02 EUR.

On June 15th, 2017 RLAH rules came fully into force on retail roaming market. For full view of the process of the reduction of roaming prices see Table 1 Roaming retail caps in the EEA.

1.3 Fair Use Policy

As written above, Fair Use Policy (FUP) was established in 2015 Roaming Regulation. In particular, Article 6b[8] set that operators could apply FUP "to prevent abusive or anomalous usage of regulated roaming services by roaming customers".

First proposal on FUP came out in September 2016. The draft stated that consumers could roam at domestic prices no longer than 90 days in a year and no more than 30 consecutive days. However, it immediately faced criticism of consumer groups claiming that this wouldn't mean the end of roaming and single market as promised by the EC. Furthermore, The European Consumer Organisation (BEUC) commented that hypothetical misuse of some consumers shouldn't result in penalty of all[9].

Consequently, the draft was rewritten and updated version with excluded day limits was approved on 15 December 2017. Article 2 of the Regulation added the principle of "stable links", which means full-time and durable presence of consumers on the territory of the Member State. This idea is developed in Article 4 of the Regulation, where it is established that to prevent "abusive or anomalous usage" of data consumption, providers may apply

[8] Regulation of the European Parliament and of the Council on universal services and users' rights. European Union Law website. Available at: (https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R2120&from=EN)

[9] Press statement. September, 2016. The European Consumer Organisation website. Available at: (http://www.beuc.eu/publications/roaming-time-limit-dropped/html)

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mechanisms based on indicators (including stable links) that measure domestic consumption over roaming consumption in other Member States. Such indicators should be observed for at least 4 months, which should be "considered as a proof of non-abusive and non-anomalous usage of regulated retail roaming services".

Overall, the Regulation is focused on misuse of data bundles, in particular unlimited prepaid plans, while the risk for voice calls and SMS is thought to be "considerably less acute" due to physical and temporal constrains and decreasing usage patterns of consumers.

In such cases of high data consumption, surcharge is set to wholesale data cap – 7.7 EUR per GB of data plus VAT – which is the price that domestic operators pay to foreign operators for usage of data roaming.

To conclude, FUP should protect operators from the misuse of cheaper tariffs in countries with higher tariffs, while maintaining the single market idea with free roaming services for occasional business and leisure travelers.

1.4 Territorial coverage

RLAH rules cover 31 members of the European Economic Area (EEA), which includes 28 members of the EU and 3 European Free Trade Association member states: Iceland, Liechtenstein and Norway.

Furthermore, roaming tariff reduction with eventual abolition might by extended to Georgia, Moldova and Ukraine[10] and might also cover remaining 3 members of Eastern Partnership: Armenia, Azerbaijan and Belarus.

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[10] Press statement. November, 2017. Available at: (https://www.rferl.org/a/eu-roaming-hahn/28858232.html)

It should also be noted that Switzerland, which has a series of bilateral agreements with the EU, is not part of RLAH rules. At the same time, though currently the United Kingdom is part of the EU and is covered by RLAH rules, it is set to leave the Union including single market in March 2019. Though British operators seem to show little desire for a return to roaming caps[11], it is not yet clear whether free roaming will be available in the UK and for its citizens in the EU after Brexit is finalized.

1.5 Effect of RLAH rules

Aside from preliminary impact assessments of the EC and benchmark reports by the Board of European Regulators for Electronic Communications (BEREC) there's little empirical analysis on the effects of RLAH rules. Presumably this is caused by overall detailed data scarcity and small timeframe after the event.

Nevertheless, "International Roaming BEREC Benchmark Data Report", published in March 2018 and which covered April to September 2017, showed increase in all roaming services. As per report, quarter to quarter growth of data traffic was 148% in Q3 2017, of outgoing international calls was 78%, of SMS 93%. In comparison, respective numbers of Q3 2016 were 123%, 36% and 59%. Though the report admits that seasonality is a strong factor in this data, there's a visible effect of RLAH rules. For instance, year-on-year growth of data traffic in Q3 2017 was 435%, while Q3 2016 year-on-year growth was at 36%. At the same time, volumes of data consumption increased to a range of 59 – 1616 Mb in Q3 2017 from 8 – 342 Mb range in Q3 2016.

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[11] Press statement. May, 2018. Available at: (https://www.computerweekly.com/news/252436396/Will-Brexit-really-bring-the-return-of-mobile-roaming-charges)

With regards to average retail mobile revenue per user (ARRPU) BEREC states that Q3 2017 numbers have minor difference from Q2 2017. These results, however, should be taken with caution, since most operators provide their offerings in bundles, which might include both mobile and fixed services, as well as handsets.

Overall, the report shows that there's a visible and strong effect of RLAH rules on data consumption. And even though calls and SMS grew too, FUP related precautions were targeted correctly.

1.6 Literature review

As it has been mentioned above, there is not enough research done on "Roam like at home" regulation due to the fact that this is quite a new policy and there is not enough data yet to provide thorough research. However, in this section I would like to mention several empirical studies done on this policy and mobile industry as a whole.

There is some interesting research on RLAH: the first attempt to study the "Roam like at home" was done by Jaunaux, Deniau and Lebourges (2015), who analysed the consequences of the RLAH obligation on European Markets. This obligation prohibits any price surcharge for roaming usage within EU. They concluded that regulation on wholesale roaming market would not abolish the heterogeneity of mobile costs and usage in Europe. This means that some national mobile markets may increase domestic price or depart from pure RLAH and allow for some extra charge above the domestic price. That is why, the regulation should become more flexible and allow some deviations from pure RLAH obligation. According to the authors, the wholesale roaming regulation can be justified only in the case when there is no competition, as the service providers must recover their costs to avoid the damage of national markets' sustainability.

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In their subsequent study Jaunaux, Deniau and Lebourges (2016) analyse the competitiveness of the wholesale roaming market from the two perspectives: "the existence of competitive mechanisms and incentives in wholesale roaming markets and the average level of wholesale market prices in comparison with corresponding level of full production costs". As a result, they show that the wholesale markets exhibit high level of competition and incentives stimulated by increasing roaming volumes as a result of RLAH regulation. According to their analysis, in 2015 the level of wholesale roaming market prices in Europe was equal to the average wholesale roaming production costs, which shows that wholesale roaming market was highly competitive. They conclude that strong regulation such as large decrease of wholesale roaming caps is not justified and can create a serious risk of distortion of visited markets and endanger investments in mobile networks industry.

Overall, studies in the telecommunication industry are mainly devoted to the choice of tariffs by the customers. For instance, Train et al. (1987) concluded that customers change tariffs less frequently than it can be predicted from the cost minimization point of view. Kridel et al. (1993) found that almost 75% of customers who subscribe to the flat tariff do not use it accordingly and, actually, do not justify their subscription. It is also possible to mention the study by Miravete(2004), who studied the pricing in mobile telephone industry. Miravete elaborated a an equilibrium oligopoly model of horizontal product differentiation for companies which mainly compete in nonlinear tariffs. By identifying the determinants of the non-uniform equilibrium markups charged to consumers of mobile networks services, the authors assess the welfare effects of competition and alternative linear/nonlinear strategies. They concluded that a single two-part tariff is able to achieve 63% of the potential welfare gains and 94% of profits of a more complex fully non-linear tariff.

Returning back to RLAH it is possible to say that parallel to Jaunaux, Deniau, Lebourges (2015) current study also finds that there was no significant effect of RLAH on

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mobile usage and SMS services, whereas in line with Jaunaux, Deniau and Lebourges (2016) the roaming volume has risen significantly as a result of this policy. In future, with richer dataset it would be interesting to estimate structural model and run counterfactual studies in order to quantify the welfare effect in the wholesale roaming market.

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Chapter 2. Data

Data for this research is obtained from GSMA Intelligence (GSMAI), which is the unit of GSM Association – a trade body which represents approximately 800 mobile network operators. On its own, GSMAI collects data from National Regulatory Authorities and reports mobile network operators. Data doesn't include mobile virtual network operators (MVNO). Data on mobile consumption metrics is collected for the last 5 years on quarterly basis, thus starting from Q1 2013 and finishing at Q1 2018.

The dataset contains information on various metrics such as data traffic, minutes of use and SMS messages. Data traffic is taken as total (in gigabytes), thus includes all traffic transferred over the 2G/3G/4G mobile networks. Minutes of use are "total minutes, including incoming, outgoing and roaming calls".

SMS messages are taken as total transferred messages via mobile network. Total amounts for minutes of use and SMS messages are taken due to scarcity of data for international calls and no data on outgoing international messages. Nevertheless, considering comments of the EC on negative trend for usage of calls and messages from Chapter 1 and rise of over-the-top services like WhatsApp and Viber, it is safe to presume that significant effect (if there is one) of RLAH should be even more visible for total amounts of use and SMS messages.

To have comparable proxy between metrics and countries which are not covered by RLAH rules, I took their growth rates compared to previous quarter starting from Q2 2013.

Furthermore, I acquired yearly "International tourism, number of arrivals" and GDP per capita in constant 2010 USD as control variables from the World Bank.

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Initially data was collected for all available operators from all countries. All countries are needed for difference in differences model, which requires both treated and non-treated by RLAH countries. I discuss this model in Chapter 3.

As the next step, operators from countries with significant outlying numbers were excluded. This includes both countries which are very high on GDP per capita scale (such as Monaco, Liechtenstein) and countries which experienced disruptive entrance of new players which changed the market (such as Reliance Jio in India).

In addition, operators with overall significant amounts of missing data or no data for 3Q 2017 or subsequent periods were excluded. Former is valid for African and Latin American countries, such as Sudan or Uruguay. While latter might be applicable to any country, including RLAH covered EEA members.

While data for data traffic and minutes of use for Q3 2017 and later is comparably representative (16 and 20 EEA member operators respectively), data for SMS messages includes only 5 countries and thus results should be taken with caution.

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Chapter 3. Regression model and results

3.1Difference in differences regression

Considering, that data contains treated and non-treated by RLAH rules countries both before and after RLAH came into force (June 15th, 2017), I utilize difference in differences (DID) regression.

DID model for each considered metric:

$$y_{ist} = \gamma_s + \lambda_t + \delta D_{st} + C_{st1} + C_{st2} + \varepsilon_{ist},$$

where, y_{ist} is the dependent variable (data traffic, minutes of use, SMS) in a country *s* at time *t*, while γ_s indicates treated country, λ_t is treated period, and D_{st} shows treatment status with δ treatment effect. C_{st1} and C_{st2} are already described control variables for tourism and GDP per capita.

3.2 DID for data traffic

Graph 1 below represents average growth rates of data traffic consumption in RLAH treated and untreated countries. While volatility for treated countries is much higher, both lines suffer from seasonality and fluctuate around 15-20% growth rates. The first significant spike comes for treated countries, when average growth rates increased by 36% quarter to quarter in Q3 2017 (note that this does not include all countries of the EEA). The spike is even more impressive, since average growth rates in untreated countries are on average approximately 5 percentage points higher than that of treated countries.

It should be noted, that Q4 2017 saw significant drop of average growth rate. A look at the data shows that main driver here was negative growth in southern countries of Europe: Portugal, Spain and Greece.

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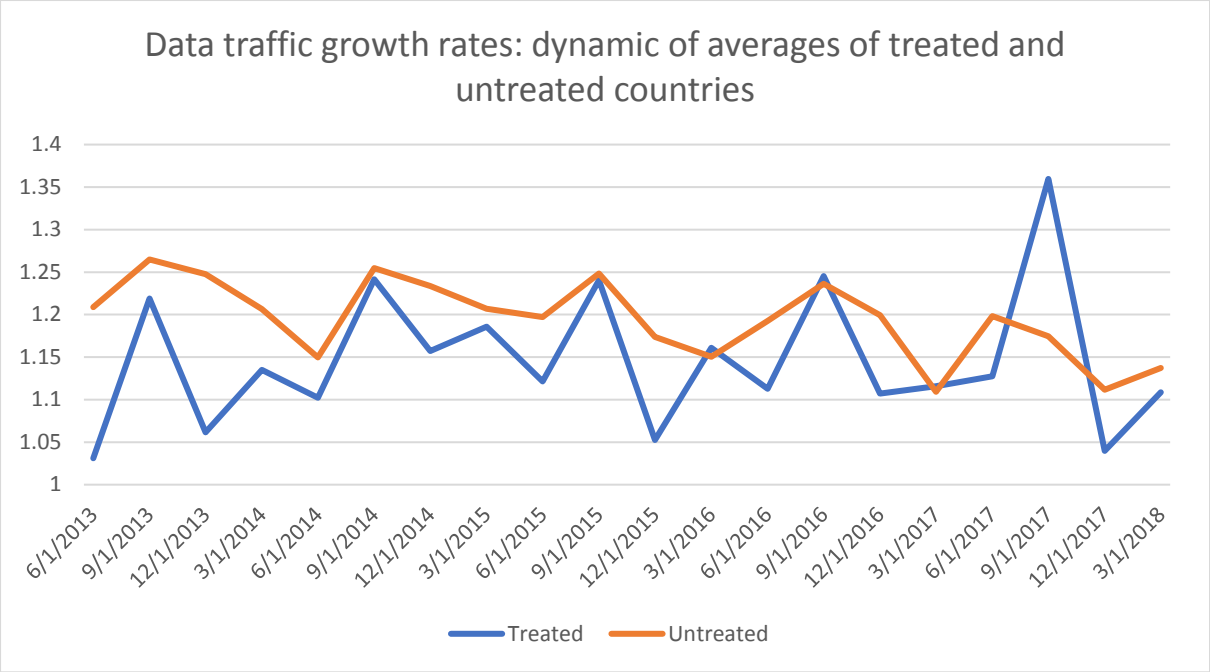

Figure 1 Data traffic: dynamic of average growth rates

Considering the timeframe of 5 years, it's safe to assume that data traffic for both treated and untreated regions were overall stable. Standard deviation for treated countries prior to RLAH is 0.06, while for untreated countries it's 0.04. One can further consider, that despite continuous decrease of roaming surcharges, the effect did not become visible until full RLAH implementation.

Furthermore, to check parallel trends assumption for DID model, I check treatment impact at earlier dates. If we assume, for instance, that RLAH was applied in November 2016 and run DID regression with new dummies, received δ would be 0.054 with P-value 0.067. Though still valid at 10%, the effect and significance are much lower than that of June 2017 cut-off.

DID model results for actual RLAH implementation are shown in Table 1 below.

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DID coefficient here represents approximately 0.10 percentage point higher growth rate of data traffic consumption for operators in treated countries. This strong positive effect is not unexected and perhaps would have been even more significant if it wasn't for drop in Q4 2017.

Table 1

	Estimate	Std. Error	t value	Pr (>|t|)	Significance
Intercept	1.2100	0.0109	111.118	0.0000	***
Treated country	- 0.0397	0.0189	- 2.103	0.0357	*
Treatment period	- 0.0567	0.0243	- 2.335	0.0197	*
DID	0.1049	0.0387	2.714	0.0067	**
Tourism, number of arrivals	- 0.0000	0.0000	- 0.960	0.3372	
GDP per capita	- 0.0000	0.0000	- 1.214	0.2249	

*Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1*

3.3 DID for minutes of use

The Graph 2 below shows average growth rates of minutes of use consumption in treated and untreated countries.

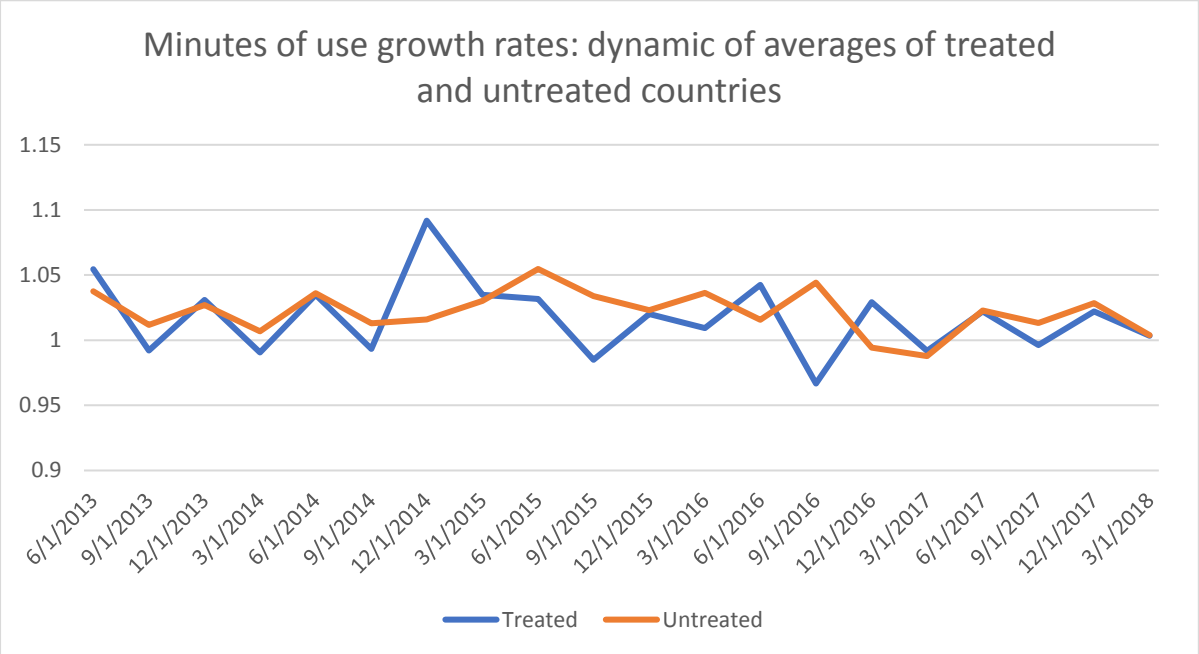

Figure 2 Minutes of use: dynamic of average growth rates

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Fluctuation is higher in treated countries, furthermore one can see similar patterns throughout 2013-2014. One can approach this as a reminder of scarcity and low quality of available data.

Nevertheless, it's not uncommon for both treated and untreated countries to go negative in their quarterly growth rates.

One can see that there's a parallel trend for both sets of data starting from the end of 2016. However RLAH effect in Q3 2017 is at best zero, if not negative.

This is seen in DID model for minutes of use, where DID coefficient is actually negative, though very small and not significant.

Table 2

	Estimate	Std. Error	t value	Pr (>|t|)	Significance
Intercept	1.0190	0.0060	170.0990	0.0000	***
Treated country	- 0.0086	0.0084	- 1.0150	0.3100	
Treatment period	- 0.0042	0.0143	- 0.0293	0.7700	
DID	- 0.0061	0.0204	- 0.3010	0.7640	
Tourism, number of arrivals	0.0000	0.0000	1.1440	0.2530	
GDP per capita	0.0000	0.0000	0.4440	0.6570	

*Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1*

Overall, one can consider this as another effect of OTT services, consumption of which should have increased via data traffic.

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3.4 DID for SMS messages

The Graph 3 below shows the dynamic of average growth of SMS messages in RLAH treated and non-treated countries. Though overall it seems to follow same pattern as voice calls. One can notice significant fluctuation of treated countries with drops to negative growth

numbers. Furthermore, there is a spike in the end of 2017, which however was nullified by the drop in Q1 2018.

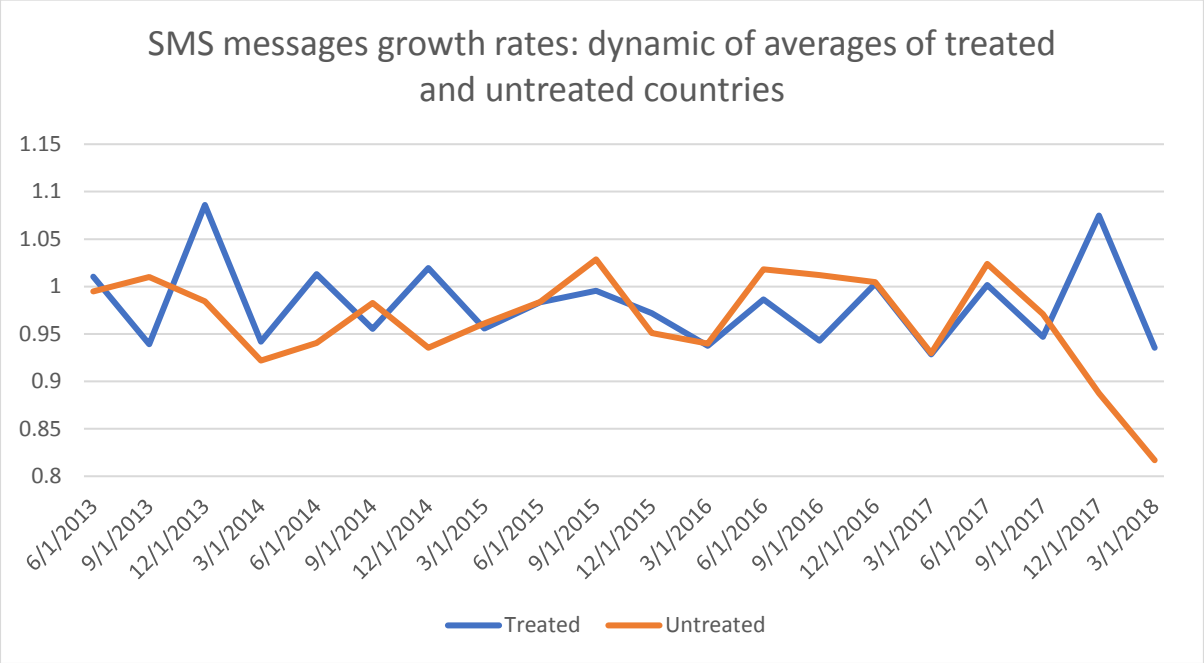

Figure 3 SMS messages: dynamic of average growth rates

According to the graph, there is a visible parallel trend starting from the end of 2016. DID model shows overall positive coefficient for intervention, however it's not significant.

Table 3

	Estimate	Std. Error	t value	Pr (>|t|)	Significance
Intercept	0.9618	0.0109	88.199	0.0000	***
Treated country	- 0.0048	0.0131	- 0.3640	0.7159	
Treatment period	- 0.0146	0.0166	- 0.8780	0.3806	
DID	0.0102	0.0246	0.4140	0.6790	
Tourism, number of arrivals	- 0.0000	0.0260	- 0.3520	0.7248	
GDP per capita	0.0000	0.0369	2.6610	0.0083	**

One can draw same conclusion as with minutes of use here: OTT consumption through services like WhatsApp, Skype and social networks most probably led to almost no effect of RLAH on consumers behaviour with regards to calls and texting.

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Chapter 4. Conclusion and policy implications

Roam like at home policy has dropped all roaming surcharges in the European Economic Area. Initial raw statistical results showed its strong effect on data consumption. Using diff-in-diff estimation method this study controls for unobserved omitted variables and confirms that there's a 0.11 percentage point growth of data consumption for operators in treated countries at 1% significance level.

At the same time, there was no visible effect for voice calls and messages and this trend will most probably hold. This result is in line with Jaunaux, Deniau and Lebourges (2015) and one of the reasons could be that national mobile operators could increase domestic prices or implement some other workaround tariffs in order to keep their revenue afloat. As a response consumers' mobile usage doesn't demonstrate a significant change.

One of the limitations of the study was the fact that complete SMS messages data was available only for five countries, which is why I hesitate to give any policy implications based on the small available data.

As for the roaming usage, with more and more countries deciding to drop roaming charges for their consumers and possibility of satellite connections, data traffic and data consumption in the world is bound to continuously grow. Together with opportunities it creates some challenges for the wholesale roaming markets, which became highly competitive in recent years. One of the directions for future research could be using structural model in order to quantify welfare effects for the wholesale roaming markets as a result of RLAH policy.

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Annex

. Roaming retail caps in the EEA

Type of service	Unit description	30 August - 29 August 2008	30 August 2008 - 30 June 2009	1 July 2009 - 30 June 2010	1 July 2010 - 30 June 2011	1 July 2011 - 30 June 2012	1 July 2012 - 30 June 2013	1 July 2013 - 30 June 2014	1 July 2014 - 29 April 2016	30 April 2016 - 14 June 2017	15 June 2017 - present
Outgoing calls to any EEA number	price of 1 minute	0.49	0.46	0.43	0.39	0.35	0.29	0.24	0.19	home network local rate + 0.05	home network local rate
	billing interval	not regulated		per second starting from 31st second							home network local billing interval
Outgoing text message to any EEA number	price of 1 message	not regulated		0.11			0.09	0.08	0.06	home network local rate + 0.02	home network local rate
Data transfer	price of 1 megabyte	not regulated					0.7	0.45	0.2	home network local rate + 0.05	home network local rate
	billing interval	not regulated					per 1 kilobyte starting from first kilobyte				home network billing interval

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