

Developing a marketing strategy for launching Intel-based mobile broadband dongles for the Russian market

Dmitry Kasatkin

Master's Thesis
Degree Programme in International
Business Management
2012



Abstract

02.12.2012

IBMA - Degree Programme in International Business Management

Author or authors Dmitry Kasatkin	Group or year of entry 2008
Title of report Developing a marketing strategy for launching Intel-based mobile broadband dongles for the Russian market.	Number of report pages and attachment pages 100 + 16
Supervisors Tarja Koskinen-Nisula, Pirjo Saaranen	
<p>The purpose of the study is to suggest a potential marketing strategy for launching Intel-based mobile broadband dongles for the Russian market. One objective is to identify what should be overall marketing strategy and another objective is to estimate potential demand for the Intel-based mobile broadband dongles.</p> <p>The conceptual framework is based on literature and articles about marketing strategies and consumer behavior. Concepts such as Marketing Mix (4Ps), Brand Image, Perceived Product Quality, Perceived Value, Concern for Price, Concern for Quality and Purchase Intention form the basis of the conceptual model. Leading concept is the purchase intention. Other concepts are the factors influencing the purchase intention. Marketing mix variables are adjusted to achieve the highest purchase intention.</p> <p>Research design is descriptive and quantitative research methods were applied. Primary data were collected using online questionnaire survey and secondary data were extracted from internal secondary sources, such as market reports. Quantitative data analysis was conducted using IBM SPSS software and Microsoft Excel.</p> <p>The results confirm that Intel brand image, perceived product quality, and a useful set of features positively influence overall purchase intention. But findings showed that the price, 2500 rubles for the Intel-based MBB dongles, was set too high. The results indicated that possible market share for the Intel-based mobile broadband dongles could be up to 16%. The results also suggested how to adjust the marketing mix to appeal to the group of consumers having high purchase intention.</p> <p>In conclusion, research questions were answered, marketing mix recommendations were developed and potential demand was estimated. It shows a potential for the Intel-based mobile broadband dongles. Also research process findings were presented. Using social network for collecting the data can be recommended.</p>	
Keywords Marketing Strategy, Consumer Behaviour, Consumer Attitude, Purchase Intention	

Table of contents

1	Introduction.....	1
2	Literature review and research hypotheses	4
2.1	Consumer Behavior	4
2.2	Marketing strategy	6
2.2.1	Market segmentation.....	8
2.2.2	Product.....	9
2.2.3	Price.....	11
2.2.4	Branding.....	12
2.2.5	Place	14
2.2.6	Promotion.....	15
2.3	Conceptual model	16
3	Research process	20
3.1	Research methodology	20
3.2	Data collection.....	22
3.3	Questionnaire communication	25
3.4	Data analysis.....	27
4	Data analysis and results	29
4.1	Market analysis.....	29
4.1.1	Internet usage in Russia	29
4.1.2	3G modem sales in Russia.....	31
4.1.3	Market situation in 2012	33
4.2	Descriptive analysis	34
4.2.1	Profile of respondents.....	34
4.2.2	Internet usage.....	38
4.2.3	Product.....	42
4.2.4	Promotion.....	44
4.2.5	Place	46
4.2.6	Attitude to price and quality.....	47
4.2.7	Attitude to Intel's brand and products.....	54
4.2.8	Attitude to the E369 modem.....	55
4.2.9	Purchase intention	60

4.3	Inferential, difference and associative analyzes	61
4.3.1	Hypotheses testing	61
4.3.2	Model testing.....	67
4.3.3	Purchase intention analysis.....	69
4.4	Sales volume estimation	85
5	Research results and discussion.....	87
6	Conclusions.....	92
	References	94
	Attachments.....	97
	Attachment 1: Questionnaire in Russian	97
	Attachment 2: Questionnaire in English.....	106

1 Introduction

The study focuses on developing a marketing strategy for launching Intel-based mobile broadband USB dongles (MBB dongle) for the Russian market.

A few years ago Intel Corporation developed a new corporate strategy to become a leading supplier of mobile communication chips. As a part of this strategy Intel at the end of January 2011 acquired Infineon's Wireless Solution Business, which designed and manufactured baseband chips that are used inside Smartphones by many different vendors. Infineon's business is fully incorporated as Intel Mobile Communication (IMC) division.

The primary markets for IMC chips are Smartphones, but Intel aims to increase sales volumes and is exploring other new potential markets. One of the markets where mobile baseband chips are used is USB Mobile Broadband dongles, which are sold by many operators and independent retailers.

Mobile broadband dongles are used to connect computers to the mobile Internet. Originally, it was meant to be used while traveling, but with growing speed of the connection and dropping prices, many people are starting to use it also at home instead of wired connection. Russia, due to its large territory and distances, looks like a very attractive market for introducing the MBB dongle.

MBB belongs to category of internationally standardized devices, which requires almost no customization for the local market, except translation of documentation and software to local languages. Basically all modems look very similar and provide the same functionality – connection to the Internet.

Due to such properties, according to one major producer of such dongles Huawei, there is mostly only 1 segment for mobile broadband dongles, where cheapest wins. Intel's MBB chip has certain qualities which are not present in other vendors, but it is not the cheapest one, which means, according to the generally perceived situation, cannot be successfully sold on the market.

Launching a new product requires substantial investment in R&D and might require multi-fold investment in marketing. New Coke or Orange phone are classical examples.

Intel has completed development of Intel-based 3G USB-modem together with Huawei. Thus there is no problem already whether to develop the product or not. However, there is a clear problem now how to market the product, because the product belongs to the category of highly standardized products.

For that reason Intel's main management concerns are: (1) whether there will be too few customers if priced too high as compared to the set of benefits associated with the product and (2) what would be the appropriate marketing strategy. Intel's objective is to exercise cost-based pricing – set the price to achieve profitable volume.

The core research problem is directly derived from the needs of the organization: what should be the overall marketing strategy and what would be potential demand for Intel-based 3G USB-modem.

To solve the problem, the following research questions arose:

1. What is the MBB market size and growth rate in Russia?
2. How many people are willing to buy Intel-based modem?
3. Who are those people?
4. What are their buying preferences?

The first research question is targeted to evaluate the overall demand for 3G USB-modems in Russia. The rest of the research questions are targeted to estimate the potential proportion of the population who would be willing to buy Intel-based 3G USB modem and their buying preferences. Together it will allow estimating the overall demand (possible volume) for Intel-based 3G USB-modem.

I would like to thank Vladimir Slinko, head of the Intel marketing department in Moscow, for suggesting the problem for the thesis and for all help during working on

the thesis, and his colleague Dmitry Kornev for arranging the prizes and helping with publishing the questionnaire on the social network website.

2 Literature review and research hypotheses

Following theories are the most relevant to the study:

- Consumer behavior
- Marketing strategy
 - Market segmentation
 - Marketing mix
 - Branding

2.1 Consumer Behavior

Consumer behavior is an important topic which is relevant to the study and an important concept for the marketing strategy. When designing marketing strategy, it is important to know what leads consumers to their purchase decisions. Consumer behavior sciences are used by marketing strategy for market segmentation to identify consumer or customer groups. Consumer behavior studies rely on following sciences:

- economics
- sociology
- psychology.

Different factors such as economical, sociological and psychological are affecting consumers' purchase decisions. Different phases or steps that lead consumer to purchase decision are formalized by different decision making models.

For example, Schiffman & Kanuk (2010, 229) introduce decision making model that has following phases:

- awareness
- knowledge

- evaluation
- purchase
- post-purchase
- evaluation.

Peter & Olson (2005, 198) present a slightly different model of adoption and purchase process:

- awareness
- knowledge
- liking
- preference
- conviction
- purchase.

Decision making models have reflections in other models, such as promotional models. Schiffman & Kanuk (2010, 229) offer promotional model that have following phases:

- attention
- interest
- desire
- action.

Since the Intel based modem is not the cheapest one, it is necessary to understand how consumers will react to a relatively high price. Literature has extensive coverage of customer behavior and also different research show interest on customer behavior and price elasticity and stability among different product categories. (Akhter 2009, 137; Stamer & Diller 2006, 62-72.)

Literature and research suggest that high price is not always a negative factor affecting buying decisions. Price often plays as the indicator of quality. Also branding plays a

vital role here. (Alvarez & Casielles 2008, 23 – 43.)

2.2 Marketing strategy

Corporate life is driven by corporate objectives which are set by the board and management team. Usually they are expressed by numbers such as revenue, profit margin, and share price. There are short term objectives which are often driven by quarterly results, and long term objectives, oriented on long-term company competitiveness.

The way to achieve corporate objectives is defined by corporate strategy. The corporate strategy in turn becomes the objectives for the next level of the organization. For example, the objective to increase or sustain revenue can be achieved by increasing sales volumes (market share) or prices. Profit margin increase or sustain objective can be achieved by decreasing costs: R&D, production, marketing. Those come as objectives to the functional units of the organization, such as R&D, manufacturing, marketing and HR.

Marketing objectives are concerned with what products are to be sold in what market, in what volume and price. The way how to achieve marketing objectives deals with marketing strategy.

Marketing strategies are widely presented in the literature.

Surprisingly, there are two interpretations what the concept of a marketing strategy really means. In some literature marketing strategy involves segmentation, targeting, differentiation, and positioning. But in other literature marketing strategy is explained as marketing mix elements (4 Ps): product, pricing, promotion and place. Recent discussions put the former as a core marketing strategy and later as a marketing management or marketing tactics. In terms of processes, the first one is called marketing strategy formulation process and the second is called as marketing strategy implementation process (El-Sansary 2006, 266-293).

Marketing strategy formulation process involves several steps (El-Sansary 2006, 266-293):

- understanding customer behavior
- segment the market
- select target segments
- design the offer to fit the target market needs
- differentiate the offer
- position the offer in customers mind.

The implementation process of a marketing strategy involves designing a marketing mix (4 Ps), which will allow to differentiate and position the product to achieve marketing objectives. This is also often called as marketing mix strategy or marketing tactic decisions.

Marketing mix historically consists of 4Ps: product, price, place, and promotion. But in some literature it is possible to see extended set of marketing mix which consists of 7Ps and includes additional 3Ps: packaging, positioning, and people.

It is possible to see that those additional Ps can be considered as a part of other Ps – packaging as part of product, positioning as a part of promotion. At the same time, pricing and promotion is often seen as elements of positioning. People are about having the right people in the company - “get the right people on the bus” (Collins 2001, 157).

From the marketing strategy perspective (segment + Ps), the following research questions can be formulated:

- What is the profile of the target market
 - What are the demographic and life style profiles of those who are most likely to buy the product?
- What the price product should have? (Price)

- Will there be enough demand at that price to be profitable?
- What product industrial design should there be? (Product)
 - Slim/ultra? What packaging?
- What functionality should the product have? (Product)
 - What speed? What management SW?
- What are the sales channels for the product? (Place)
 - Are customers willing to buy via an operator or a retailer chain?
- What are effective and efficient promotional choices? (Promotion)
 - Radio, TV, special magazine?

2.2.1 Market segmentation

Market segmentation is the process of dividing the total market into different homogeneous groups of consumers. Segmentation makes it possible to tailor the marketing mix for specific target markets to increase the performance.

Market segmentation is done using different bases:

- geographic segmentation
- demographic segmentation
- psychographic segmentation
- behavior segmentation.

According to Huawei, there is only 1 segment for MBB and the cheapest wins. But still there might be the room for adjusting non-price variables in the marketing mix.

Lately Intel was heavily investing into the development of the new low-power but powerful processors and chipset which allows creating new category of lightweight high-end devices – Ultrabooks. Intel has applied to register the name as a trademark.

Initially lightweight devices category were occupied by netbooks, which became almost

irrelevant when Apple introduced iPad in 2010. Ultrabooks have larger screen and higher performance than netbooks and must appeal to consumers who want light but notebook-like performance and screen size.

Ultrabooks are very thin. Using traditional thick MBB makes the Ultrabooks look ugly. For that reason, thin and light Intel-based MBB dongles can be a good companion for the Ultrabooks. There is an idea to consider such thin and light dongles as a different category – ultra-dongles. Such differentiation might play a key role in the product positioning.

Hypothesis 1: Consumers prefer to use ultra-dongles with ultra-books.

2.2.2 Product

A product is a combination of functional and formal design. MBB can be classified by following attributes:

- functionality (bands, speed)
- appearance (design, size)
- performance
- efficiency (power consumption)
- reliability
- packaging
- warranty
- service (support).

First the Intel-based MBB product is designed by Huawei, which is released under the name E-369 (Figure 1).



Figure 1. Huawei E369

Intel based MBB has the following features (Table 1):

Table 1. Huawei E369 features

Feature	Spec	Benefit
Size	65 x 24.5 x 8 mm	Smallest dongle in the World. Looks nice with Ultra-book.
Speed	Fast 21.6 Mb/s	Faster browsing – Internet experience is better.
Power	30% less power	Longer work from battery.
Bands	850/900/AWS/1900/2100	Global reach 5 bands to work in any country.
Services	Huawei cloud service	Network storage.
Extra	Easy magnetic cap	Feeling like high quality product.

Key differentiating features (KDFs) are the feature which differentiate the product from competitors' products (McDonald & Dunbar 2004, 144). If a feature is available in many competitors' products, it cannot be considered as KDF. The set of features available in one product can also uniquely differentiating it from competitors' products. The Intel-based modem combines many features, and consumers who wish to have such features would be more willing to buy an Intel-based modem. The following hypothesis can be defined:

Hypothesis 2: Consumers, who wish to have all features, will be more willing to buy an Intel-based modem.

2.2.3 Price

Pricing is a key element in positioning the product and is the trickiest thing to do when launching a new product.

Price setting depends on the following sales objectives (Jewell 2000, 252):

- profit maximization
- profit level
- profit margin
- increase in market share
- sales revenue maximization
- risk minimization.

The following are 3 broad approaches to pricing:

- cost-based pricing
- competitor-oriented pricing
- market-oriented pricing
 - skimming
 - penetration.

Intel's objective is to achieve profitable volume.

Price should be consistent with other elements of the marketing mix (Calantone & Benedetto 2007, 4 – 19).

From the basic economics theory we know that demand is a function of price.

Demand tends to decrease when the price goes up and vice versa. But price change also might have opposite effect. Research shows that a higher price has direct impact on perceived quality and perceived benefits of the product. (Alvarez & Casielles 2008,

23 – 43; Gardner 2000, 1053-1077; Jewell 2000, 254.)

Also marketing effort goes up when the price goes up or down beyond acceptable price range. The company needs to explain to its customers why the prices are so high or so low. (Jewell 2000, 255.)

Based on that, it is possible to hope that even though Intel-based modem having a higher price than its competitors, it is still possible to adjust other elements of the marketing mix to achieve the sales objectives.

Hypothesis 3: Consumers see higher price of MBB as indicator of higher quality.

2.2.4 Branding

Branding is an element of Positioning P. Brand has an important role in marketing. Brands are not simply logos or names, but they are now about image and its perception. Branding provides a link between the attributes customers associate with a brand and how the brand owner wants the consumer to perceive the brand: brand identify.

There is no common agreement what branding belongs to: is it one of marketing strategies, is it a product tactics of marketing mix, or is it a stand-alone strategy that links marketing strategy to the marketing mix.

Commodity markets are characterized by a lack of perceived differentiation by customers between competing offerings. For example, despite the possible quality differences, customers usually see any carton of milk as any other carton of milk. In such situations, purchase decisions are usually based on the price and availability. (Meldrum & McDonald 2007, 113.)

Brand is different from commodity by providing additional “added values”, which enforce differentiation to competing offerings. Successful brands tend to:

- have a unique identity
- provide sustainable competitive advantage
- add significantly to the asset value of the organization when it is sold or acquired
- require continuous investment to avoid diminution.

Brand includes the following components:

- brand positioning
 - physical or functional aspects
 - bipolar scale: expensive/cheap, fast/slow, male/female.
- personality
 - impression, that customers have on brand
 - sensual appeal
 - rational appeal
 - emotional appeal.

In highly standardized markets it is often hard to sell solely through promoting tangible attributes. If the device attributes are similar, then customers tend to select “branded” products as it decreases their uncertainty and get some intangible attributes – perceived quality and reliability.

Intel has strong branding habits. Intel has become one of the world's most recognizable computer brands following its long-running “Intel Inside” campaign. Since 1992, Intel is the biggest semiconductor manufacturer. Many separate PC peripherals from other manufacturers, such as video, audio and network cards have been replaced by Intel branded integrated peripherals, such as Intel HD Audio, Intel HD Video, Intel Centrino Mobile, etc. High quality integrated peripherals made competition for other vendors very hard and a number of different offerings unnecessary. Exceptions are only related to very specific peripherals and high-performance GPUs, where market is dominated by Nvidia and AMD ATI.

Due to profound history, I see that Intel's branding approach might be also applied to

Intel based MBB dongle.

Hypothesis 4: Intel brand and “Intel Inside” logo increase consumers’ willingness to buy a product.

2.2.5 Place

The last element of marketing mix, Place, defines the way, how product is reaching the customer – its distribution channels. Broader definition tells about the chain from raw materials through to the customer.

Following is a list of distribution channels:

- wholesalers
 - break down 'bulk' to smaller packages for resale by retailers
- agents
 - secure an order for producer and charge a commission
- retailers
 - strongest relationship to customers
- Internet
 - direct access to consumers.

MBB dongles provide access to the Internet using mobile cellular networks, which are owned and managed by mobile network operators. Operators can be considered as a main distribution channel. The major Russian network operators are:

- MTS
- Megafon
- Beeline
- Tele2.

In Russia, there are also several retailer chains, specializing on selling communication

equipment, such as mobile phones and MBBs. The major retailer chains that have wide distribution network are:

- Svyaznoy
- Euroset.

But consumers might perceive that dongles bought in operator stores, are configured or designed to suite better for the operator network. For that reason they might see operator's store as a preferred place to purchase the modem.

Hypothesis 5: Operator's store is a preferred place for purchasing the MBB.

2.2.6 Promotion

Promotion purpose is to create awareness about the product and increase reference prices.

Promotions include all the tools available to the marketer for marketing communications, which is as a marketing mix has its own promotions mix. Elements of promotional mix are:

- personal selling
- sales promotion
- public relations
- direct mail
- trade fairs and exhibitions
- advertising
- sponsorship.

MBB promotion may include several elements. But the most meaningful would be advertising: TV, special journals, Internet.

Almost every operator advertises some mobile Internet subscriptions using USB modems:

- MTS Connect
 - MTS branded modem
- Megafon online
 - Huawei E352/E367
- Beeline
 - ZTE MF 180/190, Huawei E171.

It sounds logical that consumers would be willing to get all possible information about the product from the place where they are willing to purchase the product. Also some consumers search and compare what other sources say about the product. But in general following hypothesis can be stated:

Hypothesis 6: Consumers prefer to find information about MBB from the place of purchase.

2.3 Conceptual model

In social sciences and marketing, a concept is an abstraction which is used to represent an object, property of an object, or certain phenomena, like 'cost', 'market share', 'aspiration', or 'purchase intention'. The conceptual model is a simplified representation of the problem or phenomena, and consists of concepts and relationships between them. The relationship between the two concepts is a hypothesis. There are several concepts which are relevant to this research.

When moving from conceptual to empirical level in research, concepts are converted into variables with a set of logical or quantitative relationships between them (Ghauri & Grønhaug 2005, 39).

To answer research questions 2 – 4, it is necessary to conduct empirical research in order to identify relationships between consumer buying preferences and purchase

intention towards Intel-based MBB. Knowledge about that will allow identifying suitable marketing mix in order to influence purchase intention. Also it will allow identifying the proportion of consumers who might be willing to purchase Intel-based MBB. Projecting that to the market size and growth rate will give the answer to the main research question (research problem).

The key concept for understanding if consumers want to buy the product is consumer purchase intention (CPI). In my research, I want to measure this concept and to find what factors can influence it. This concept is considered as a dependent variable.

The marketing mix can be seen as the model which drives CPI. Hence, CPI depends on Product, Price, Place, and Promotion. Promotion is seen as best-effort communication activity which needs to explain and create image of the product in the customers' mind. I see it as not independent and dependent variables, but as a constraint in which relationships between independent and dependent variables might exist.

Stamer & Diller (2006, 62-72) discuss price segmentation and how to adapt price management to segment-specific price behavior for enhanced pricing effectiveness and efficiency. They explore the relationship between the concepts "willingness to pay" and price and quality uncertainty. They deal with concepts, such as concern for price (CP) and concern for quality (CQ). Such approach can be applied to measure consumers' preferences in relation to quality, brand and price.

Souiden, Pons & Mayrand (2011, 356 – 367) discuss important concepts influencing purchase intention for high-tech products including a product image (PIM), uncertainty (UNC) and aspiration (ASP). They draw the conclusions that positive brand image reduces consumer uncertainty, increases aspiration, and all together positively influence consumer purchase intention.

In another research article on purchase intention, Grewal, Krishnan, Baker & Borin (1998, 331 – 352) discuss the relationships between Brand name, Perceived brand/product quality, Internal Reference Price, Perceived Value and Purchase

Intention. One clean addition to the Souiden's model is the Internal Reference Price. And it seems a very relevant addition to my research, because MBB is a kind of high-technology product which needs to be sold at a certain price level.

Based on the above discussions and models, I found them very relevant also to my research as to how to find out the influence of the brand and product benefits to purchase intention. Thus, the following concepts have been used:

- Concern for quality (CQ)
- Concern for price (CP)
- Brand Image (BI)
- Perceived product quality (PPQ)
- Internal reference price (IRP)
- Perceived Value (PV)
- Aspiration (ASP)
- Consumer purchase intention (PI).

The purpose of designing proper marketing mix (4 Ps) is to increase sales of the product. The higher sale of the product – the higher is purchase intention. Thus, there is for sure a relationship between 4 Ps and purchase intention. 4Ps are constraints to which purchase intention is applied. Therefore, it is necessary to measure consumer preferences towards product features, promotional and distribution channel strategies as well.

Based on literature review and the above discussions, the following conceptual model is proposed on Figure 2.

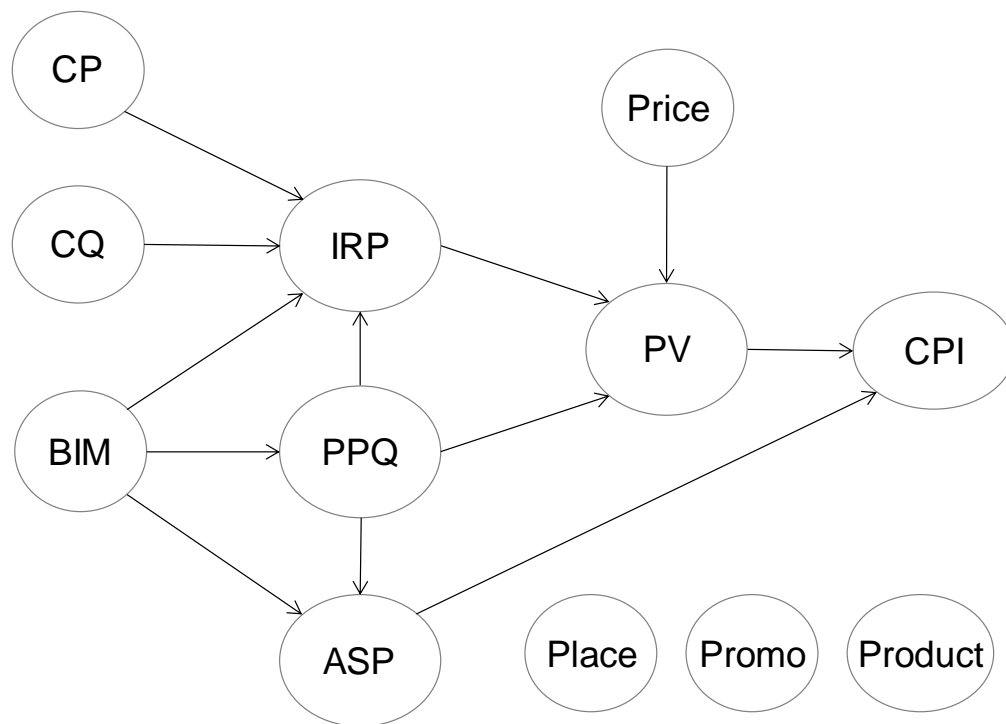


Figure 2. Conceptual model

In the proposed model, consumer purchase intention (CPI) is driven by perceived product value (PV) and aspiration (ASP). PV in turn is driven by perceived product quality (PPQ), internal reference price (IRP) and price. PPQ is driven by brand image (BIM). ASP is driven by BIM and PPQ. IRP is driven by BIM, concern for quality (CQ) and concern for price (CP).

3 Research process

The research target in this study is a market of 3G USB-modems in Russia, thus this is a marketing research. Marketing research is the process of designing, gathering, analyzing and reporting information that may be used to solve a specific marketing problem (Burns & Bush 2010, 35). Marketing research was conducted to gather information about market size, market growth, to evaluate potential demand for the product, as well as how to adjust elements of marketing mix to increase sales of the product.

3.1 Research methodology

Research methodology section describes chosen research design, data collection and analysis methods and explains the reason for the choice. Shortly, research design is descriptive, secondary and primary data were used, quantitative data collection and data analysis methods were employed.

Selection of the research design entirely depends on the type of the problem which needs to be solved and what type of the research questions need to be answered. There are structured and unstructured problems. Structured problems are problems, which can be broken down to a series of well-defined steps. Unstructured problems require the use of intuition, reasoning and memory. Structured problems are solved using descriptive or causal research design and unstructured problems are solved using exploratory design. (Ghauri & Grønhaug 2005, 58).

Research questions in this study are structured. Concepts that are involved in research questions, such as “market size”, “market share”, “demand”, and “attitude” are well understood. For that reason descriptive research design is appropriate. It includes a set of methods that describe marketing variables, which are investigated by answering who, what, where, and how questions.

In order to answer research questions secondary and primary data were used. Information about mobile broadband dongles’ market size, growth rate and structure

of the Russian 3G USB-modem market were obtained from secondary data to answer research question 1. Secondary data have been extracted from existing internal and external market reports and surveys. Intel's marketing department collected the data about Russian market for other projects.

In order to answer research questions 2 – 4 it is necessary to estimate demand for the Intel-based MBBs and analyze consumers' attitudes, opinions, preferences, and purchase intentions. This information is not available from secondary data. To find out such information the primary data that are relevant to the product were collected.

There are two types of methods of research: quantitative and qualitative. Qualitative methods are more appropriate when we do not know what variable to measure, when it is necessary to understand the nature of the phenomena. Research questions often start with “why”. It is closely related to exploratory research design. Qualitative research methods are not appropriate for this research.

When it is known what variable to measure, quantitative research methods are most appropriate. In this research, based on prior knowledge of theories, it is known what is necessary to measure, and thus quantitative methods were used. Quantitative methods are closely related to descriptive research design.

Quantitative data collection method using questionnaire survey was used in this study. Required samples size depends on the required accuracy level. If desired accuracy is 5% then sample size should be around 400. This study does not require high accuracy, thus 10% sample error is acceptable and sample size could be around 100. (Burns & Bush 2010, 403.)

Quantitative data usually, but not always, requires quantitative data analysis. As also we deal with structured problems, quantitative statistical data analysis was applied in the study using IBM Statistical Package for Social Sciences (SPSS) tool. Also some analysis was not possible to perform using SPSS. Microsoft Excel was used to calculate necessary statistical formulas.

Use of quantitative research methods is also supported by numerous articles, which were presented in the literature review chapter. All referred articles use quantitative data collection and data analysis methods. Data collection was done using questionnaire survey in all referred cases.

The formal development of reliable and valid measure is long and complicated process (Burns & Bush 2010, 322). These measures are published in academic journals. Thus, construct validity and reliability in this study rely on prior research presented in reviewed articles. Reliability of multi-item measurement scale was verified using reliability analysis. In most cases Cronbach's alpha is over 0.85 which means very good and in one case it is 0.76 which is acceptable. External validity of the hypothesis tests is ensured by statistical conclusion validity. Inferential analysis uses statistical significance in order to make conclusion about the population. Statistical significance tests take into account sample size.

3.2 Data collection

Primary data collection method was questionnaire survey.

Literature provides extensive guidelines for constructing questionnaires. Ghauri & Grønhaug (2005, 129) presents the following rules for designing a questionnaire:

1. must be simple and concise
2. should not put unrealistic demand for required knowledge to answer
3. should ensure that everybody understand questions in the same manner
4. each question should deal with one dimension or variable
5. should not be formulated so that there is no escape route to default answer
6. should be specific
7. should not be of a suggestive nature
8. should be in polite and soft language
9. questions should be in right order (easy and positive first)
10. layout is important
11. questionnaire should be pre-tested.

Questionnaire for this research has following categories of questions to cover all relevant variables:

- Respondents profile
- Internet usage
- Brand Image
- Product Image
- Price
- Place
- Promotion
- Aspiration
- Purchase intention.

For measuring degree of agreement, the five-point Likert scale is used with the levels defined as: (1) Fully Disagree (FD), (2) Partially Disagree (PD), (3) Neither/Nor (NN), (4) Partially Agree (PA), and (5) Fully Agree (FA).

Level of Importance is measured using the following scale: (0) Not important (NI), (1) Slightly important (SI), (2) Important (I), (3) Quite important (QI), (4) Very important (VI).

Internet usage frequency is measured using the following scale: (0) Never, (1) Once a month, (2) Once a week, (3) Few days a week, (4) Every day.

The questionnaire was designed with the help of 2 pre-testing. The first pre-testing was completed by sending a link to Russian Intel colleagues. Several people filled out the questionnaire and provided feedback as to the questionnaire's questions and format. Based on the feedback, the questionnaire layout was redesigned.

The second version was sent to several friends. Answers were reviewed and analyzed if they made sense. Filling out the questionnaire did not create any difficulties and

responses contained all the necessary data. Also preliminary analysis of data discovered that answers to different similar questions were consistent and the expected relationship between answers existed.

Final version of the questionnaire in Russian can be found in Attachment 2 and its English counterpart in Attachment 1.

It was foreseen, that in order to get respondents to answer the questionnaire it was necessary to motivate them with the possibility of winning a prize, a common practice in Finland. Without prizes the response rate can be quite low. Huawei was very kind and offered two 3G USB-modems Huawei E369 to be awarded as prizes.

There were several options for distributing the questionnaire. The first option was that the possible target respondent list, with email addresses, would be obtained from the operator. The second option was that the operators would send out the URL by themselves if they are not willing to disclose customers' contact information. The third option was to publish the URL of the questionnaire on the operators' and retailers' web sites. All these approaches would require involving the operators and retailers, and would require financial resources. It turned out to be problematic, because the budgeting situation has changed in May 2012 at Intel's department involving in this research and they could not provide the funding. Also involving only certain operator or retailer would create operator related bias in the responses.

It was decided to go with a zero-budgeting approach. The easiest way was try to use social networks, such as Facebook and VKontakte. Indeed, Facebook has got highest market capitalization in the history when listing on stock exchange this year in May 2012. Their business model is to get revenue from advertising in its social network. The Russian equivalent of Facebook is the social network VKontakte (www.vk.com), which has approximately 140 million users at the moment.

It was decided to publish the URL of the questionnaire on the Intel hosted group on VKontakte, but also repost the URL on different thematic groups about Mobile Internet, 3G modems, etc.

3.3 Questionnaire communication

In order to publish the URL on Intel's VK group, contact persons have been identified. It turned out from them that publishing the URL on behalf of Intel requires approval from Intel Legal department about the content of the questionnaire and also special form needed to be filled out and attached to the questionnaire page containing "Rules and conditions of participating in questionnaire". The document specified who is eligible for participating, dates of participation, what prizes, winner selection and delivery, and ways of handling personal information.

Everything was ready by the end of June 2012 for publishing and consent from the social network content coordinator had been received on 27.06.2012. The target was to run the questionnaire data collection during the first 2 weeks of July 2012 and start the data analysis in second half of July 2012. I was also on vacation during the first half of July, while the responses would be collected. On my return I would start the data analysis.

But URL placement did not happen. I contacted the social network content coordinator again on July 7th about the matter and received response on July 9 that the external agency, who will place the URL, has questions about content. From email thread discussion it was seen that someone from external agency was not available and they did not do placement on 27.06.2012. My reminder on July 7 initiated response about content.

One of the statements from the agency was that "nobody will fill out such a long questionnaire" and "we will get negative feelings from the community" and "they do not recommend placing such a questionnaire in the group". That was quite stressing and disappointing when taking into account that it took already 2 months to get to this point.

The agency also commented that there are some legal aspects with giving a prize, as it is considered to be a lottery, and has certain legal aspects, which they do not handle

themselves.

I started updating the questionnaire on 29.07.2012, when I came back from vacation. I discussed it with the social network content coordinator again and agreed upon changes in the questionnaire. Unfortunately, on 01.08.2012 the woman in charge informed me that she would not be able to do anything until she gets back from vacation in a few weeks. I have contacted Vladimir Slinko and explained the situation to him. He advised me to contact his deputy, because he also was starting vacation on August 2nd. The deputy said that everyone in his department were busy and would not be able to help me until the middle of August.

Thanks to Dmitry Kornev, who re-initiated the process of placing the questionnaire with different people from the marketing department on August 16th and explained their interest in the research. It was also found out that there are indeed legal complications with running a lottery, as mentioned by the external agency. According to Russian legislation, lotteries must be officially registered. A questionnaire in that form is considered a lottery – anyone who participates becomes eligible for the prize draw. The Legal department suggested that in order for the questionnaire not to be considered a lottery, it needs to be a contest. New questions about Intel were added to the questionnaire and a new legal form was prepared with the rules. Only those, who correctly answered the questions about Intel, participated in a prize draw. Everything was approved by the Legal department and the URL was subsequently placed in VK on September 13, 2012. A link to the questionnaire was placed on the Intel community webpage (http://vk.com/intel_trendy), as well as on different 3G modem and mobile Internet related groups, such as “3G modems” (<http://vk.com/club34535493>) and a few others. Also link was placed on the Intel Russia Facebook page (<http://www.facebook.com/intelrussia>).

Intel allowed keeping the link to the questionnaire visible on Intel_Trendy for about 2 weeks during 13.09.2012 – 29.09.2012. During this time 111 answers were received.

3.4 Data analysis

Statistical data analysis was done using the IBM SPSS package. The questionnaire report was exported from Webropol in Excel format, before importing it into SPSS. In addition, first line with the questions was replaced with the variable names from V1 – V138. When imported to SPSS, variables with the names V1 – V138 were automatically created.

After the data was imported into SPSS, every variable were given a label, corresponding to the question. Also variables were given possible response values and measurement scale.

SPSS has “Compute” and “Recode” functionality which allows computing or recoding new or existing variable using other existing variables. In order to automate the process and have the possibility to calculate variables again, SPSS syntax file was created using SPSS “Paste” functionality. Syntax files were also used during analysis to be able to repeat analysis the same way if necessary in the future.

The questionnaire uses an inverse scale, where low values represent higher/more positive attitude: Fully agree, Partially agree, Neither/Nor, Partially disagree, Fully disagree (1 – 5). Using such a scale is not always preferable in analysis, where in tables and charts, higher values usually represent more positive attitudes. For that reason, variables have been re-coded as: Fully disagree, Partially disagree, Neither/Nor, Partially agree, Fully agree (1 – 5).

The questionnaire has several multi-response questions, for example “Where do you need 3G USB-modem”. Several multi-response-sets were defined to aggregate the variables related to those questions.

The conceptual model in the thesis aims to measure and find the relationship between several variables, such as CP, CQ, BIM, IPR, PPQ, ASP, PV and PI. Those variables are measured using multiple items (questions). The detailed description of questions (items) and how they are used to compute model variables is discussed in Attachment

1.

The two variables V123 and V124 contain free text answers about what respondents like more or less about the E369 modem. Two new variables Like_Most and Like_Least were created based on the V123/V124 and contain a coma separated list of attributes, what people like or dislike, such as “speed”, “design”, “price”, etc. Based on those categories, multiple-response variables were created (LIKE_DESIGN, etc.) and a multiple-response-set was created.

4 Data analysis and results

4.1 Market analysis

This chapter presents market analysis about the Russian 3G USB-modem market, which is intended to answer the research question 1.

According to Aaker (2001), market analysis includes following dimensions:

- Market size (current and future)
- Market growth rate
- Market profitability
- Industry cost structure
- Distribution channels
- Market trends
- Key success factors.

For this study relevant market dimensions are market size, growth rate and distribution channels. The information about the current Russian market was extracted from secondary sources, collected during Intel's market research activities.

4.1.1 Internet usage in Russia

Here are some facts about Russia:

- area: #1 17M km²
- population: 143M
- density: 8.4 people / 1 sq.km
- Internet penetration: 42.8 % - ~ 60M users
- Growth rate: +29% YoY
 - Internet users in Q2'11 – 55M, Q3'11 – 60M
- 48% house hold penetration (top 9 WW)

- ~50% of population lives in small cities and suburbs connected to the Internet through an MBB stick.

Figure 3 shows the Internet penetration map in Russian. Areas with higher population also have higher Internet penetration.



Figure 3. Internet penetration in Russia

Russia has about 60M Internet users at the moment, where Internet usage by connection type is divided as follows:

- Fixed/BB (5 – 20 Mb): 38%
- 3G Modem (1 – 2 Mb): 22%
- 3G Phone (1 – 2 Mb): 20%
- Other (1 – 2 Mb): 20%.

During the last 3 years, the fixed connection growth rate were +20% YoY and for mobile connections were +30% YoY.

Figure 4 shows the proportion of people using fixed and mobile Internet, depending on the size of the municipality.

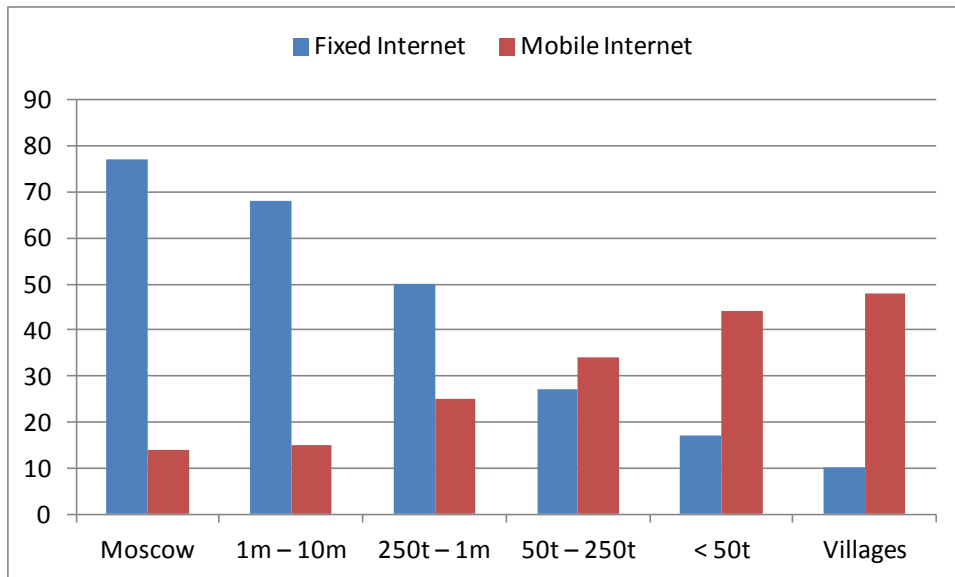


Figure 4. Proportions of people using fixed and mobile Internet

The above data and figures show a further good opportunity for 3G MBB dongles. In large cities, mobile Internet usage is still quite low compared to the population. There are lots of possibilities for growth.

Mobile Internet usage bypassed fixed Internet usage in settlements with population sizes less than 250 000 inhabitants. This can be explained by 2 factors. First, the population density in such towns is lower, than in large cities, making fixed Internet cable installation more expensive per customer. Second, the income level of the inhabitants is much lower in small towns. For these reasons fixed Internet becomes quite expensive. It becomes cheaper to use wireless mobile Internet. There is a significant market for MBB dongles in small settlements.

4.1.2 3G modem sales in Russia

The yearly growth rate for mobile connections during the last 3 years was about +30%. That includes connections using 3G USB-modems, integrated modems and Smartphones. Total available market (TAM) of 3G USB-modems in Russia in 2011 was about 6 million units. The growth rate was about 30% YoY since 2008. This situation changed in 2012. It is discussed in the following section. Sales forecast for 2012 is 4-5 million units.

Table 2 below shows market sales, share and growth rate of the top 3 mobile Internet services providers in Russia:

Table 2. 3G USB-modem monthly sales in Russian by operator in 2011

	Sales (TU/month)	Market Share	Growth rate (YoY)
MegaFon	190	38%	+64%
MTS	155	31%	+51%
Beeline	105	21%	+32%
Retailers	50	10%	+40%
Total	500	100%	

Operators sell about 90% of 3G USB-modems, where 60% they sell via their own channels and 30% they sell via retailers. Those modems are locked by default. The remaining 10% are lock-free and sold by retailers. About 70% of all 3G modems in Russia are supplied by Huawei.

Intel's target is that by the end of 2012 up to 10% of 3G USB-modems will be using the Intel's chip.

The list below shows the list of MBB dongles that are sold by competitors:

- 28.8 Mbps modems:
 - Huawei E367
 - Telewell TW-3G HSPA+
- 21.6 Mbps modems
 - Nokia 21M-02
- 7.2 Mbps and slower:
 - A-Link 3GU
 - Archos G9 3G
 - Novatel Merlin U740
 - D-Link DWM-152/156
 - Option GlobeSurfer

- Webee 3G.

There are currently quite a few high-speed competitors' products on the market. The Intel-based modem, with unique features, might still have a good potential.

4.1.3 Market situation in 2012

Operators sell 3G USB-modems, that are operator locked (SIM-lock), but current legislation in Russia requires that operators don't prevent consumers from switching operators. For that reason operators are required to provide the unlock code on request by the customer. According to Megafon, about 10% of the consumers requested the operator unlock codes during the last year.

Russian legislation does not enforce the binding of fixed-time contracts, such as 1 year or 2 years contracts, like in Europe or the US. For this reason, customers might immediately break the contract. Because operators are not able to hold on to customers, they are not generally willing to provide free modems or at huge discounts, as often happen in Europe or the US. During 2008 – 2011 years of fast growth, operators, in order to win new customers, started subsidizing sales of 3G USB-modems, by offering 2 – 3 months of free Internet access. Also revenue per user (RPU) is higher for modem subscriptions (~\$15) than for Smartphone subscriptions (~\$10). For this reason operators also were selling modems a bit cheaper. Basically they were offering modems almost for free. It accelerated 3G modem adoption and was one of the main driving forces for 30% YoY growth.

But at the same time, such marketing strategy had two negative effects. First, it suppresses sales of unsubsidized and more expensive models. Availability of “free” modems kills competition of the non-free modems. Also high growth expectations led to an overstock of modems in stores. To get rid of stock, stores needed to sell modems for 800 rubbles, which otherwise cost 1200 rubbles. Second, it made possible for users to switch operators at no cost, when the free Internet access expired. Consumers could simply go and buy another modem from the same or another operator with yet another free Internet bonus.

The situation started to change in 2012 or, even before that, from the end of 2011. Sales started to decline. The Russian retailer Euroset has different statistics for the 3G USB-modem sales even for 2011. According to them, the total modem sales in 2011 were ~6M units instead of the other 9 – 11 M estimated units. That is quite a significant difference.

The reason for the sales decline is that market was saturated with modems. The new customer base growth slowed down, so the operators' race for customers came to its end. It became no benefit to offer 2 – 3 month free Internet, so there was no benefit for users to switch operators or get another modem. Free Internet is now mostly limited to 1 month.

The latest estimation is that modem sales in 2012 might be as low as even 4M units. The total of 3G USB-modem users is about 20M users.

4.2 Descriptive analysis

The descriptive analysis summarizes basic findings for the sample and describes the typical respondent, describes how respondents are similar to the typical respondent (Burns & Bush 2010, 462). Descriptive statistics measures central tendency and variability. Not all information which is provided in this section is essential from research problem point of view, but provided in one place to simplify reading and understanding.

4.2.1 Profile of respondents

This section describes profile of respondents who participated in the questionnaire survey and includes gender, age, occupation, income level, country of residence, size of municipality, and federal district of Russia.

The majority of respondents 83.8% were males, while females accounted only for 16.2% answers (Figure 5).

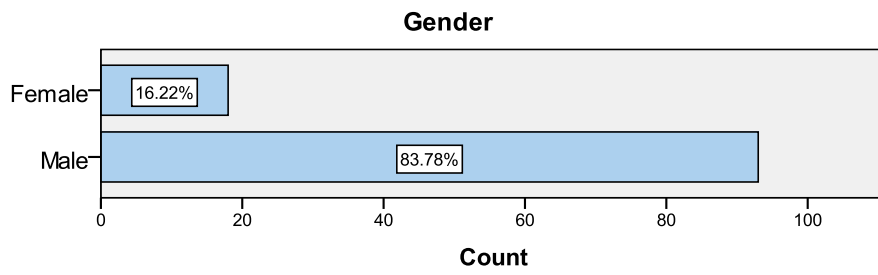


Figure 5. Gender

The majority of respondents belongs to 18-24 age group (57.7%), followed by 25-34 age group (23.4%) and under 17 (13.5%) (Figure 6).

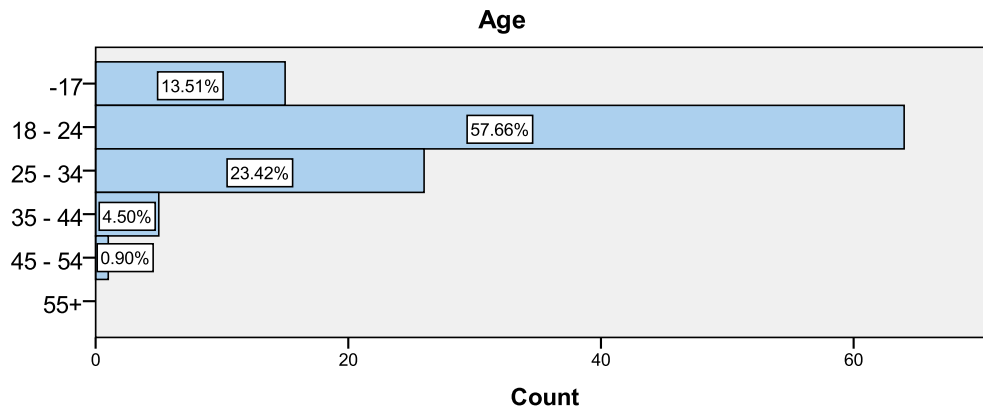


Figure 6. Age

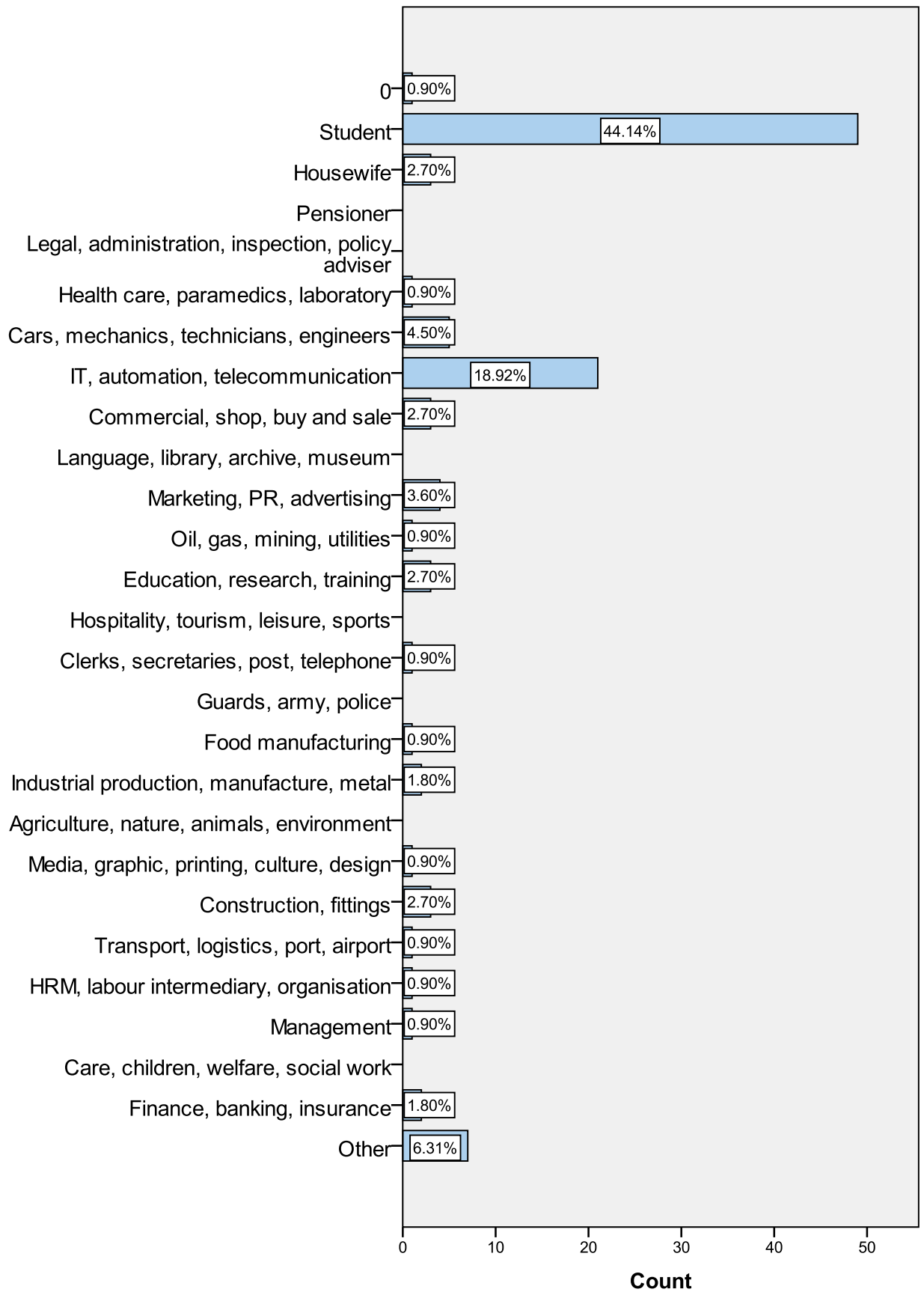


Figure 7. Occupation

The majority of respondents were students (44.1%) and employed in IT (18.9%) (Figure 7).

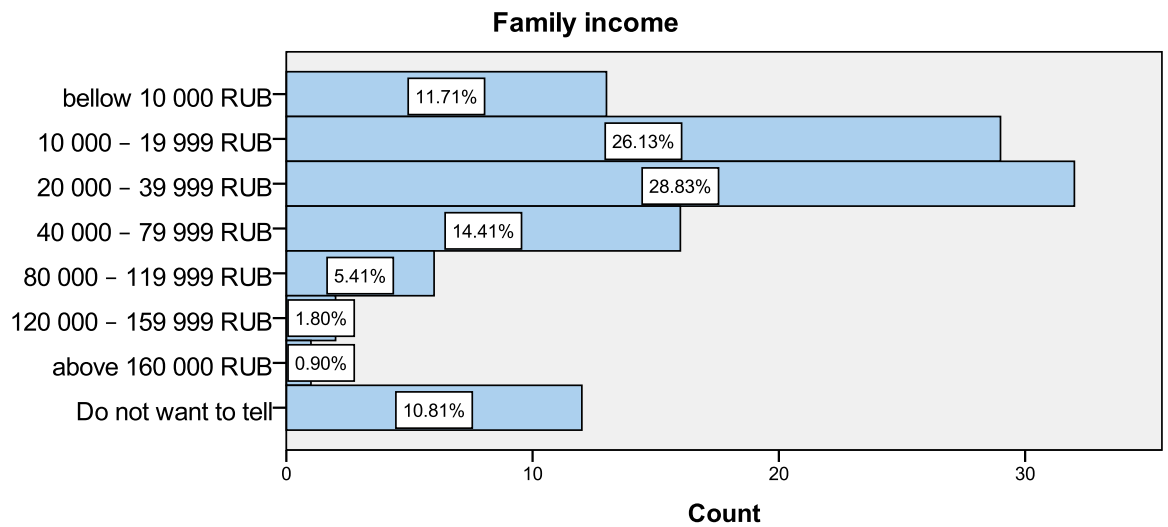


Figure 8. Family income

Family income of the majority of respondents is between 20000 and 40000 rubbles – about 55% (Figure 8).

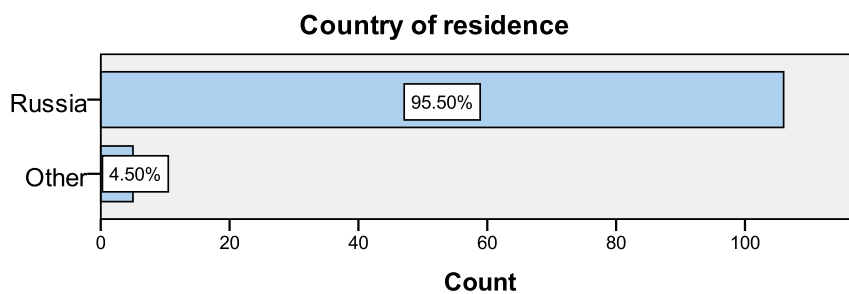


Figure 9. Country of residence

The majority of respondents were from Russia (Figure 9). But it was also a few respondents from other countries including Finland, Ukraine and Denmark.

Figure 10 shows that there were no bias towards large cities such as Moscow and Saint-Petersburg. Respondents were located in settlements of different sizes.

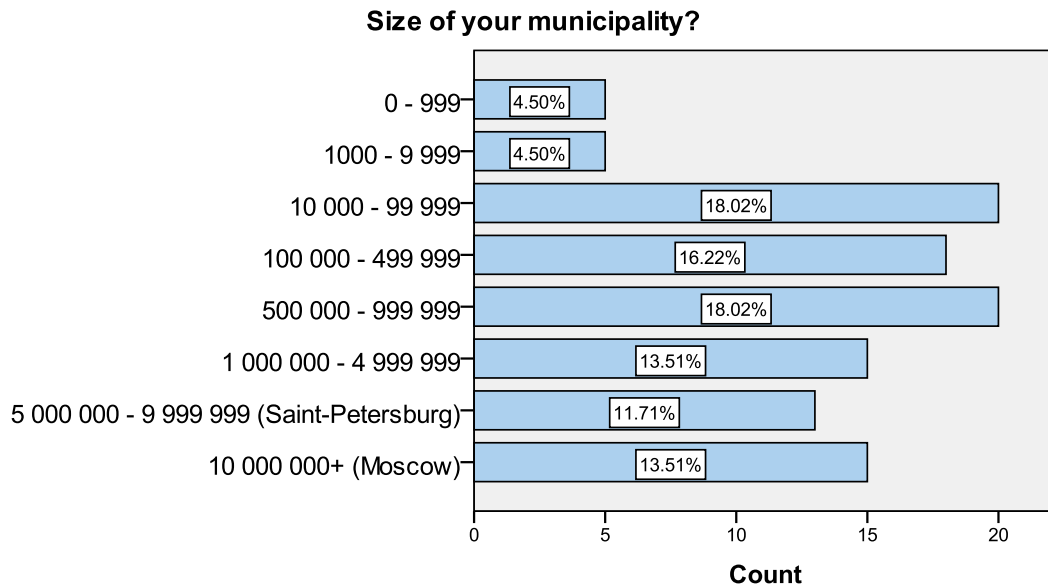


Figure 10. Size of municipality

Respondents were also located in different regions of Russia, but the majority of respondents live in central federal district (Figure 11).

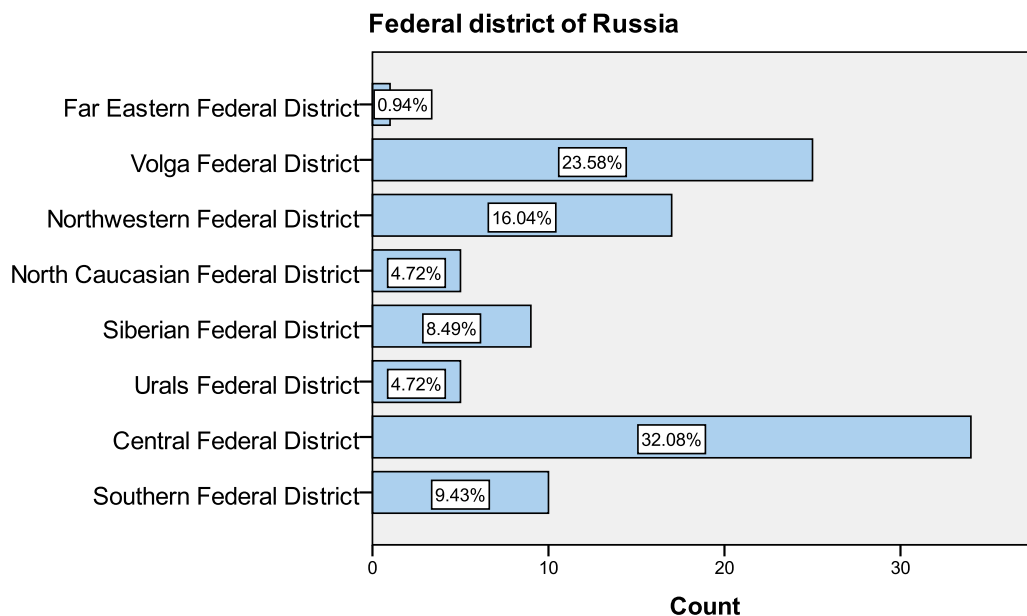


Figure 11. Federal district of Russia

4.2.2 Internet usage

This section describes where and how often respondents use the Internet, how they do connect to the Internet, and why do they need mobile Internet.

Majority of respondents have 3 or 2 internet users in their family (Figure 12).

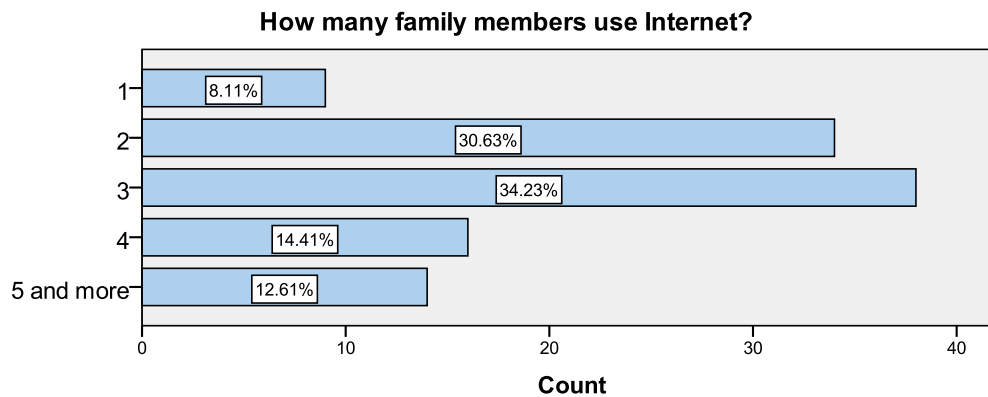


Figure 12. Number of family members using Internet

Table 3. Where and how often respondents use Internet

	Never (0)	Once a month (1)	Once a week (2)	Few days a week (3)	Every day (4)	Average
At work	12	3	3	26	67	3.20
At home	0	0	1	5	105	3.94
On public transport	21	7	11	29	43	2.59
In a car	23	11	13	35	29	2.32
At summer cottage	22	20	12	21	36	2.26
On holidays or business trips (travelling)	9	16	9	23	54	2.87
In other places	86	2	2	6	15	0.76

Table 3 shows where and how often respondents use Internet. The highest Internet usage is at home. 105 of 111 respondents use Internet at home every day. The second place where Internet is actively used is at work. 67 respondents use Internet at work every day. It also shows that respondents actively use Internet while travelling. In other places, such as public transport, car, summer cottage, the respondents use Internet from once a week to few days a week – average is between 2 and 3. Some respondents also indicated that they often use Internet in the cafe, visiting guests, walking, and in the study places.

The majority of respondents (63%) have wired connection to the Internet. But also about 50% connects to Internet using 3G USB-modem, using phone as a modem. 41% indicated that they use 3G/WiFi router. Few indicated that they use Smartphone to connect to Internet, but that belongs to “via mobile phone, using it as a modem”. One indicated that uses satellite to connect to the Internet. (Figure 13.)

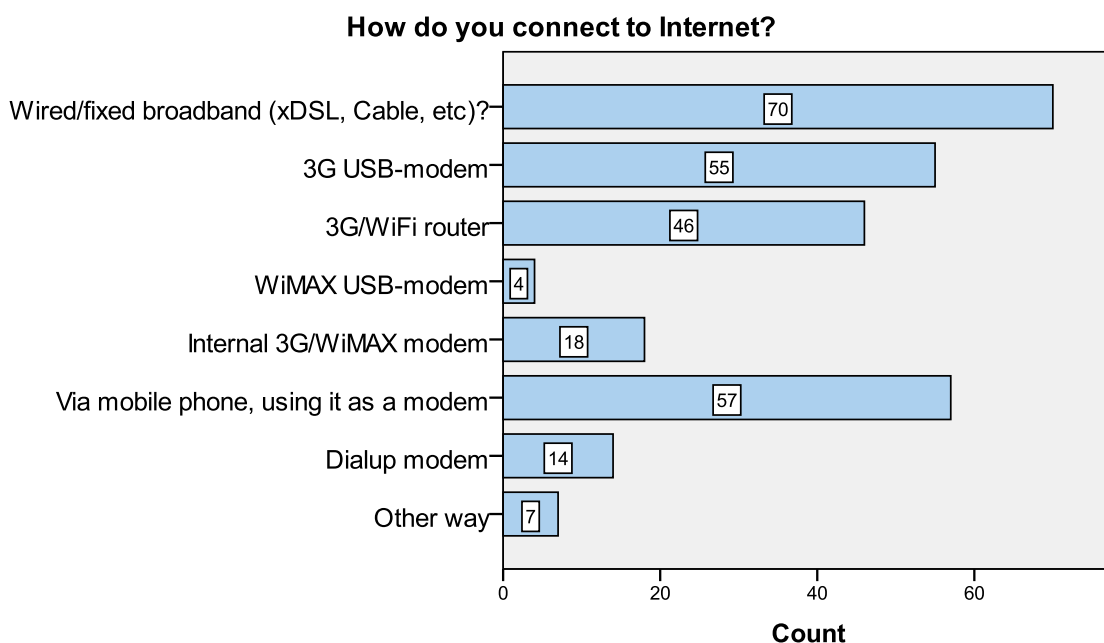


Figure 13. How connect to Internet

Table 4 shows that highest every day usage of 3G USB-modems is on travelling and in a summer cottages.

Table 4. Where and how often respondents use 3G USB-modem

	Never (0)	Once a month (1)	Once a week (2)	Few days a week (3)	Every day (4)	Average
At work (V27)	62	7	7	15	20	1.32
At home (V28)	61	5	8	10	27	1.43
On public transport (V29)	71	2	9	15	14	1.09
In a car (V30)	67	5	8	18	13	1.14
At summer cottage (V31)	52	9	10	15	25	1.57
On holidays or business trips (V32)	44	12	11	15	29	1.76
In other places (V33)	100	0	1	6	4	0.32

The respondents also indicated other places, such as cafe, visiting guests, walk, in the school.

Figure 14 shows people who use or never use 3G USB-modem. About 76.6% of respondents use 3G USB-modem.

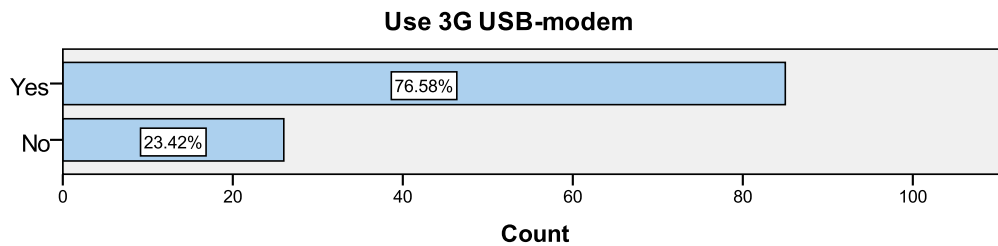


Figure 14. Using 3G USB-modem

Many respondents wish to use 3G USB-modem while travelling (73.9%), in summer cottages (56.8%). But also more than 40% respondents wish to use 3G USB-modem at work, at home, on public transport and in a car. Few respondents indicated that they also wish to use a modem in cafe, during walk, visiting guests and in the study place. (Figure 15.)

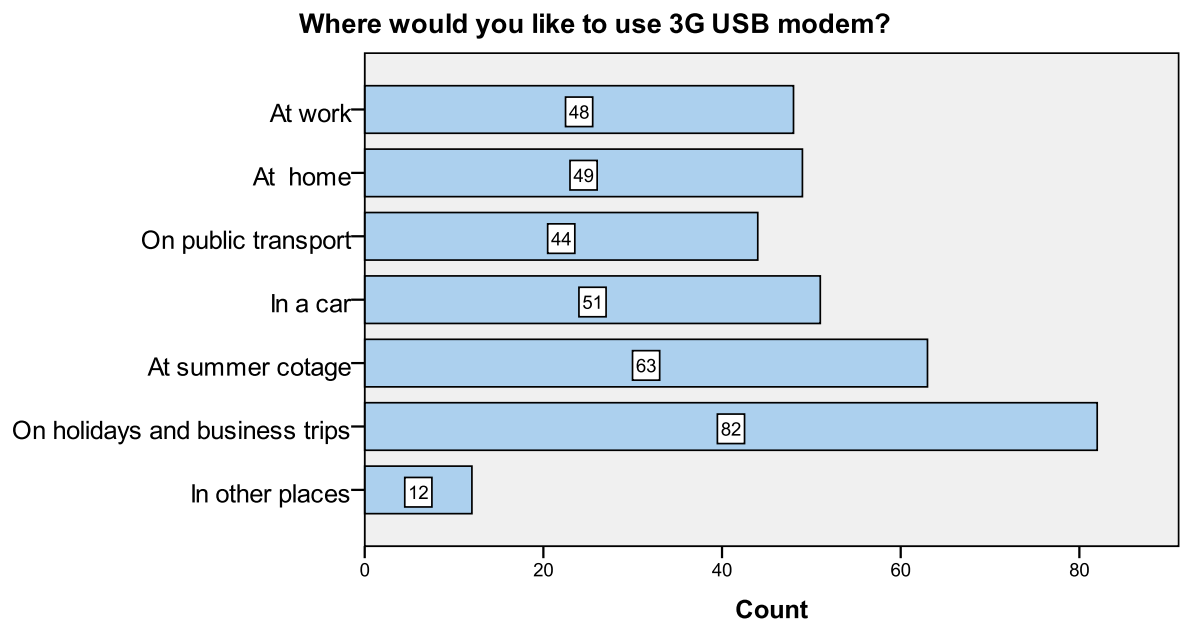


Figure 15. Where want to use 3G USB-modem

Figure 16 shows why people need mobile Internet. 86.5% indicated that they need mobile Internet for browsing and reading emails. 83.8% indicated that need it for social networking. For other use of mobile Internet voted 28 – 48% of respondents.

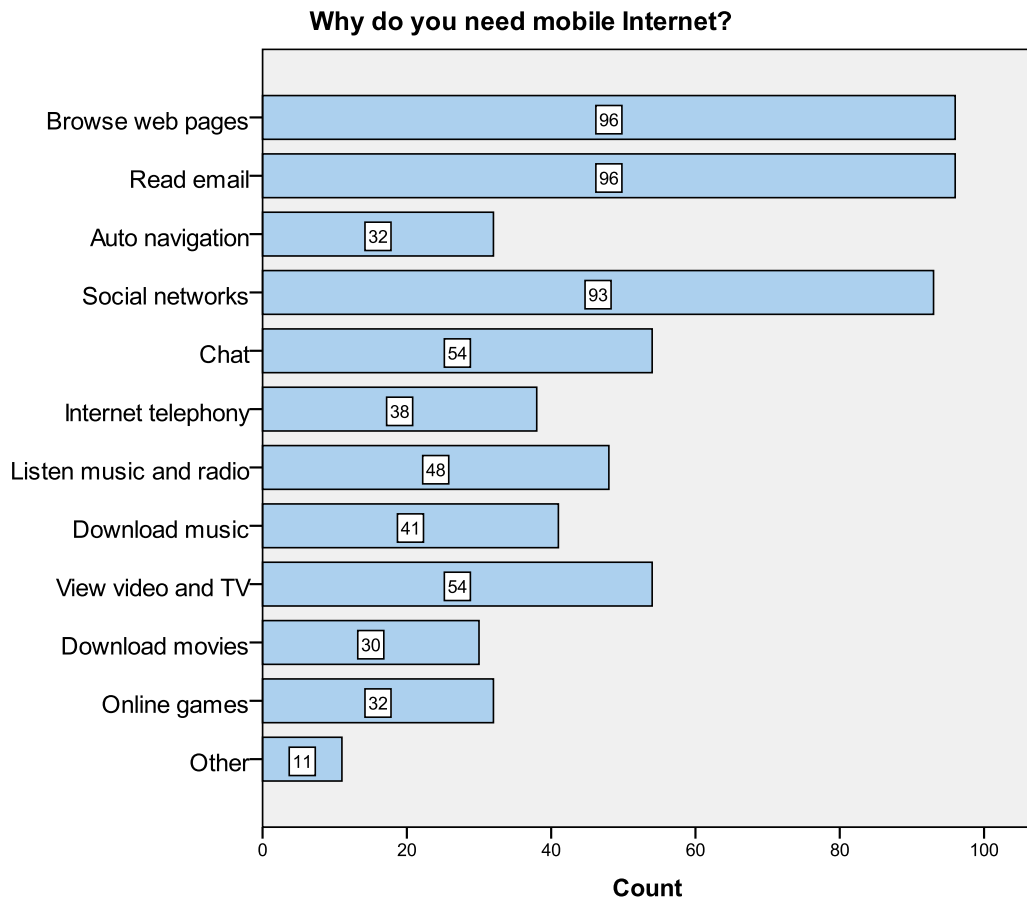


Figure 16. Why mobile Internet is needed

Other reasons why mobile Internet is needed include study, work, reading books, searching in the Internet.

Following sections measure generic marketing mix variables, which are not related to specific brand and product.

4.2.3 Product

This section describes what attributes 3G USB-modem should have. Scale description can be found in chapter 3.2.

Q: How important for you are the following 3G USB-modem attributes?

Table 5. Importance of 3G USB-modem features

	NI (1)	SI (2)	I (3)	QI (4)	VI (5)	Average
Size (V56)	15	21	31	26	18	3.10
Design (V57)	25	32	18	20	16	2.73
Speed (faster browsing, download) (V58)	1	1	2	13	94	4.78
Multiple bands (use in any region and country) (V59)	6	8	12	24	61	4.14
Low power consumption (longer battery life) (V60)	9	17	16	23	46	3.72
Nice packaging (V61)	60	20	9	13	9	2.02
Warranty (V62)	12	13	28	21	37	3.52
Operator lock free (SIM-lock free) (V63)	5	7	8	20	71	4.31
Brand (V64)	35	18	24	18	16	2.66
Price (V65)	5	9	19	22	56	4.04

The respondents indicated that the most important features are speed, operator lock-free and multiple bands support (Mean > 4). Low power consumption is seen as also important. Nice packaging is just slightly important for respondents. The brand is considered just slightly important. The respondents also indicated that price is also quite important for them. (Table 5.)

Figure 17 visually highlight importance of modem features.

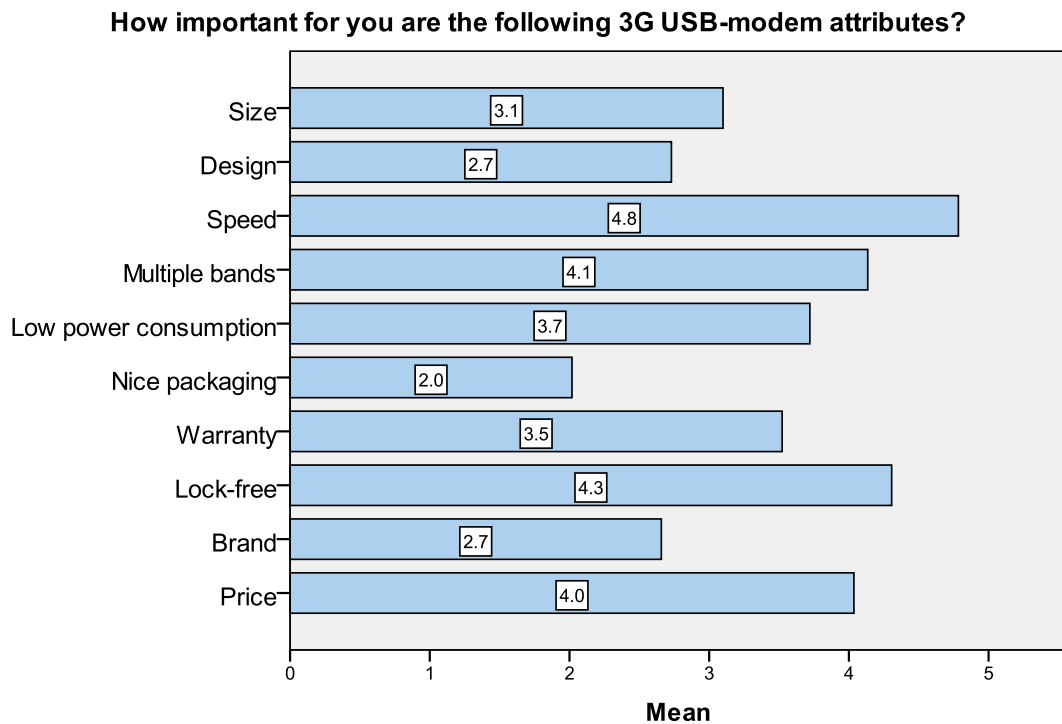


Figure 17. Importance of 3G USB-modem features

The Feature Attitude Level (FAL) is measured by variables V56 – V64, except Packaging (V61) and Price (V65). FAL is calculated in SPSS as $FAL = \text{MEAN}(V56, V57, V58, V59, V60, V62, V63, V64)$.

Q: For Ultrabook™ you would prefer to use small USB-modem (ultra-modem)?

Table 6. Preference to use ultra-modem with Ultrabook™ (V66)

Fully disagree (1)	Partially Disagree (2)	Neither/Nor (3)	Partially Agree (4)	Fully Agree(5)	Average
0	0	12	29	70	4.52

The majority of respondents fully agree that they prefer to use small USB-modem with Ultrabooks (Table 6).

4.2.4 Promotion

This section describes from where respondents wish to know about the modem.

Q: From where do you prefer to learn about 3G USB-modems?

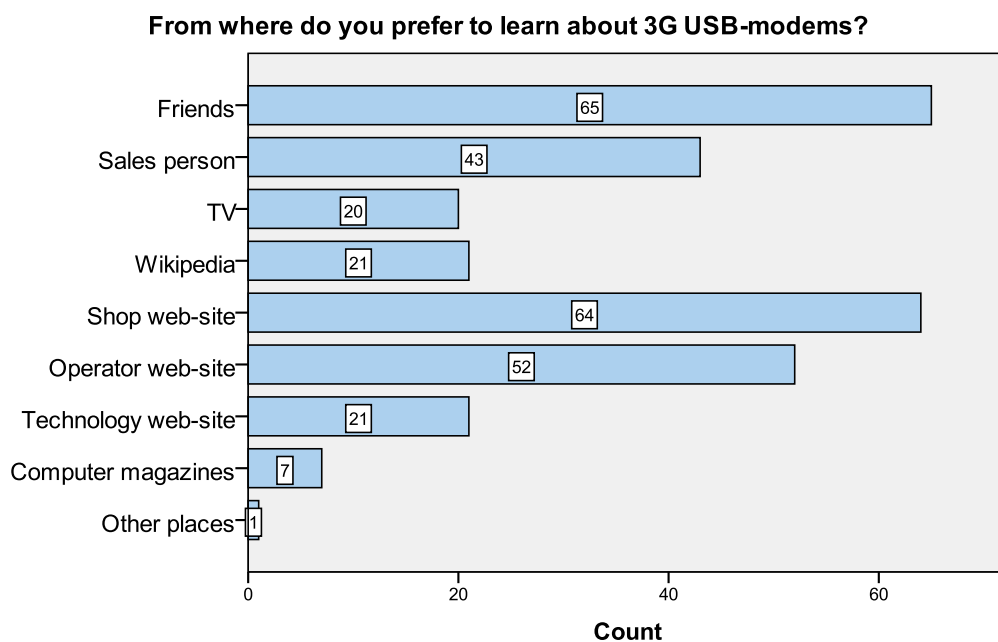


Figure 18. Source of information about 3G USB-modem

About 60% of respondents would like to get information about 3G USB-modems from friends and shop web-site. About 50% wish to learn about a modem also from operator web-site. Less than 20% of respondents would like to learn about a modem from TV or technology web-sites. Only about 6% of respondents wish to read about modem from computer magazines. (Figure 18.)

Figure 19 below shows sites and magazines provided by respondents:

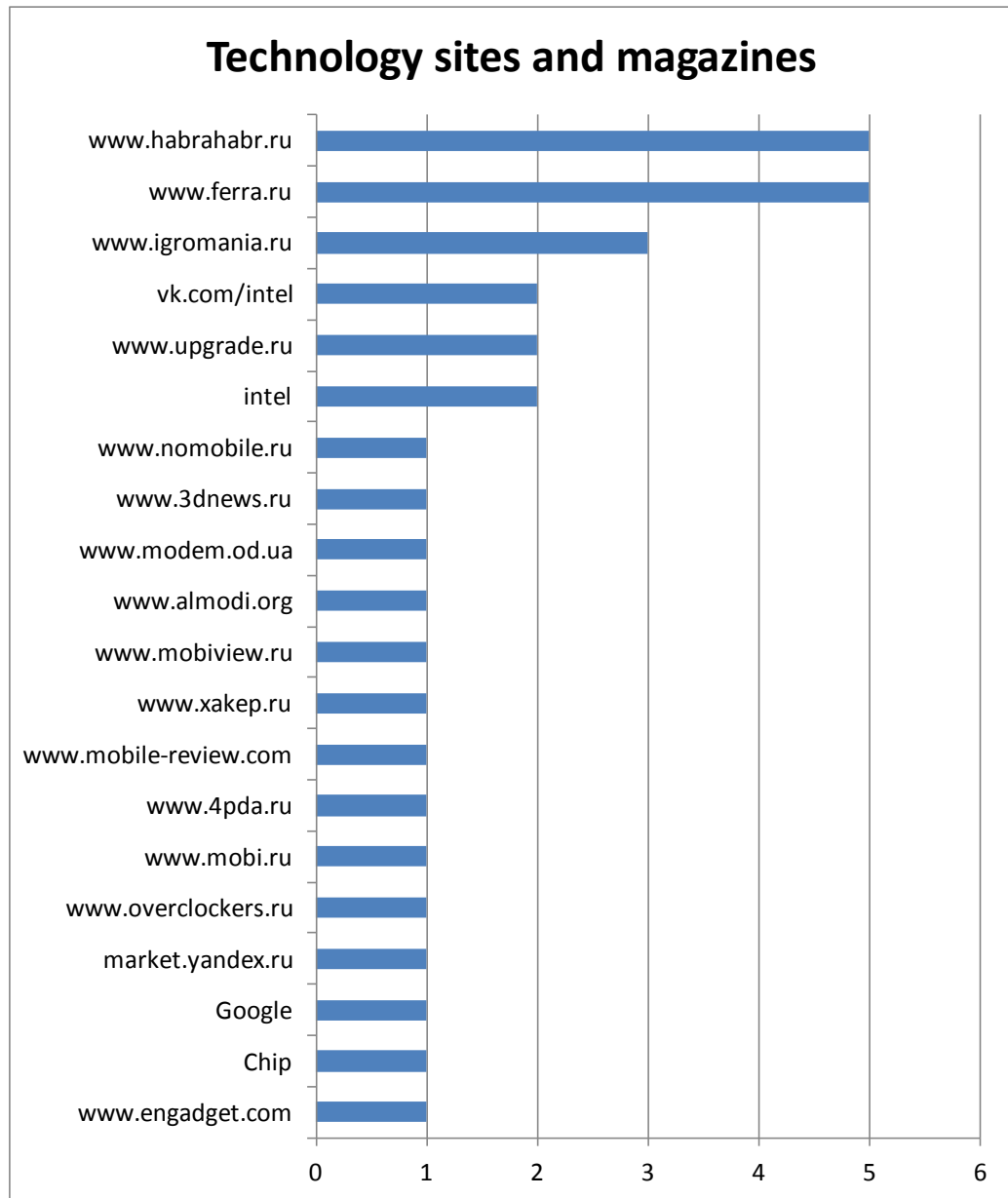


Figure 19. Technology sites and magazines

Figure 19 shows what magazines and technology web-sites were indicated by respondents.

4.2.5 Place

This section describes where respondents wish to purchase a modem.

Q: Where have you bought or consider buying a 3G USB-modem?

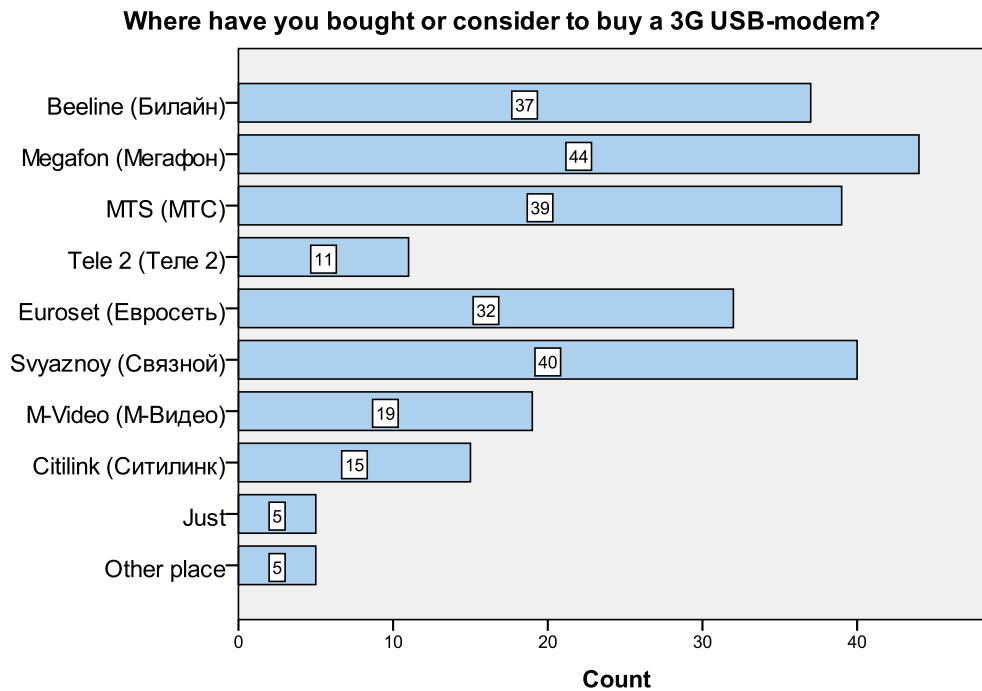


Figure 20. Places to buy 3G USB-modem

About 40% of respondents wish to buy modem from Megafon. This supports market data, that Megafon is the largest modem seller in Russia. About 35% also indicated that they could buy modem also from MTS and Beeline (33%). According to responses, the most popular retailing network to buy a modem is Svyaznoy (36%). Euroset accounted for about 29% of votes. Respondents also indicated other places, such as www.ulmart.ru, www.forum3.ru, www.dns-shop.ru, www.nix.ru. (Figure 20.)

Q: Would you prefer to purchase a 3G USB-modem online (with delivery)?

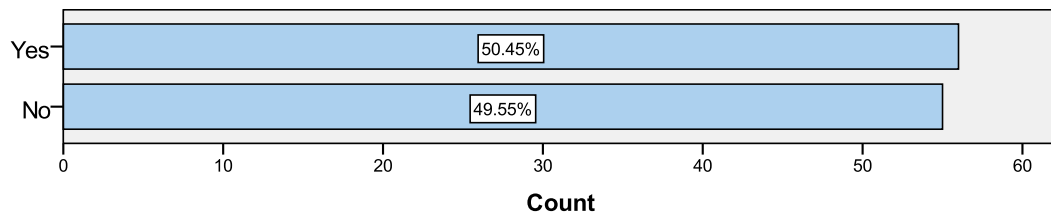


Figure 21. Preference to buy 3G USB-modem online

About 50% of respondents indicated that they would like to be able to buy modem online with delivery. Internet shopping is considered as important distribution channel. (Figure 21).

4.2.6 Attitude to price and quality

This section aims to understand price sensitivity in general in relation to purchase intention.

Q: What do you think about following statements?

Table 7. Attitude to 3G USB-modem price and quality

	FD (1)	PD (2)	NN (3)	PA (4)	FA (5)	Average
The quality of a 3G USB-modem is important for me (V91)	0	1	2	7	101	4.87
A 3G USB-modem is a product where quality differences are high (V92)	1	5	14	48	43	4.14
For a 3G USB-modem, very low prices may indicate low quality (V93)	7	27	18	45	14	3.29
When paying a higher price for 3G USB-modem, you generally get a better quality (V94)	11	29	11	44	16	3.23
A 3G USB-modem from well known brand has better quality (V95)	5	16	14	42	34	3.76
The brand of the product is a sign of quality (V96)	6	18	17	45	25	3.59
A 3G USB-modem from well known brand provides more value for your money (V97)	11	22	8	45	25	3.46
I need to collect a lot of information on a 3G USB-modem before considering its purchase (V98)	2	11	14	20	64	4.20
When purchasing a 3G USB-modem, quality is more important than price (V99)	0	10	16	42	43	4.06

When purchasing a 3G USB-modem, brand is more important than price (V100)	28	19	26	31	7	2.73
When purchasing a 3G USB-modem, I consider a large number of alternative brands (V101)	2	11	19	38	41	3.95
When purchasing a 3G USB-modem, I collect a large amount of information on price via comparing prices in stores or searching for deals (V102)	5	3	17	35	51	4.12

Attitude to the price and quality of a modem is shown on Table 7 and Figure 22. 101 respondents indicated that quality is important for them and also majority indicated that quality is more important than price. The respondents are also agreeing that there are quality differences between 3G USB-modems. Brand is considered less important than price.

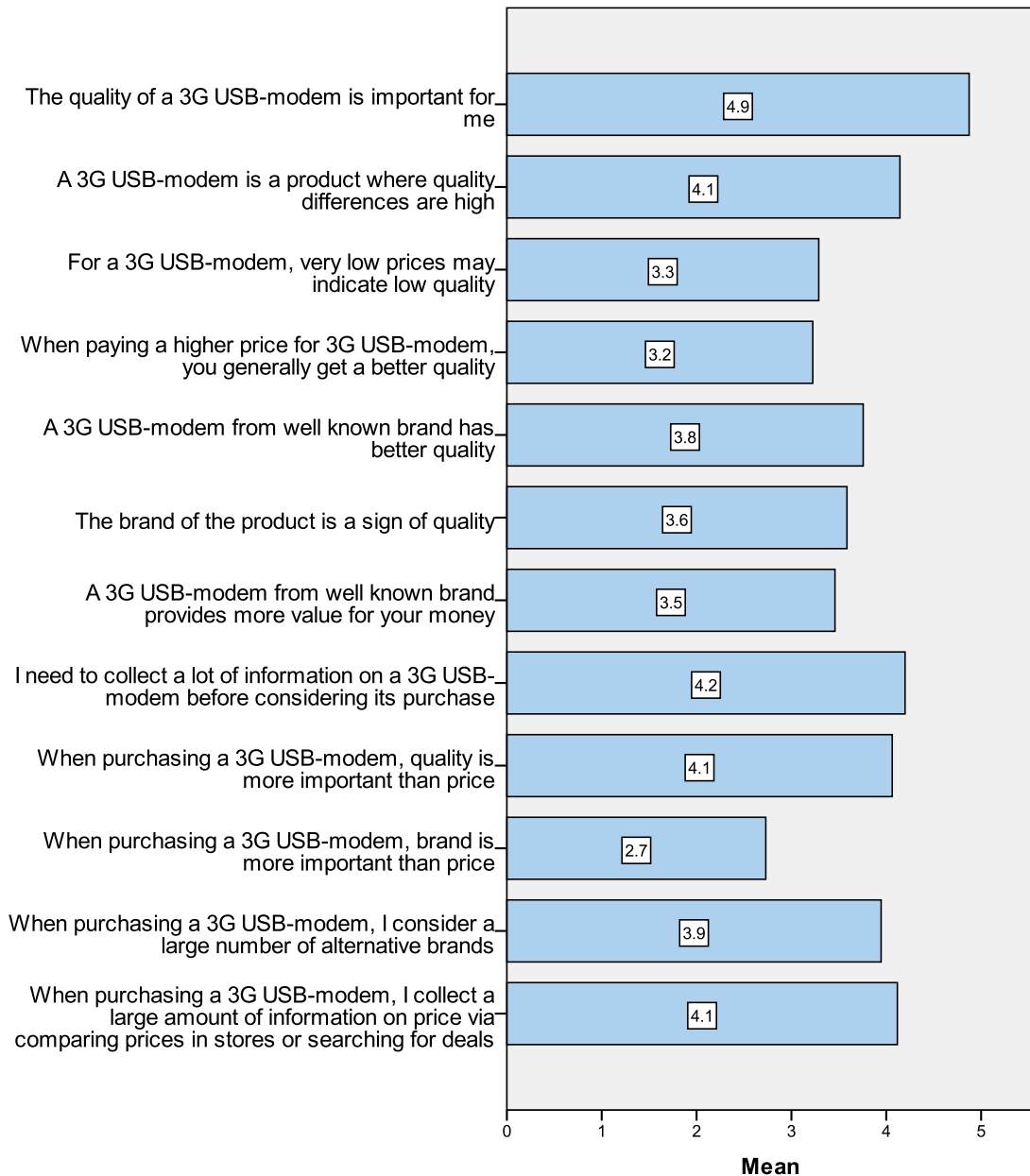


Figure 22. Attitude to 3G USB-modem price and quality

The Concern for quality (CQ) is measured by variables V91 – V98. Variables V93 and V94 are interpreted as “Price as quality indicator”. Variables V95, V96 and V97 are interpreted as “Brand as quality indicator”. CP is calculated in SPSS as $CQ = \text{MEAN}(V91, V92, V93, V94, V95, V96, V97, V98)$

The Concern for price (CP) is measured by variables V99 – V102. CP is calculated in SPSS as $CP = \text{MEAN}(6-V99, 6-V100, V101, V102)$

Q: What do you think about prices for 3G USB-modems?

Here is a list of questions that were asked about their experience and perception of modem prices:

- What was the price you have paid last time if you bought a 3G USB-modem? (V103) (Price recall)
- What is the price you would consider normal for a 3G USB-modem? (V104) (Normal price estimate)
- What is the price you would consider very expensive for MBB? (V105) (Upper threshold)
- What is the price you would consider cheap for a 3G USB-modem? (V106) (Lower threshold)
- What is the maximum price you would be prepared to pay for a 3G USB-modem? (V107) (Reservation price).

Figure 23 shows what price respondents have paid in the past for a 3G-USB modems. Average value is 1019 rubles.

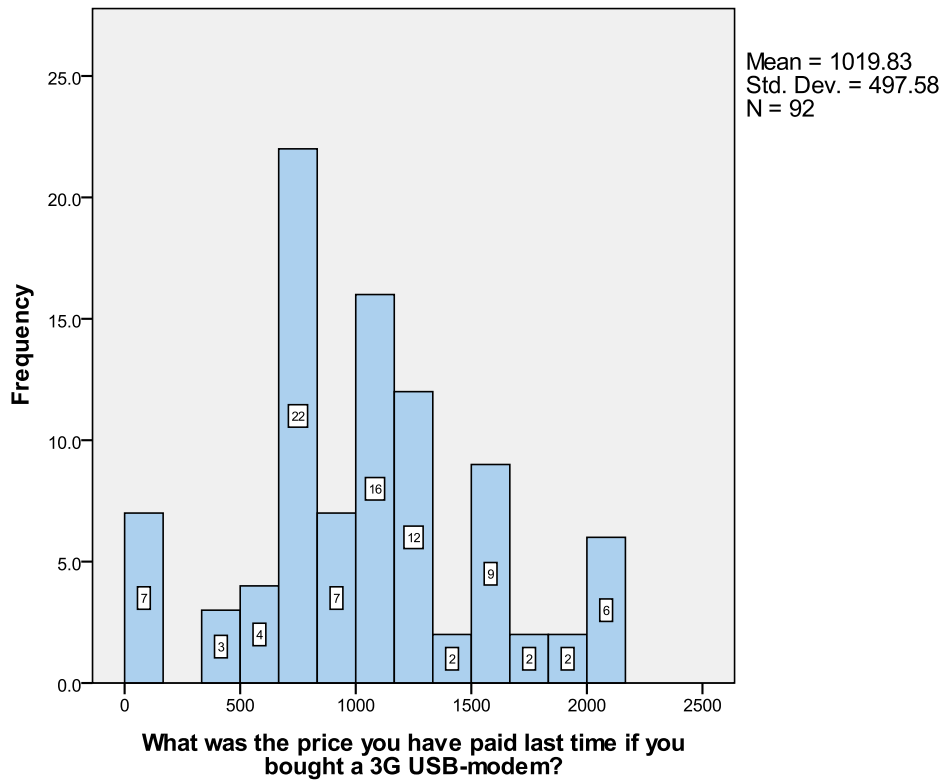


Figure 23. Price respondents paid for 3G USB-modems (V103)

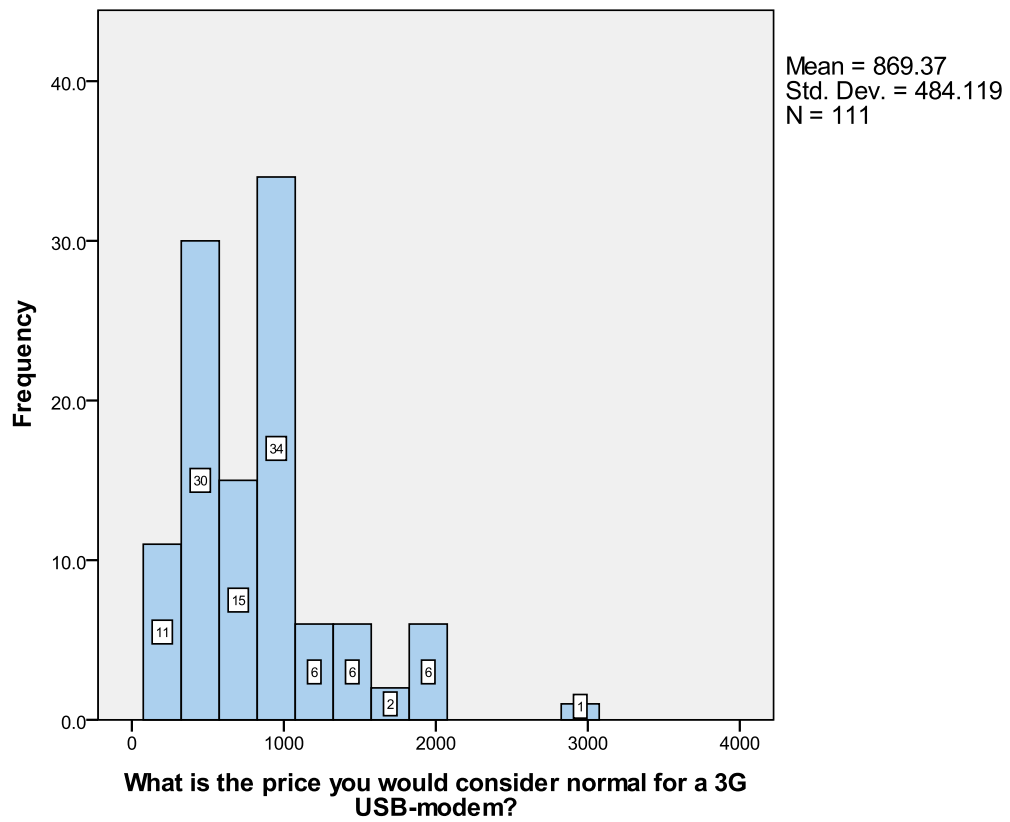


Figure 24. Price for 3G USB-modem, which is considered normal (V104)

Figure 24 shows what price the respondents consider normal for 3G USB-modems. Average is 869 rubles and less than average what respondents paid in the past.

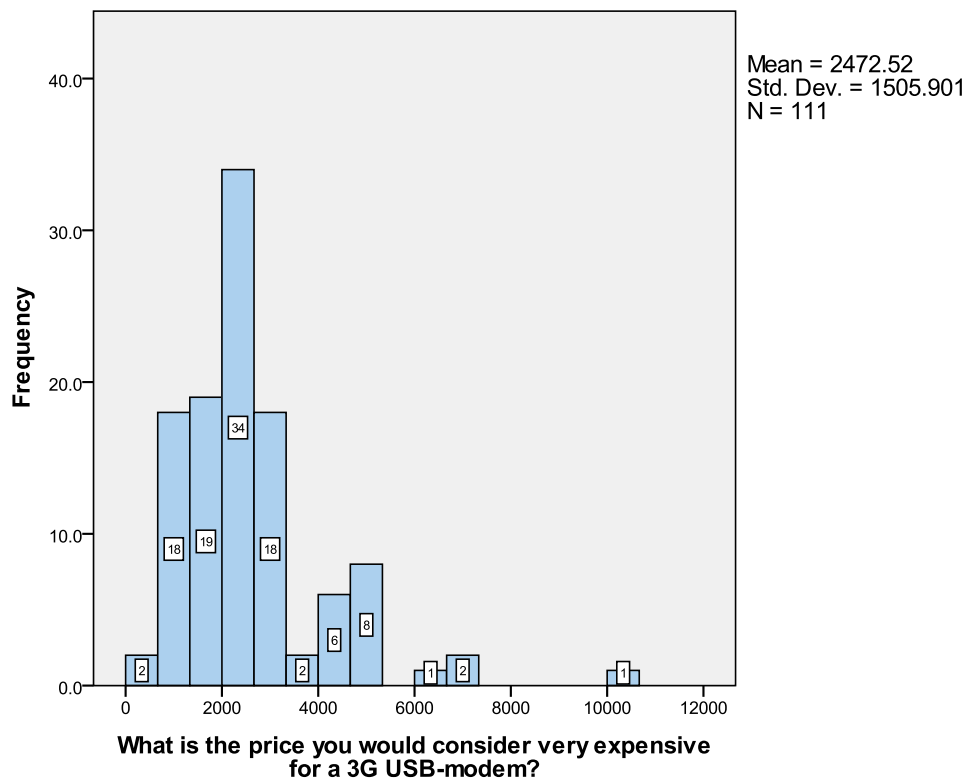


Figure 25. Price for 3G USB-modem, which is considered very expensive

Figure 25 shows what price is considered very expensive. Average is 2472 rubbles. Thus 2500 rubles for Intel modem belongs to category of very expensive modems.

Figure 26 shows that the respondents consider on average that 406 rubles is a very cheap price for a modem.

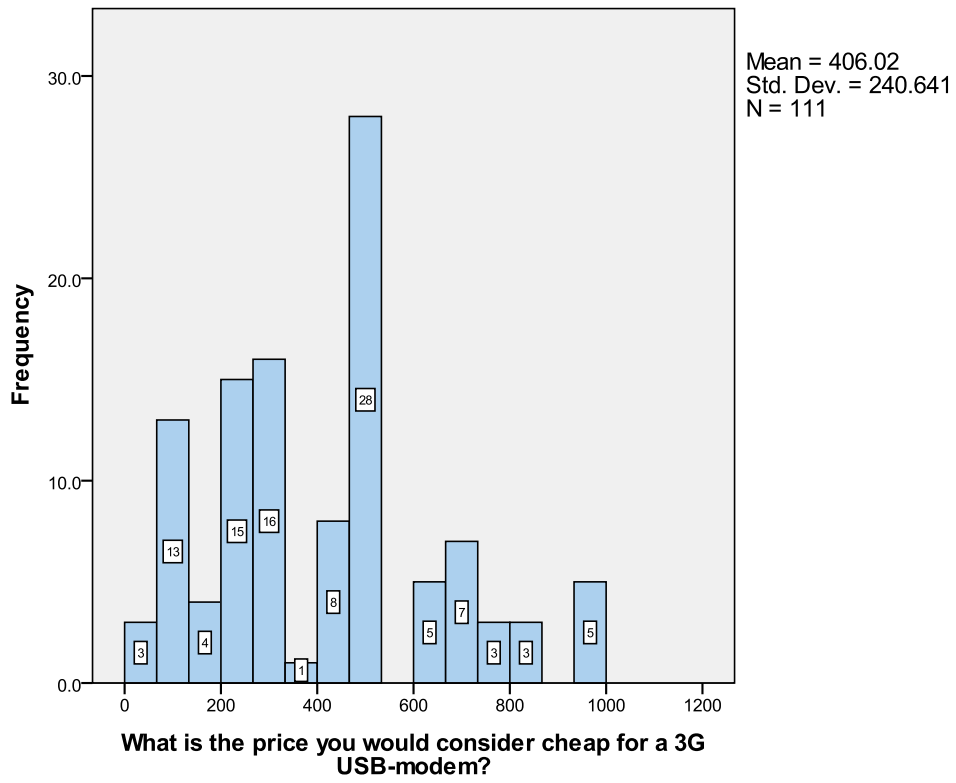


Figure 26. Price for 3G USB-modem, which is considered cheap

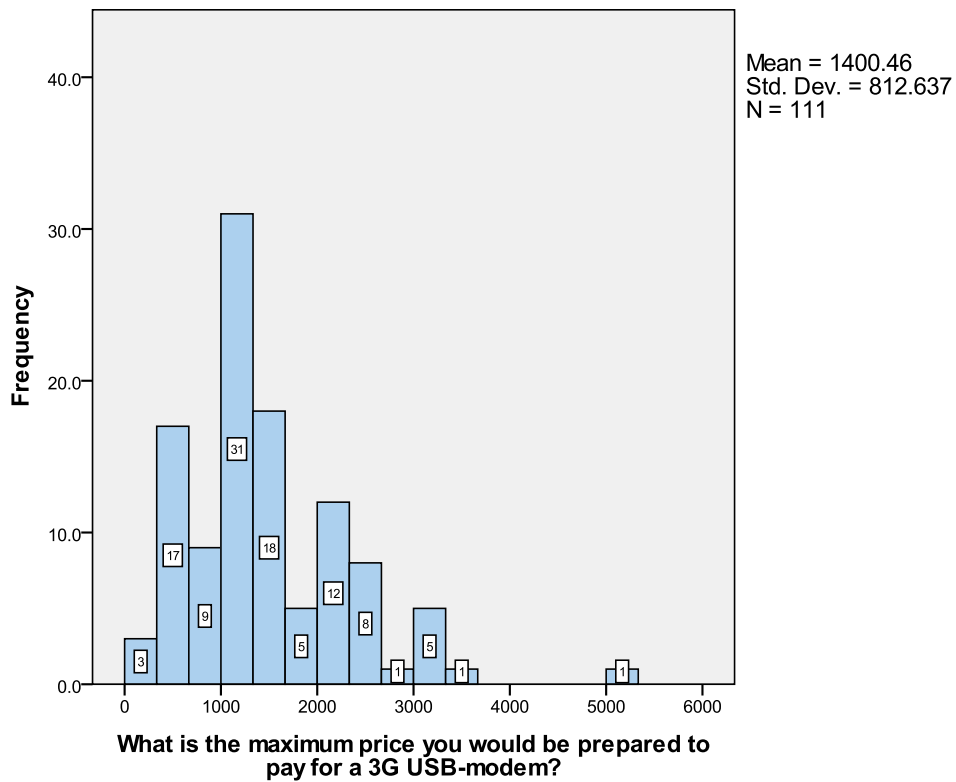


Figure 27. Maximum price for 3G USB-modem, which respondents are prepared to pay

Figure 27 shows that on average respondents are prepared to pay maximum 1400 rubles for a 3G USB-modem. About 25% of respondents are prepared to pay more than 2000 rubles for a modem.

Internal Reference Price (IRP) is calculated using variables V104 – V107. IRP is calculated in SPSS as $IRP = MEAN(V104, V105, V106, V107)$ (Figure 28).

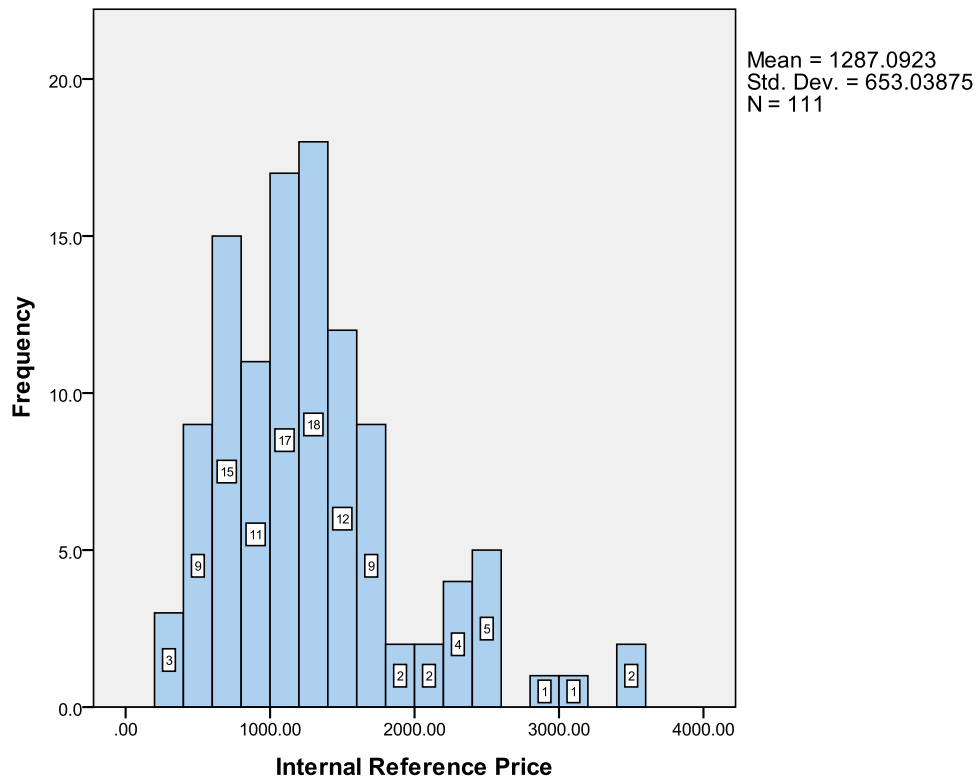


Figure 28. Internal Reference Price

4.2.7 Attitude to Intel’s brand and products

This section aims to understand Intel brand and & Intel MBB perception in relation to purchase intention.

Q: What do you think about Intel and its products?

Table 8. Attitude to Intel’s brand and products

	FD (1)	PD (2)	NN (3)	PA (4)	FA (5)	Average

Intel's products are modern and innovative (V108)	0	0	0	14	97	4.87
Intel's products are of high quality (V109)	0	0	0	15	96	4.86
Intel's products have a good price-quality ratio (V110)	0	3	3	47	58	4.44
Intel logo "Intel Inside" is a sign of high quality (V111)	1	4	8	22	76	4.51
I like to have a logo "Intel Inside" on Intel-based product (V112)	2	0	15	17	77	4.50
I am always confident when buying Intel products (V113)	0	0	6	15	90	4.76

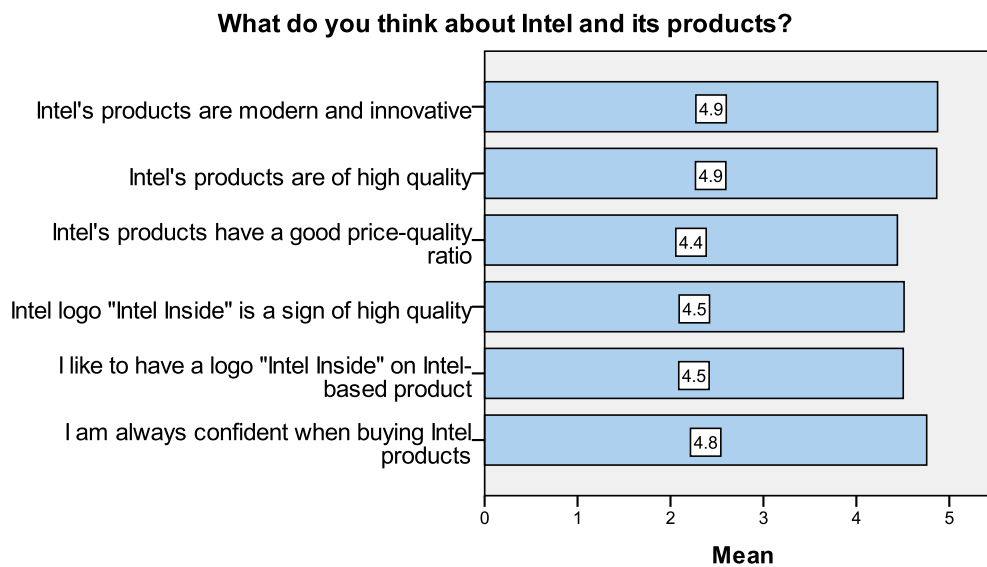


Figure 29. Attitude to Intel brand and products

Table 8 and Figure 29 shows very positive attitude to Intel brand and Intel's products, Average score for quality is 4.9. Few respondents indicate that price/quality ratio is not very good for Intel's products.

The Brand Image (BIM) is measured by variables V108 – V113. BIM is calculated as $BIM = \text{MEAN}(V108, V109, V110, V111, V112, V113)$

4.2.8 Attitude to the E369 modem

This section describes respondents' attitude to the E369 modem.

Table 9 shows Huawei E369 features and price.

Table 9. Huawei E369 features

Feature	Specification	Benefit
Size	65 x 24.5 x 8 mm	Smallest dongle in the World. Looks nice with Ultra-book
Speed	Fast 21.6 Mb/s	Faster browsing – Internet experience is better
Power	30% less power	Longer work from battery on the laptop
Bands	850/900/AWS/1900/2100	Global reach 5 bands to work in any country
Services	Huawei cloud service	Additional storage space
Extra	Easy magnetic cap	Pleasant to handle
Warranty	2 years	No worries
Price	2500 RUB (65 Euro)	

Q: What do you think about this Intel-based E369 3G USB-modem?

Table 10. Attitude to Intel-based Huawei E369 3G USB-modem

	FD (1)	PD (2)	NN (3)	PA (4)	FA (5)	Average
E369 modem has good features (V114)	0	0	4	13	94	4.81
E369 looks nice (V115)	1	7	7	15	81	4.51
E369 modem combines features, which are not available in other modems (V116)	0	1	11	45	54	4.37
E369 modem is high quality product (V117)	0	2	13	26	70	4.48
E369 modem is reliable product (V118)	0	3	14	32	62	4.38
Price is less than what I expected to be (V119)	17	18	17	26	33	3.36
Price is less than average market price (V120)	33	28	16	14	20	2.64
The E369 modem is a great deal (V121)	3	14	15	32	47	3.95
The E369 modem has a good value for money (V122)	8	21	12	30	40	3.66

Table 10 and Figure 30 show quite positive attitude towards Intel-based E369 modem. Responses indicate that modem has very good features, but the price is higher than average market price.

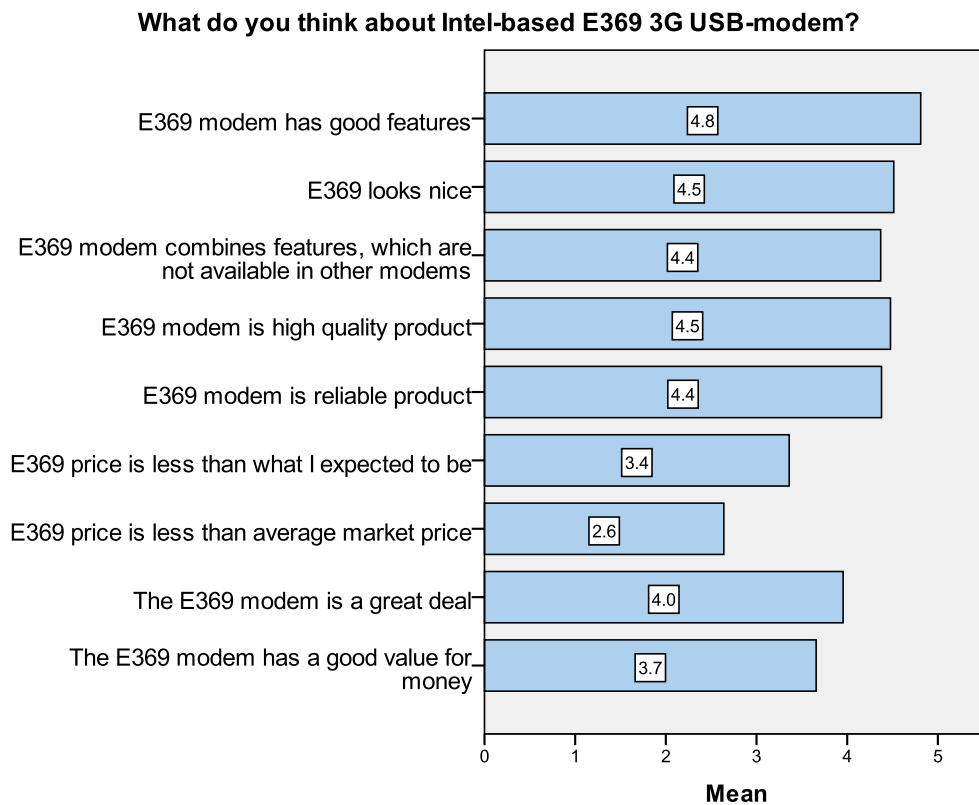


Figure 30. Attitude to Intel-based Huawei E369 3G USB-modem

The Perceived Product Quality (PPQ) is measured by variables V114 – V118. PPQ is calculated in SPSS as $PPQ = \text{MEAN}(V114, V115, V116, V117, V118)$.

The Perceived value (PV) is measured by variables V119 – V122. PV is calculated in SPSS as $PV = \text{MEAN}(V119, V120, V121, V122)$.

Q: What do you like most or least about E369?

This question is open-end question. Answers were manually coded into single-word categories, such as speed, design, etc...

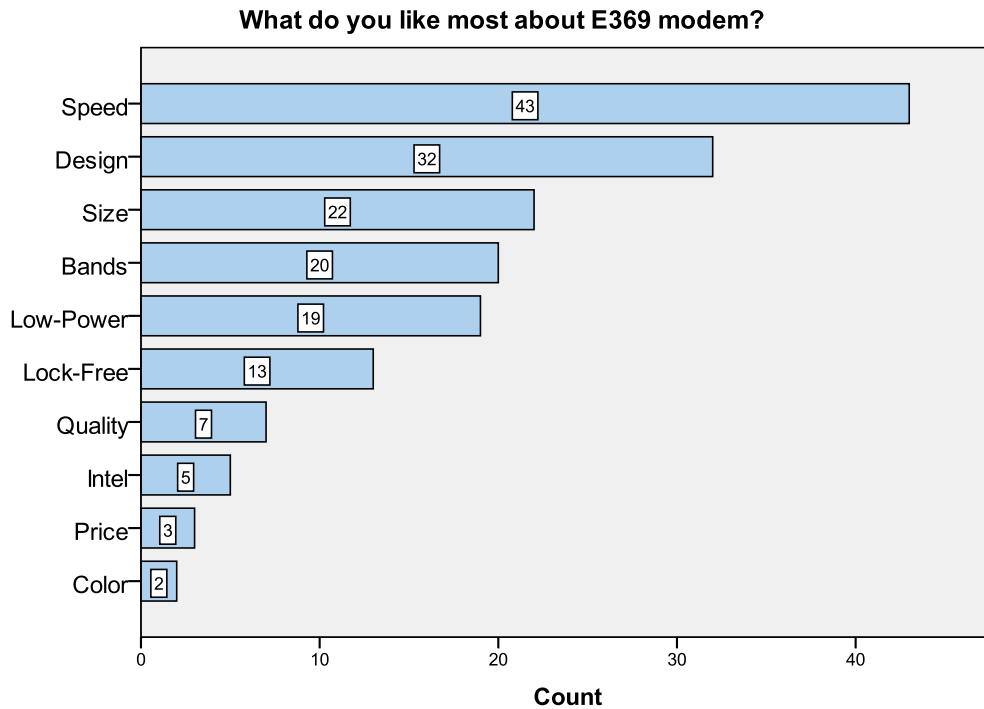


Figure 31. What respondents like most about E369 USB-modem

Figure 31 shows what respondents like most about E369 USB-modem: 39% like speed, 29% like design, 20% like size, 18% like multi-band support, 17% like low-power consumption, 12% like that is lock-free. Few respondents also indicated that they like “quality” and that modem uses Intel chip.

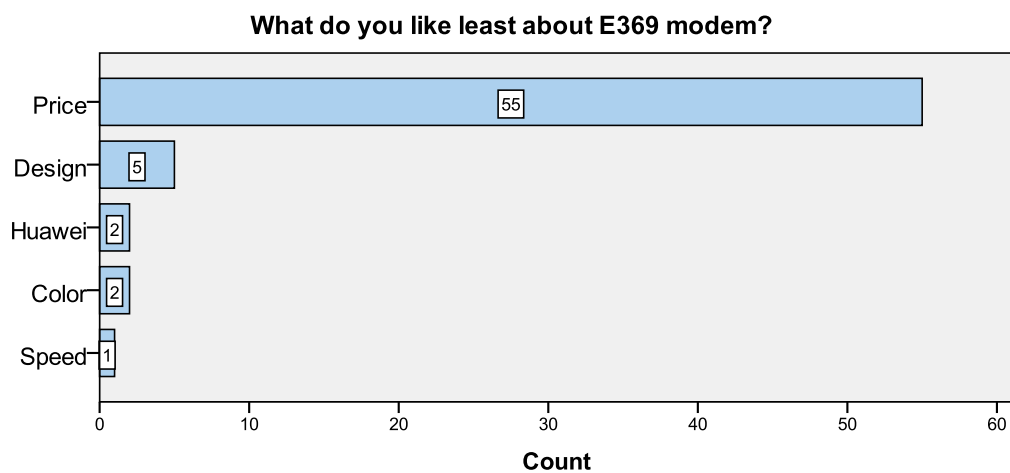


Figure 32. What respondents like least about E369 modem

Figure 32 shows that ~50% of respondents don't like price of the modem. Also a few

indicated that they do not like design.

Q: What are your aspirations in terms of owning the Intel-based E369 modem?

Table 11. Aspiration of owning Intel-based E369 modem

	FD (1)	PD (2)	NN (3)	PA (4)	FA (5)	Average
I am interested in the E369 modem (V125)	3	2	4	19	83	4.59
I like the idea of having the E369 modem (V126)	4	6	8	46	47	4.14
I am very impressed by the E369 modem (V127)	3	1	11	28	68	4.41
I would prefer to have E369 than modems of other brands (V128)	7	7	13	24	60	4.11
The purchase of the E369 modem may positively influence my image among my friends (V129)	13	4	36	22	36	3.58
I want to see "Intel Inside" logo on the E369 modem (V130)	5	4	19	18	65	4.21

What are your aspirations in terms of owning the Intel-based E369 modem?

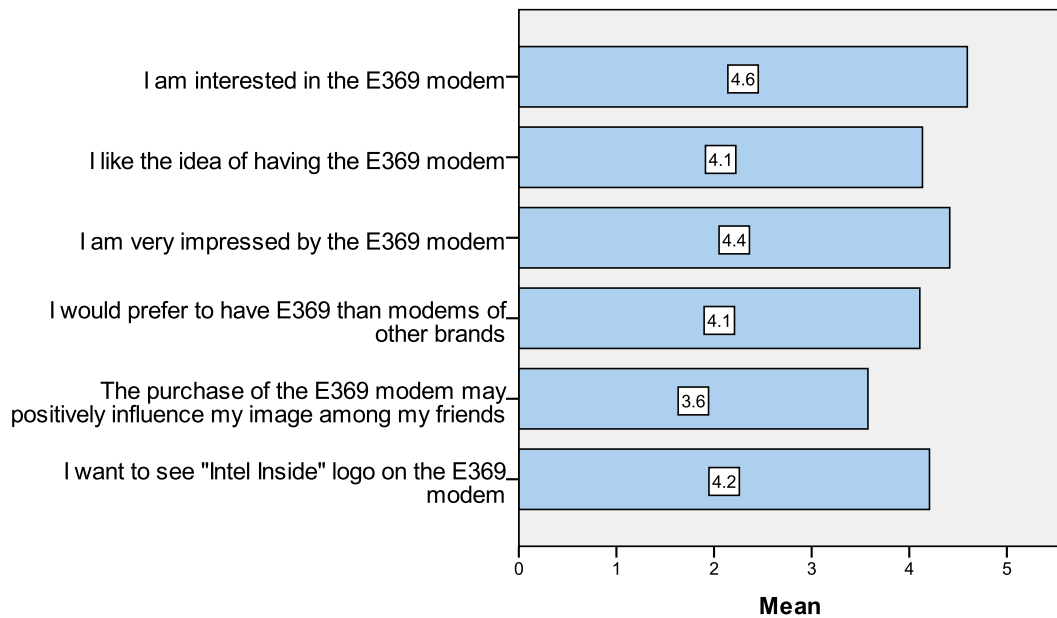


Figure 33. Aspiration of owning Intel-based E369 modem

Table 11 and Figure 33 indicate quite high interest towards 3G USB-modem. Average scores are over 4, except that modem can positively influence image among friends – respondents are neutral about it.

The Aspiration (ASP) is measured by variables V125 – V130. ASP is calculated in SPSS as $ASP = \text{MEAN}(V125, V126, V127, V128, V129, V130)$

4.2.9 Purchase intention

This section describes purchase intention towards the E369 modem.

Q: What do you think about purchasing the E369 modem?

Table 12. Intention to purchase E369 modem

	FD (1)	PD (2)	NN (3)	PA (4)	FA (5)	Average
I want to purchase E369 3G USB-modem during next 3 months (V131)	24	14	24	27	22	3.08
I want to purchase E369 3G USB-modem during next 6 months (V132)	22	12	18	36	23	3.23
I would purchase the E369 3G USB-modem because it is small (V133)	7	5	18	32	49	4.00
I would purchase the E369 3G USB-modem because it is fast (V134)	4	2	4	23	78	4.52
I would purchase the E369 3G USB-modem because it consumes less power (V135)	5	1	12	32	61	4.29
I would purchase the E369 3G USB-modem because it looks good (V136)	11	4	20	30	46	3.86
I would consider purchasing the E369 3G USB-modem at the price of 2500 Rubles (V137)	42	23	10	21	15	2.50
I recommend the E369 modem to others (V138)	5	8	14	33	51	4.05

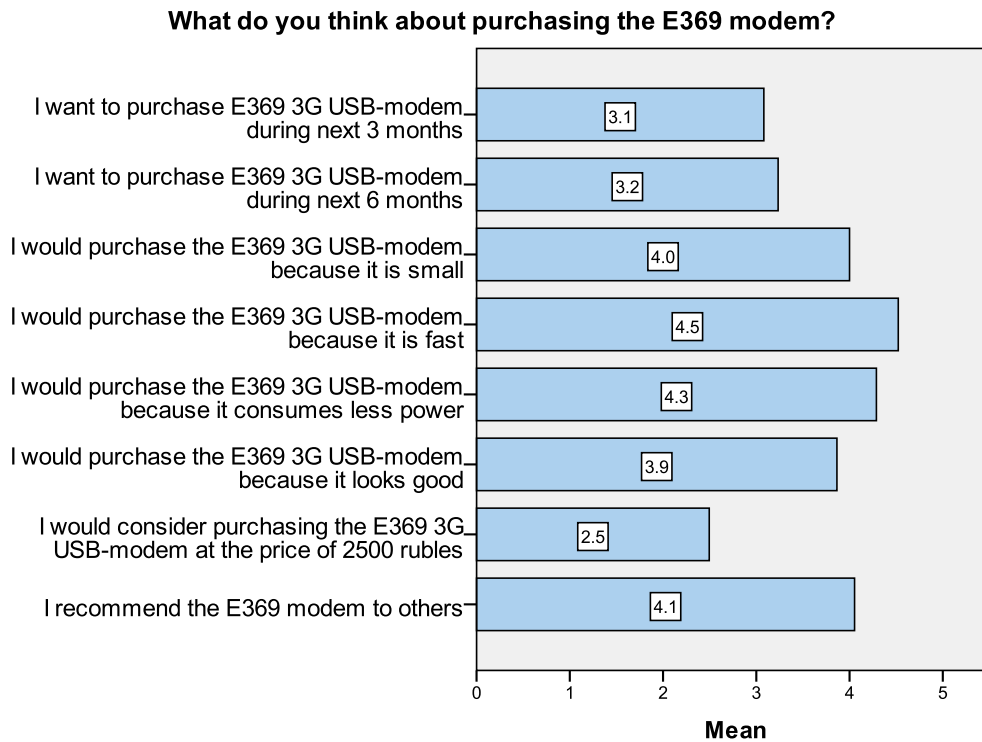


Figure 34. Intention to purchase E369 modem

Table 12 and Figure 34 show purchase intention towards E369 modem. Intention to buy is quite high because of good modem features. But respondents tend to disagree to purchase modem for 2500 rubles. Again price is considered to be quite high.

The Purchase intention (PI) is measured by variables V131 – V138. PI is calculated in SPSS as $PI = \text{MEAN}(V131, V132, V133, V134, V135, V136, V137, V138)$.

4.3 Inferential, difference and associative analyzes

This chapter provides inferential, difference and associative analyzes, which identify differences and relationship between different response groups. This analysis allows identifying what group of respondents has higher willingness to purchase the modem.

4.3.1 Hypotheses testing

Hypothesis 1: Ultra-dongles are higher preferred choice when using with Ultrabook.

It is appropriate to use hypothesis test for a mean. Average and neutral value of the scale is 3. So null hypothesis H0 will be stated as: the population mean would be less or equal to 3. Table 14 shows one-sample test result.

Table 13. One-sample statistics (Ultrabook)

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
For Ultrabook (TM) you would prefer to use small USB-modem (ultra-modem)	111	4.52	.686	.065

Table 14. One-sample t-test (Ultrabook)

One-Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
For Ultrabook (TM) you would prefer to use small USB-modem (ultra-modem)	23.399	110	.000	1.523	1.39	1.65

Test shows no support for null hypothesis, thus difference in means is significant. Mean difference and confidence interval is positive, which means that statistics can be generalized to population.

Hypothesis 1 is accepted.

Hypothesis 2: Consumers, who wish to have all features, will be more willing to buy Intel-based modem.

Questions in chapter 4.2.3 measure consumers' attitude towards features they consider important to have in MBB. Feature attitude level (FAL) has been computed to provide overall importance level. Consumers for who important to have all possible features will have highest FAL value. Willingness to buy is measured by Purchase Intention and Feature-based Purchase Intention.

Table 15. Correlation between FAL and FPI

Correlations		Feature attitude level
Feature Purchase Intention	Pearson Correlation	.365**
	Sig. (2-tailed)	.000
	N	111

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation analysis between FAL and Feature-based Purchase Intention (FPI) is shown on Table 15. Null hypothesis that there is no correlation is not supported ($p=0.0$). Thus there is significant positive correlation and hypothesis 2 is accepted.

Hypothesis 3: Consumers see higher price of MBB as indicator of higher quality.

V93 and V94 have means larger than 3.

Table 16. One-sample statistics (price)

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
For a 3G USB-modem, very low prices may indicate low quality	111	3.29	1.155	.110
When paying a higher price for 3G USB-modem, you generally get a better quality	111	3.23	1.263	.120

Table 17. One-sample t-test (price)

One-Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	90% Confidence Interval of the Difference	
					Lower	Upper
For a 3G USB-modem, very low prices may indicate low quality	2.629	110	.010	.288	.11	.47
When paying a higher price for 3G USB-modem, you generally get a better quality	1.879	110	.063	.225	.03	.42

As we are working with directional hypothesis test we can adjust significance level to be 10% on upper side (Burns & Bush 2010, 513). One-Sample test on Table 17 shows

that there is no support for null hypothesis that there is no difference between test value 3 and sample statistics – there is significant difference between means. Tests support that respondents see very low prices as indicate low quality ($p=0.01$). Test supports also that respondents consider that when paying higher price, they get better quality. We can conclude that consumers consider higher price as indicator of quality. At the same time, V120 mean is less than 3, which means that consumers see Intel-based modem as more expensive device.

The correlation analysis on Table 18 and Table 19 show there is no support for null hypothesis that there is no correlation.

Table 18. Spearman correlation between PPQ and V137

Correlations			I would consider purchasing the E369 3G USB-modem at the price of 2500 rubles
Spearman's rho	Perceived Product Quality	Correlation Coefficient	.284**
		Sig. (2-tailed)	.002
		N	111

** Correlation is significant at the 0.01 level (2-tailed).

Table 19. Pearson correlation between PPQ and PI

Correlations		Purchase Intention
Perceived Product Quality	Pearson Correlation	.700**
	Sig. (2-tailed)	.000
	N	111

** Correlation is significant at the 0.01 level (2-tailed).

There is a significant positive correlation between perceived product quality (PPQ) and “considering purchasing MBB for 2500 RUB” and also between PPQ and PI. Thus, consumers, who are willing to buy more expensive Intel-based modem for 2500 rubles has higher perceived product quality. Hypothesis 3 is accepted.

Hypothesis 4: Intel brand and “Intel Inside” logo increase consumers’ willingness to buy a product.

Variables V108 – V113 are measuring consumers’ attitude to Intel brand and logo. The correlation analysis on Table 20 shows no support for null hypothesis. We have significant correlation between Brand Image and Purchase Intention. Table 21 shows correlations between relevant variables.

Table 20. Pearson correlation between BIM, PI and FPI

Correlations			
		Purchase Intention	Feature Purchase Intention
Brand Image	Pearson Correlation	.551**	.529**
	Sig. (2-tailed)	.000	.000
	N	111	111
Purchase Intention	Pearson Correlation		.840**
	Sig. (2-tailed)		.000
	N		111

** . Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis on Table 21 shows that there are significant correlations between willingness to see the logo, brand image and overall purchase intention. At the same time at significance level 5% there is no correlation between willingness to see the logo and “consider purchasing for 2500 rubbles”. It shows that “logo” is not very good motivator if the price is too high.

Table 21. Spearman correlation between V112, BIM, V137, PI and FPI

Correlations						
			Brand Image	I would consider purchasing the E369 3G USB-modem at the price of 2500 rubles	Purchase Intention	Feature Purchase Intention
Spearman's rho	I like to have a logo "Intel Inside" on Intel-based product	Correlation Coefficient	.764**	.168	.360**	.403**
		Sig. (2-tailed)	.000	.078	.000	.000
		N	111	111	111	111
	Brand Image	Correlation Coefficient		.284**		
		Sig. (2-tailed)		.003		
		N		111		
	I would consider purchasing the E369 3G USB-modem at the price of 2500 rubles	Correlation Coefficient			.691**	.317**
		Sig. (2-tailed)			.000	.001
		N			111	111

** . Correlation is significant at the 0.01 level (2-tailed).

As overall purchase intention is significantly and positively affected, hypothesis 4 is

accepted.

Hypothesis 5: Operator's store is a preferred place for purchasing the MBB.

V79 – V88 in chapter 4.2.5 measure consumers’ preferences in respect where they would like to buy the modem.

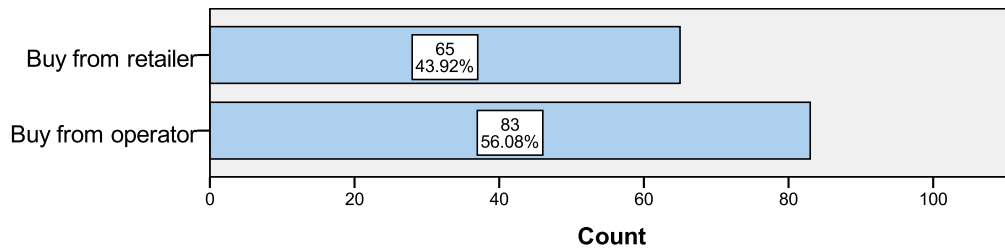


Figure 35. Purchase place preference

SPSS is not able to calculate Z value for percentage, but we can use following formula to test difference between two percentages (Burns & Bush 2010, 535):

$$Z = \frac{p_1 - p_2}{\sqrt{\left(\frac{p_1 * q_1}{n_1} + \frac{p_2 * q_2}{n_2}\right)}}$$

Null hypothesis here is that there is no difference between percentages. Table 22 shows Excel calculations for Z value.

Table 22. Difference between retailer and operator

	Retailer	Operator
count	65	83
n	111	111
p	0.58559	0.74775
q	0.41441	0.25225
(p*q)/n	0.00219	0.00170
Z		2.60

Z value is 2.6 and larger than so we need to reject null hypothesis and accept alternative hypothesis that there is a difference between percentages. The operator

percentage is higher than retailer, thus hypothesis 5 is accepted.

Hypothesis 6: Consumers prefer to find information about MBB from the place of purchase.

According to the data from chapter 4.2.4, majority of respondents prefer to acquire information about 3G modems from friends, shop web site and operator website.

Hypothesis 6 can be accepted.

4.3.2 Model testing

This part of analysis aims to explore relationships between variables from conceptual model in chapter 2.3.

Usually $\leq 5\%$ significance level is selected, but since this is exploratory study, significance levels at 10% are considered in interpreting the results.

Table 23. Descriptive statistics for model variables

Descriptive Statistics			
	Mean	Std. Deviation	N
Concern For Quality	3.8164	.69614	111
Concern For Price	3.3176	.56200	111
Internal Reference Price	1287.0923	653.03875	111
Brand Image	4.6592	.43251	111
Perceived Product Quality	4.5099	.57886	111
Perceived Value	3.4032	1.12572	111
Aspiration	4.1727	.82692	111
Purchase Intention	3.6926	.84187	111

Table 23 shows descriptive statistics for model variables. Table 24 shows correlation analysis between model variables.

Table 24. Correlation between conceptual model variables

		Correlations							
		Concern For Quality	Concern For Price	Internal Reference Price	Brand Image	Perceived Product Quality	Perceived Value	Aspiration	Purchase Intention
Concern For Quality	Pearson Correlation	1	-.220*	.095	.388**	.364**	.249**	.297**	.359**
	Sig. (2-tailed)		.020	.320	.000	.000	.008	.002	.000
	N	111	111	111	111	111	111	111	111
Concern For Price	Pearson Correlation		1	.076	.055	.128	-.179	.047	-.045
	Sig. (2-tailed)			.430	.566	.181	.060	.623	.638
	N		111	111	111	111	111	111	111
Internal Reference Price	Pearson Correlation			1	.046	.085	.281**	.144	.201*
	Sig. (2-tailed)				.632	.375	.003	.132	.035
	N			111	111	111	111	111	111
Brand Image	Pearson Correlation				1	.679**	.386**	.668**	.551**
	Sig. (2-tailed)					.000	.000	.000	.000
	N				111	111	111	111	111
Perceived Product Quality	Pearson Correlation					1	.461**	.745**	.700**
	Sig. (2-tailed)						.000	.000	.000
	N					111	111	111	111
Perceived Value	Pearson Correlation						1	.583**	.560**
	Sig. (2-tailed)							.000	.000
	N						111	111	111
Aspiration	Pearson Correlation							1	.723**
	Sig. (2-tailed)								.000
	N							111	111
Purchase Intention	Pearson Correlation								1
	Sig. (2-tailed)								
	N								111

*. Correlation is significant at the 0.05 level (2-tailed).
 **. Correlation is significant at the 0.01 level (2-tailed).

According to the correlation analysis, Purchase Intention (PI) significantly ($p=0.01$) positively correlates with Aspiration (ASP), Perceived Value (PV), Perceived Product Quality (PPQ), Brand Image (BIM), and Concern for Quality (CQ).

The correlation analysis shows that there is no relationship between CP, CQ, BIM and IRP. Interestingly, research paper (Souiden et al. 2011, 356 – 367) does not even discuss reference prices in analyzing consumer purchase intention. IRP has no relationship with perception of brand and quality. But there is a positive correlation ($r=0.281$, $p=0.03$) between IRP and Perceived Value (PV) and positive correlation ($r=0.201$, $p=0.035$) between IRP and Purchase Intention (P) – higher IRP increases PV and PI.

Table 25. Conceptual model hypotheses

From	To	Hypothesis	Correlation
CP	IRP	Rejected	
CQ	IRP	Rejected	
BIM	IRP	Rejected	
BIM	PPQ	Accepted	R=0.678, p=0.0
BIM	ASP	Accepted	R=0.668, p=0.0
PPQ	IRP	Rejected	
PPQ	ASP	Accepted	R=0.745, p=0.0
PPQ	PV	Accepted	R=0.461, p=0.0
IRP	PV	Accepted	R=0.281, p=0.03
PV	PI	Accepted	R=0.560, p=0.0
ASP	PI	Accepted	R=0.723, p=0.0

Table 25 shows conceptual model hypotheses and whether they are accepted or rejected based on correlation analysis. Based on this findings it is possible to make a conclusion is that PI for Intel based E369 modem is driven by attitude to Intel brand Image and consequently perceived product quality.

4.3.3 Purchase intention analysis

The aim of purchase intention analysis is to discover possible factors that influence purchase intention. Those factors have to be involved in designing possible marketing mix.

Overall purchase intention

PI distribution diagram on Figure 36 shows very positive attitude towards purchasing E369 modem. At the same time Figure 37 shows that majority of respondents disagree to purchase a modem at a price 2500 rubles.

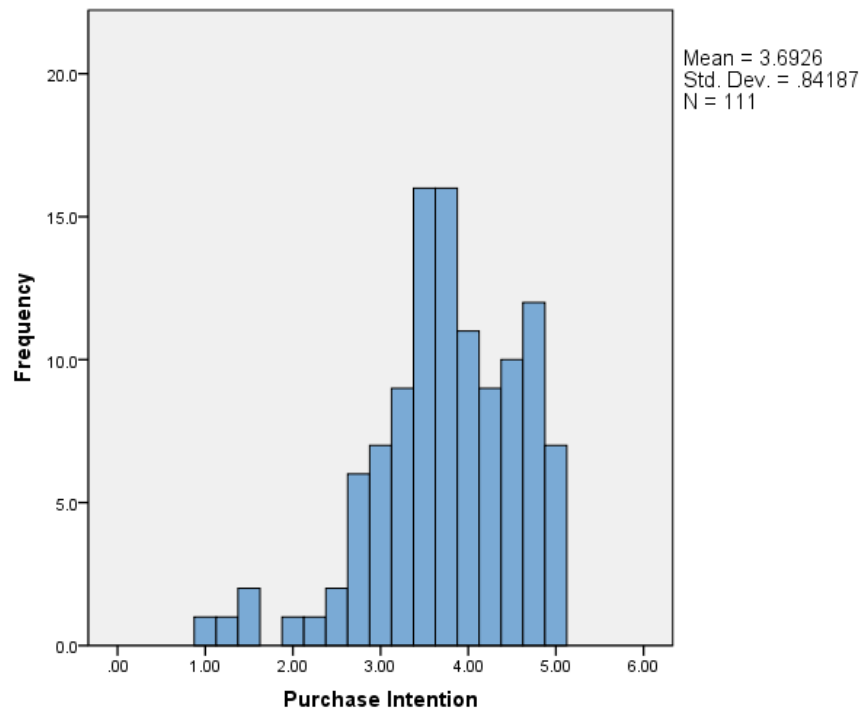


Figure 36. Purchase Intention (PI)

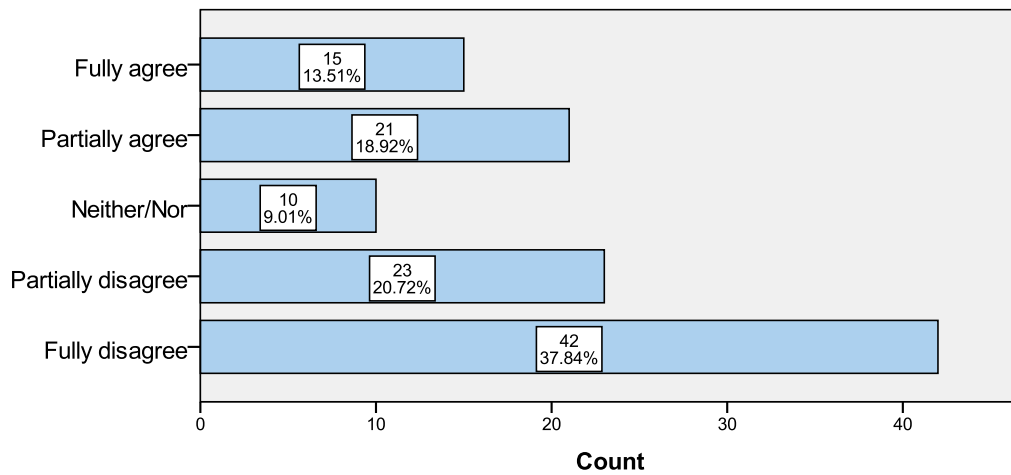


Figure 37. Consider purchasing the E369 for 2500 rubles

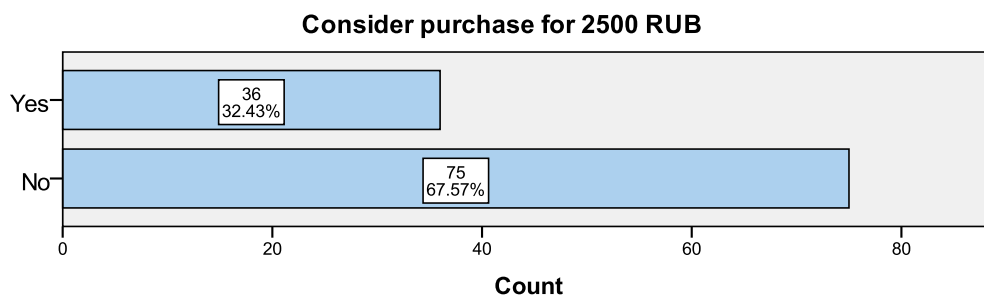


Figure 38. Agree to consider purchasing the E369 for 2500 rubles

Figure 38 shows that there are 32.43% of respondents who fully or partially agree to consider purchasing a modem for 2500 rubles.

The independent samples t-test is shown in Table 26 and Table 27. Levene's test for equality of variances gives 0.037, which is less than 0.05. It means that we need to reject null hypothesis and consider that equal variances are not assumed. T-test for equality of means shows that we have also to reject null hypothesis ($p=0.00$). We have to conclude that there is a significant different between means. Test confirms that there is a significant difference between purchase intention for those who is willing and who is not to purchase a modem for 2500 RUB.

Table 26. Purchase Intention statistics (consider purchasing for 2500 rubles)

Group Statistics					
Purchase for 2500 Agree+		N	Mean	Std. Deviation	Std. Error Mean
Purchase Intention	No	75	3.3333	.74416	.08593
	Yes	36	4.4410	.45167	.07528

Table 27. Independent samples t-test (consider purchasing for 2500 rubles)

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Purchase Intention	Equal variances assumed	4.440	.037	-8.222	109	.000	-1.10764	.13472	-1.3746	-.84063
	Equal variances not assumed			-9.696	102.9	.000	-1.10764	.11424	-1.3342	-.88107

Figure 39 shows mean Purchase Intention for respondents who consider buying a modem and not.

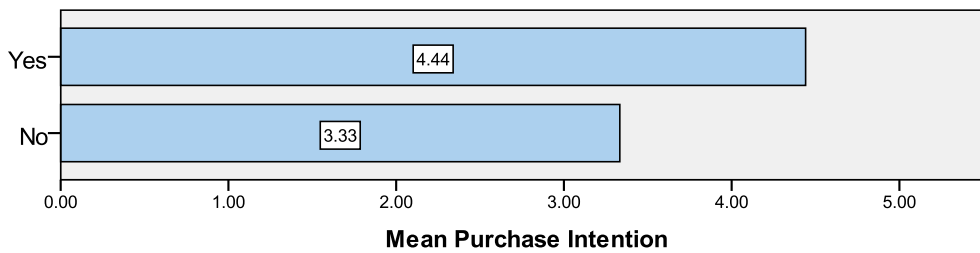


Figure 39. Mean purchase intention (consider purchasing for 2500 rubles)

Gender

Hypothesis: Is there a difference in purchase intention between men and women?

Figure 40 and Table 28 show mean Purchase Intention for men and women.

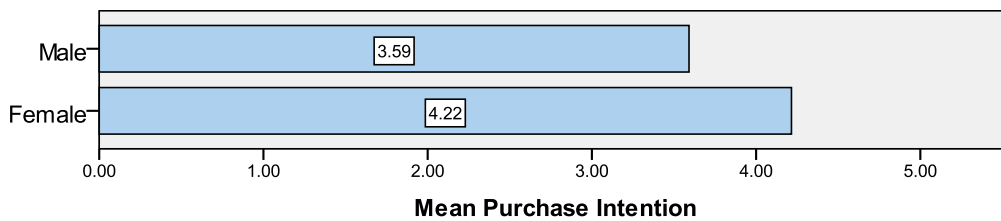


Figure 40. Mean Purchase intention (gender)

Table 28. Purchase intention statistics (gender)

Descriptives						
Purchase Intention						
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Male	93	3.5914	.85778	.08895	3.4147	3.7681
Female	18	4.2153	.50876	.11992	3.9623	4.4683
Total	111	3.6926	.84187	.07991	3.5342	3.8509

The independent samples t-test is shown in Table 29. Levene's test for equality of variances gives 0.072, which exceeds 0.05. It means that we have no reason to reject null hypothesis and consider that equal variances are assumed. The t-test for equality of means shows that we have to reject null hypothesis ($p=0.004$). We have to conclude that there is a significant different between means. Test confirms that there is a significant difference between purchase intention for men and women.

Table 29. Independent samples t-test of (gender)

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Purchase Intention	Equal variances assumed	3.304	.072	-2.979	109	.004	-.62388	.20942	-1.03894	-.2088
	Equal variances not assumed			-4.179	38.68	.000	-.62388	.14930	-.92595	-.3218

Figure 41 shows that larger proportion (50%) of women will consider buying modem for 2500 RUB.

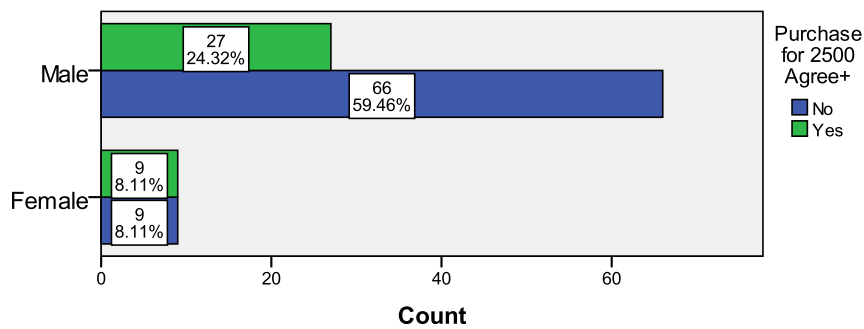


Figure 41. Consider purchasing for 2500 rubles (gender)

Age

Hypothesis: Is there a difference in purchase intention between age groups?

Because it was only one respondent in age group 45-54, this age group has been merged with 35-44.

As we have more than two groups, we need to use One-way ANOVA test.

Figure 42 and Table 31 show mean Purchase Intention for different age groups.

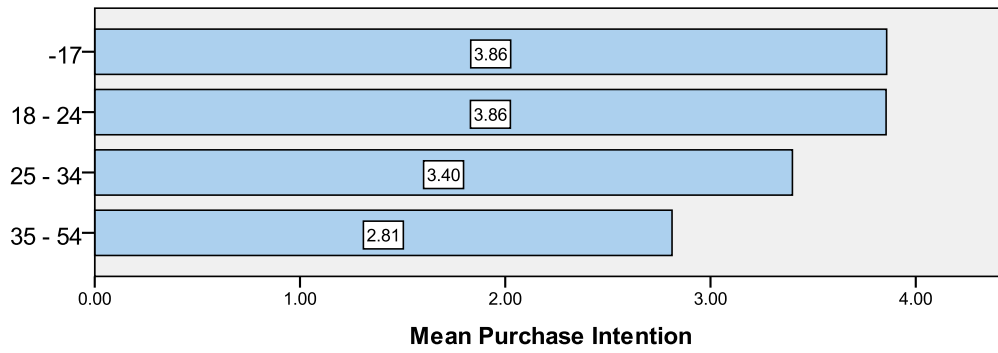


Figure 42. Mean purchase intention (age)

Table 30. Purchase Intention statistics (age)

Descriptives				
Purchase Intention				
	N	Mean	Std. Deviation	Std. Error
-17	15	3.8583	.55273	.14271
18 - 24	64	3.8555	.71347	.08918
25 - 34	26	3.3990	1.02714	.20144
35 - 54	6	2.8125	1.11733	.45615
Total	111	3.6926	.84187	.07991

The ANOVA test on Table 31 shows that significance level is 0.004 and is less than 0.05. It means we will reject then null hypothesis and state that there is a significant difference between groups.

Table 31. ANOVA test (age)

ANOVA					
Purchase Intention					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.998	3	2.999	4.653	.004
Within Groups	68.964	107	.645		
Total	77.962	110			

Table 32. ANOVA Tukey test (age)

Multiple Comparisons

Purchase Intention
Tukey HSD

(I) Age squashed	(J) Age squashed	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
-17	18 - 24	.00286	.23030	1.000	-.5982	.6039
	25 - 34	.45929	.26030	.296	-.2201	1.1387
	35 - 54	1.04583*	.38780	.040	.0337	2.0579
18 - 24	-17	-.00286	.23030	1.000	-.6039	.5982
	25 - 34	.45643	.18671	.075	-.0309	.9437
	35 - 54	1.04297*	.34277	.015	.1484	1.9376
25 - 34	-17	-.45929	.26030	.296	-1.1387	.2201
	18 - 24	-.45643	.18671	.075	-.9437	.0309
	35 - 54	.58654	.36361	.376	-.3624	1.5355
35 - 54	-17	-1.04583*	.38780	.040	-2.0579	-.0337
	18 - 24	-1.04297*	.34277	.015	-1.9376	-.1484
	25 - 34	-.58654	.36361	.376	-1.5355	.3624

*. The mean difference is significant at the 0.05 level.

Post Hoc Tukey test on Table 32 shows that there is a significant difference between following groups:

- (-17) and (35-54) (p=0.040)
- (18-24) and (35-54) (p=0.015).

We can conclude that purchase intention is higher for younger age groups. It was no anyone who expressed willingness to buy the modem for 2500 RUB in age group 35+. In other age groups about 50% of respondents would consider to buy a modem for 2500 rubles (Figure 43).

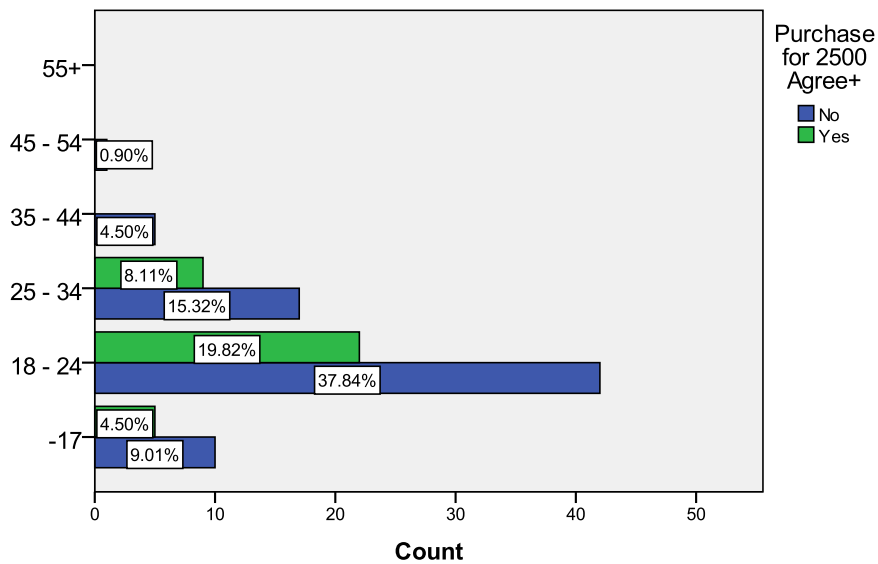


Figure 43. Consider purchasing for 2500 rubles (age)

Occupation

There are many different occupations and sample size is too small to test differences between each category, because in some of categories is fewer than 2 cases. For that reason occupation variable has been recorded as: Student, IT, Other.

Figure 44 and Table 33 show mean Purchase Intention for different age groups.

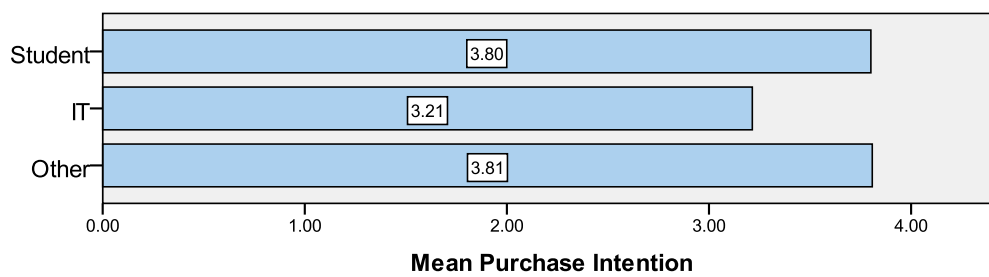


Figure 44. Mean purchase intention (occupation)

Table 33. Purchase Intention statistics (occupation)

Descriptives						
Purchase Intention						
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Student	49	3.8010	.64344	.09192	3.6162	3.9858
IT	21	3.2143	1.10549	.24124	2.7111	3.7175
Other	41	3.8079	.83249	.13001	3.5452	4.0707
Total	111	3.6926	.84187	.07991	3.5342	3.8509

The ANOVA test on Table 34 shows that significance level is 0.014 and is less than 0.05. It means we will reject then null hypothesis and state that there is a significant difference between groups.

Table 34. ANOVA test (occupation)

ANOVA					
Purchase Intention					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.926	2	2.963	4.442	.014
Within Groups	72.036	108	.667		
Total	77.962	110			

Table 35. ANOVA Tukey test (occupation)

Multiple Comparisons							
Purchase Intention TukeyHSD							
(I) Occupation simplified	(J) Occupation simplified	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
Student	IT	.58673*	.21301	.019	.0805	1.0929	
	Other	-.00691	.17286	.999	-.4177	.4039	
IT	Student	-.58673*	.21301	.019	-1.0929	-.0805	
	Other	-.59364*	.21916	.021	-1.1145	-.0728	
Other	Student	.00691	.17286	.999	-.4039	.4177	
	IT	.59364*	.21916	.021	.0728	1.1145	

*. The mean difference is significant at the 0.05 level.

Post Hoc Tukey test on Table 35 shows that there is significant difference between following groups:

- IT-Other ($p=0.021$)
- IT-Student ($p=0.019$).

We can make a conclusion that IT workers have lower purchase Intention. Also from Figure 45 it is visible that proportion who will consider buying a modem for 2500 rubles is higher from “other” occupations than students or IT workers.

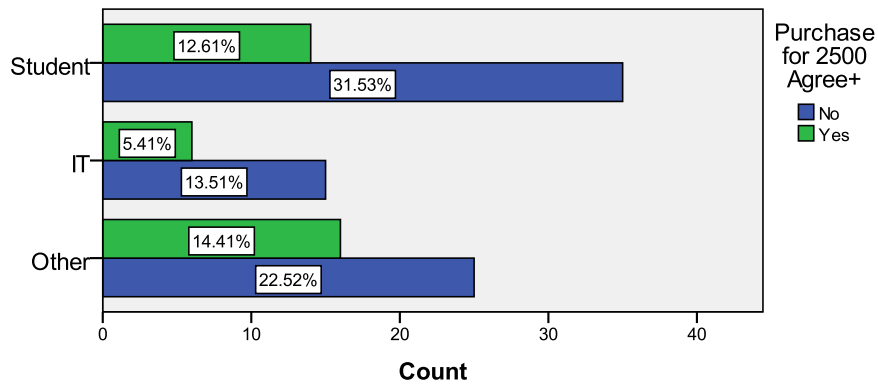


Figure 45. Consider purchasing for 2500 rubles (occupation)

Income level

There is only 1 case for above 160 000 RUB income level. This case has been combined with “120 000 – 159 999 RUB”.

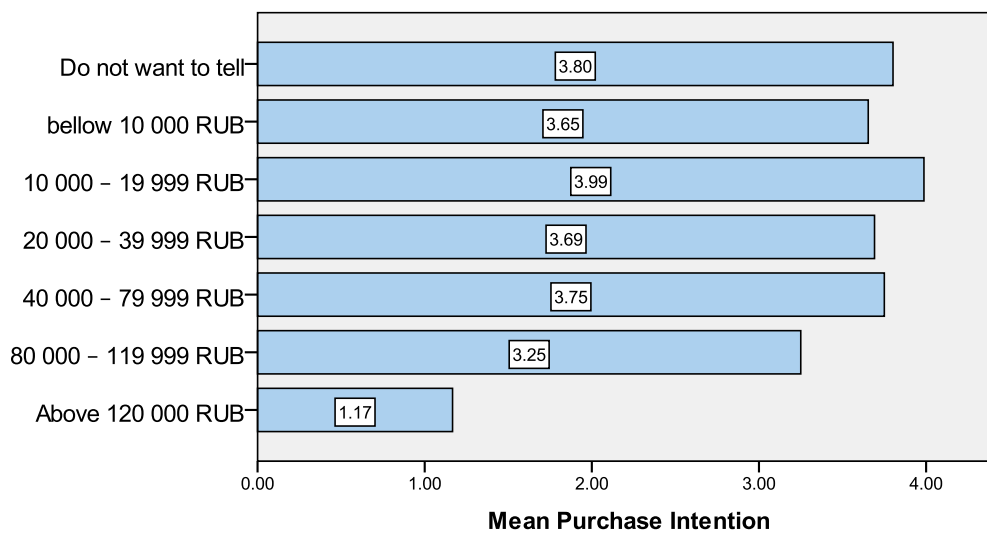


Figure 46. Mean purchase intention (income level)

Figure 46 and Table 37 show mean Purchase Intention for different income levels.

Table 36. Purchase Intention statistics (income level)

Descriptives						
Purchase Intention						
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Do not want to tell	12	3.8021	.91151	.26313	3.2229	4.3812
bellow 10 000 RUB	13	3.6538	.62740	.17401	3.2747	4.0330
10 000 – 19 999 RUB	29	3.9871	.70422	.13077	3.7192	4.2549
20 000 – 39 999 RUB	32	3.6914	.65067	.11502	3.4568	3.9260
40 000 – 79 999 RUB	16	3.7500	.75277	.18819	3.3489	4.1511
80 000 – 119 999 RUB	6	3.2500	1.04583	.42696	2.1525	4.3475
Above 120 000 RUB	3	1.1667	.19094	.11024	.6923	1.6410
Total	111	3.6926	.84187	.07991	3.5342	3.8509

The ANOVA test on Table 37 shows that significance level is 0.000 and is less than 0.05. It means we will reject then null hypothesis and state that there is a significant difference between groups.

Table 37. ANOVA for income level

ANOVA					
Purchase Intention					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23.047	6	3.841	7.275	.000
Within Groups	54.915	104	.528		
Total	77.962	110			

Post Hoc Tukey test on Table 38 shows that there is significant differences between “Above 120 000 RUB” and all other groups. Non-significant differences have been removed from the table.

Table 38. Tukey test for income level

Multiple Comparisons

Purchase Intention
TukeyHSD

(I) Family Income combined	(J) Family Income combined	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Above 120 000 RUB	Do not want to tell	-2.63542*	.46905	.000	-4.0458	-1.2250
	bellow 10 000 RUB	-2.48718*	.46543	.000	-3.8867	-1.0877
	10 000 – 19 999 RUB	-2.82040*	.44070	.000	-4.1455	-1.4953
	20 000 – 39 999 RUB	-2.52474*	.43876	.000	-3.8440	-1.2055
	40 000 – 79 999 RUB	-2.58333*	.45718	.000	-3.9580	-1.2087
	80 000 – 119 999 RUB	-2.08333*	.51382	.002	-3.6283	-.5383

*. The mean difference is significant at the 0.05 level.

The reason for the difference might be that high-income consumer would prefer to use more expensive computers with integrated modems.

Size of municipality

The correlation analysis between Purchase Intention and size of municipality is shown in Table 39. Significance level is 0.006 and less than 0.05. It means we reject null hypothesis and conclude that there is a significant weak negative correlation between municipality size and purchase intention.

Table 39. Correlation between PI and size of municipality

Correlations

		Size of your municipality?	Purchase Intention
Size of your municipality?	Pearson Correlation	1	-.257**
	Sig. (2-tailed)		.006
	N	111	111

** . Correlation is significant at the 0.01 level (2-tailed).

We can conclude that purchase intention is smaller in larger municipalities.

Number of Internet users at home

No relationship found between number of internet users at home and purchase intention.

Level of Internet usage

Level of Internet usage is calculated as an average from chapter 4.2.2:

INTERNET_USAGE=MEAN(V10, V11, V12, V13, V14, V15, V16).

MOBILE_USAGE=MEAN(V27, V28, V29, V30, V31, V32, V33).

There is no correlation between usage level of Internet and Purchase Intention.

The correlation analysis between Purchase Intention and mobile Internet usage is shown in Table 40. Significance level is 0.001 and less than 0.05. It means we reject null hypothesis and conclude that there is a significant positive correlation between mobile internet usage and purchase intention.

Table 40. Correlation between PI and level of internet usage

Correlations		Purchase Intention
Mobile internet usage	Pearson Correlation	.302**
	Sig. (2-tailed)	.001
	N	111

** . Correlation is significant at the 0.01 level (2-tailed).

We can conclude that more people use or want to use mobile Internet, higher is their purchase Intention.

Buying from operator or retailer

Statistical tests have not given any significant differences in Purchase Intention when buying from operator or retailer, but Purchase Intention is higher for respondents who want to buy from retailer.

Place to buy from

Figure 47 shows purchase place preferences of those who is considering buying a

modem for 2500 rubles. Chart shows that purchase intention for 2500 RUB is highest amount respondents, who would like to purchase from Beeline operator.

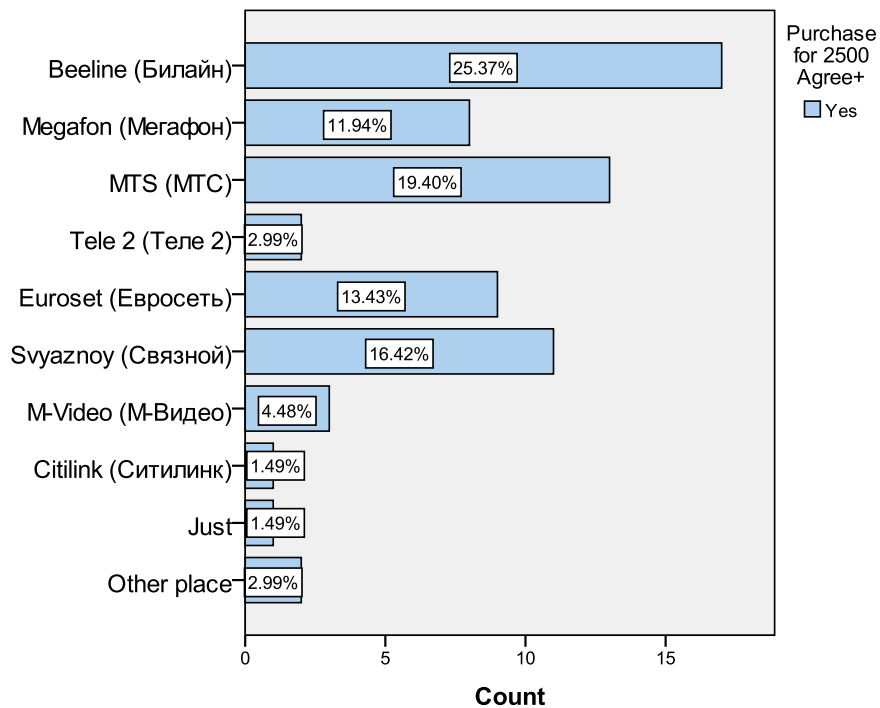


Figure 47. Consider purchase for 2500 rubles (purchase places)

Table 41. Mean Purchase Intention (purchase places)

		Purchase Intention			
		Mean	Count	Standard Deviation	Standard Error of Mean
Where to buy 3G USB-modem	Beeline (Билайн)	3.94	37	.64	.10
	MegaFon (Мегафон)	3.50	44	.88	.13
	MTS (МТС)	3.75	39	.76	.12
	Tele 2 (Теле 2)	3.69	11	.49	.15
	Euroset (Евросеть)	3.89	32	.52	.09
	Svyaznoy (Связной)	3.94	40	.60	.10
	M-Video (М-Видео)	3.75	19	.67	.15
	Citilink (Ситилинк)	3.68	15	.61	.16
	Just	4.00	5	.41	.19
	Other place	3.43	5	1.53	.69

SPSS is not able to calculate differences for Multiple Response Set. For that reason it will be calculated manually in Excel using formula for significance of the difference between two means (Burns & Bush 2010, 539):

$$Z = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{s_{\bar{x}_1}^2 + s_{\bar{x}_2}^2}}$$

where

\bar{x} – sample mean.

$s_{\bar{x}}$ – standard error of the mean.

The means and standard errors of mean are presented in Table 41. Z statistics is shown in Table 42 below. Highlighted and bolded cells shows what differences are significant.

Table 42. Z statistics for PI differences (purchase places)

	Beeline	Megafon	MTS	Tele 2	Euroset	Svyaznoy	M-Video	Citilink	Just
Beeline									
Megafon	2.68								
MTS	1.22	-1.41							
Tele 2	1.39	-0.96	0.31						
Euroset	0.37	-2.47	-0.93	-1.14					
Svyaznoy	0.00	-2.68	-1.22	-1.39	-0.37				
M-Video	1.05	-1.26	0.00	-0.28	0.80	1.05			
Citilink	1.38	-0.87	0.35	0.05	1.14	1.38	0.32		
Just	-0.28	-2.17	-1.11	-1.28	-0.52	-0.28	-1.03	-1.29	
Other place	0.73	0.10	0.46	0.37	0.66	0.73	0.45	0.35	0.80

Z statistics show that Megafon has significantly lower purchase intention than Beeline, Euroset, Svyaznoy, and Just.

Search for information about MBB

Figure 48 shows purchase place preferences of those who is considering buying a modem for 2500 rubles.

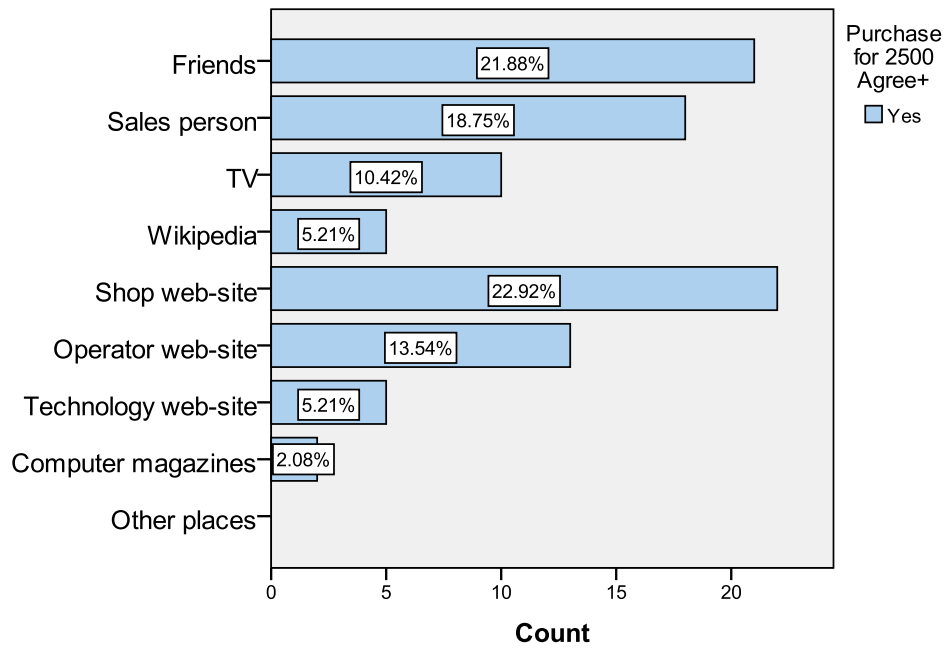


Figure 48. Consider purchase for 2500 rubles (information sources)

Table 43. Mean Purchase Intention (information sources)

		Purchase Intention			
		Mean	Count	Standard Deviation	Standard Error of Mean
Source of information about 3G USB-modem	Friends	3.77	65	.70	.09
	Sales person	4.02	43	.74	.11
	TV	4.01	20	.82	.18
	Wikipedia	3.46	21	.96	.21
	Shop web-site	3.73	64	.81	.10
	Operator web-site	3.66	52	.85	.12
	Technology web-site	3.38	21	.82	.18
	Computer magazines	3.41	7	.82	.31
	Other places	3.88	1	.	.

SPSS is not able to calculate differences for Multiple Response Set. For that reason it will be calculated manually in Excel using formula for significance of the difference between two means (Burns & Bush 2010, 539):

$$Z = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{s_{\bar{x}_1}^2 + s_{\bar{x}_2}^2}}$$

where

\bar{x} – sample mean.

$S_{\bar{x}}$ – standard error of the mean.

The means and standard errors of mean are presented in Table 43. Z statistics is shown in Table 44 below. Highlighted and bolded cells shows what differences are significant. Orange cells show also Z values which are ~ 1.96 .

Table 44. Z statistics for PI differences for places to buy the modem

	Friends	Sales person	TV	Wikipedia	Shop web-site	Operator web-site	Technology web-site
Friends							
Sales person	-1.76						
TV	-1.19	0.05					
Wikipedia	1.36	2.36	1.99				
Shop web-site	0.30	1.95	1.36	-1.16			
Operator web-site	0.73	2.21	1.62	-0.83	0.45		
Technology web-site	1.94	3.03	2.47	0.29	1.70	1.29	
Computer magazines	1.12	1.85	1.67	0.13	0.98	0.75	-0.08

Z statistics show that there is a significant difference in the purchase intention between “Sales person” information source and almost all the others. Purchase intention is also high for TV source and significantly different from Wikipedia or technology websites.

4.4 Sales volume estimation

To estimate potential sales it is necessary to look in detail at how the purchase intention is distributed across different channels. Table 45 shows purchase preferences for those who answered Partially Agree or Fully Agree and also who answered Fully Agree only. Table shows that the highest purchase intention is among those who selected Beeline as a place to purchase the modem (45.9%/16.2%), followed by MTS (33.3%/12.18%), Svyaznoy (27.5%/15.0%), Euroset (28.1%/6.3%), and Megafon (18.2%/6.8%).

Table 45. Consider purchase for 2500 rubles (purchase places)

	Purchase for 2500 Agree+				Purchase for 2500 Fully Agree+			
	Yes		No		Yes		No	
Beeline (Билайн)	17	45.9%	20	54.1%	6	16.2%	31	83.8%
Megafon (Мегафон)	8	18.2%	36	81.8%	3	6.8%	41	93.2%
MTS (МТС)	13	33.3%	26	66.7%	5	12.8%	34	87.2%
Tele 2 (Теле 2)	2	18.2%	9	81.8%	1	9.1%	10	90.9%
Euroset (Евросеть)	9	28.1%	23	71.9%	2	6.3%	30	93.8%
Связной (Связной)	11	27.5%	29	72.5%	6	15.0%	34	85.0%
M-Video (М-Видео)	3	15.8%	16	84.2%	2	10.5%	17	89.5%
Citilink (Ситилинк)	1	6.7%	14	93.3%	0	.0%	15	100.0%
Just	1	20.0%	4	80.0%	0	.0%	5	100.0%
Other place	2	40.0%	3	60.0%	1	20.0%	4	80.0%

Projecting purchase intention to overall sale volumes, it is possible to get following E369 modem sale volume estimation across different operators (Table 46).

Table 46. E369 sales volume estimation

	Total Sales (TU/month)	Agree+ (TU/month)	Fully Agree (TU/month)
Megafon	190 (38%)	34.6 (18.2%)	12.9 (6.8%)
MTS	155 (31%)	51.2 (33.3%)	19.8 (12.8%)
Beeline	105 (21%)	48.2 (45.9%)	17.0 (16.2%)
Svyaznoi	25 (~5%)	6.9 (27.5%)	3.8 (15%)
Euroset	25 (~5%)	7.0 (28.1%)	1.6 (6.3%)
Total	500 (100%)	147.9 (~29.6%)	55.1 (11.0%)

Table 46 shows that the possible sales of E369 modem can in a range from 55000 and even up to 148000 units per month. Even though Beeline got the highest purchase intention, MTS could sell more Intel-based modems than Beeline due to higher overall modem sales volume. Due to low sale volumes of other retailers, they are not taken into account.

It remains to be seen if these estimations are correct, because most of the respondents indicated that they don't like the E369 modem price which is twice higher than average market price.

5 Research results and discussion

The aim of the research was to develop a marketing strategy for launching the Intel-based mobile broadband dongle for the Russian market.

The Intel-based mobile broadband dongle is a 3G USB-modem designed by Intel and Huawei and sold by Huawei under the model name E369. Huawei, who is supplying 70% of all 3G USB-modems in Russia, claims that in such a market only the cheapest one wins. The average modem price is about 1500 rubbles, while Huawei E369 is more expensive and is sold for 2500 rubbles. Intel is sharing the marketing effort with Huawei and is interested in ways to increase product sales. In order to do that, recommendations for adjusting the marketing strategy has to be developed.

While the broad meaning of the marketing strategy includes segmentation, targeting, differentiation and positioning, the marketing strategy in this research is limited to identifying how to adjust marketing mix variables which might help to increase sales of the product.

The research problems “what should be the overall marketing strategy” and “what would be potential demand for Intel-based 3G USB-modem” were identified and several research questions were stated: (1) what is the MBB market size and growth rate in Russia? (2) How many people are willing to buy an Intel-based modem? (3) Who are those people? (4) What are their buying preferences?

In order to answer the first research question, data from secondary sources were collected. Data about the market size, growth rate and structure have been obtained from Intel’s market analysis reports. Market information is used to estimate potential demand (sales volume) for Intel based modems.

To answer the rest of the research questions, it was necessary to collect and analyze primary data. A questionnaire survey was used to get quantitative data. The key concept, which was measured, is the Purchase Intention. Purchase intention allows answering research question 2, about what proportion of the population would

possibly buy an Intel-based 3G USB-modem.

Purchase intention varies among group of consumers and those consumers have different buying preferences and attitudes. Analyzing relationship between purchase intention and people's buying preferences and attitudes gave possibility to answer research questions 3 and 4. Consumers' buying preferences and attitudes show up how marketing mix should be adjusted.

The conceptual model was defined, which aimed to analyze which factors influence purchase intention. Several other concepts, such as Concern for Price, Concern for Quality, Internal Reference Price, Brand Image, Aspiration and Perceived Product Quality were measured and their influence to purchase intention was analyzed. Also several additional hypotheses were identified and tested.

It was found that the purchase intention of Intel-based modem is greatly influenced by the Intel brand image and perceived product quality. It shows the important role of a strong brand name in making purchasing decisions.

Based on the analysis, the following recommendations for marketing mix can be given.

Product

Analysis revealed that the E369 design and features are appreciated by respondents. Those who appreciate such attributes, have a higher purchase intention. The results showed that many respondents would like to see the Intel logo on the modem. Thus it is recommended to have Intel logo on the packaging and the modem body.

Price

32% of respondents stated that they considered purchasing a E369 modem for 2500 rubles, but at the same time most of the respondents stated, that they did not like the price of the modem. The mean Internal Reference Price is 1287 rubles for a modem. It means that 2500 rubles is relatively high price. As the product belongs to the

category of highly standardized products, the price elasticity of demand is considered to be quite low. It means the demand might be very low, if the product price is high. Based on this, it is very hard to conclude if the purchase intention will be reflected in actual sales. The price may be too high for those benefits associated with the product.

It is recommended to reduce the price if costs allow.

Place

Analysis has shown that consumers who are willing to buy a modem from the Beeline operator have the highest purchase intention for 2500 rubles. At the same time, sale volume estimation showed that MTS can sell more modems than Beeline. Thus recommended operator channel to start with is MTS and then Beeline. Megafon is the last channel to add to distribution network. Among retailers, Svyaznoy is the most preferred channel to start with, followed by Euroset.

Analysis revealed that 50% of the respondents are willing to purchase a modem online with delivery. Though most of the channels provide online delivery, often some products are not available online. Thus it is necessary to work with the operator or retailer to ensure that the modem is available for online orders and delivery.

Analysis in this report contradicts with Intel's plan to start distribution with Megafon. Analysis of purchase intention and sales volume estimations showed that Megafon is not the first channel to start with.

Promotion

Most preferred places for the promotion of a modem are shop websites, friends, sales persons and operator websites. TV, as a source of information, was indicated only by 10% of the respondents. Technology websites and magazines were given minor attention. This practically gives a suggestion that the most important source of information about a modem is the place of purchase. There is no reason to spend resources to promote modem in expensive medias such as TV, technology websites or

journals. Indeed, technology websites and journals are appreciated by IT-workers, but the analysis showed that they have lower purchase intention comparing to other group of the respondents.

Analysis has shown very positive attitude towards modem features. So it is necessary to advertise the small modem size, high connection speed, multiple bands support and low power consumption. Those features (KDFs) are very convenient for mobile users. So it is necessary in advertising to highlight KDFs and mobile usage use cases.

Multi-band and lock-free features make the modem attractive for International travel. So it might be possible to add airports as priority point of sale (POS).

Data collection using social network media revealed positive attitudes towards modem and the prize questionnaire survey. Analysis has shown that respondents with high mobile usage also have high social network usage. Thus it could be very beneficial for sales to promote modem sin different social network groups.

The conceptual model analysis revealed that brand image has an influential role on purchasing intention. Intel's brand enjoys a positive attitude to its products. For that reason it is recommended to highlight that the modem is Intel-based. Analysis revealed that consumers are willing to see Intel's logo on the modem.

Purchase intention amount different groups

Another finding is that the female respondents have higher purchase intention for 2500 rubles. About 50% of the female respondents expressed that they considered purchasing the modem, while only 29% of the male respondents expressed that.

Analysis also revealed the differences in purchase intention between different age groups. Younger respondents showed higher purchase intention.

IT workers showed lower purchase intention than any other groups. This is inline with findings of Hamann et al. (2007), who found, that advanced users see less

differentiation in the high-technology products than normal users.

Sales volume estimation

32% of respondents stated that they considered purchasing E369 modem for 2500 rubles. So potentially, when distributing via all possible channels, it might be possible to get up ~30% market share or 160000 units per month. From other hand, there were only 13.51% of the respondents, who answered “Fully Agree” that they consider purchasing modem for 2500 rubles. Thus, market share could be as low as 13.51% or 67000 units per month.

If to select MTS as preferred operator to start with, then the possible volume can be between 19800 – 51200 units per month, or with market share between 4.0% - 10.2%

As the modem price is twice higher than average market price, it remains to be seen if these sales estimations are correct.

6 Conclusions

The thesis has focused on developing a marketing strategy for launching an Intel-based mobile broadband dongle for the Russian market. As the result, the research questions were answered and recommendations for adjusting marketing mix were developed. The research was conducted using quantitative methods using questionnaire surveys for data collection. The SPSS and Excel tools were used for analyzing quantitative data. The quantitative methods were acceptable methods due to the descriptive nature of the research, where leading question words were what, where, who, and how. Social networks were used to publish the questionnaire, which allowed me to collect 111 responses during a two weeks time frame. Two weeks was the longest possible time that Intel's social networking community team allowed to keep the questionnaire published on the Intel's webpage in VK and have a prize contest.

Following up to the data collection process, it was observed that the response rate was high on the day of publishing and on the last day, when it was possible to answer the questionnaire. Between those days, the response count was slowly growing. By giving more time to collect responses, I believe I could get more than 111 responses. While 111 responses were enough for most of the statistics, in a few questions the number of responses were not enough for certain possible choices. It was necessary to combine scale in order to be able calculate statistics. Also a larger size would decrease possible confidence intervals and risks of error. To stimulate participation in the questionnaire two E369 modems were allocated as prizes. My overall opinion is that a prize, which costs 2500 rubles, was not very strong motivator to participate in the questionnaire. I think it would be possible to get higher number of respondents during a 2 weeks period by providing more valuable prizes. Also during preparation for publishing the questionnaire, certain corporate bureaucratic and legal issues were discovered, which delayed the publishing process for more than two months. In order to publish the questionnaire with prizes in Russia, it is necessary to publish it as a contest, where the questionnaire has several questions which must be answered correctly in order to participate in the prize draw. Otherwise it is considered a lottery and must be officially registered. An external agency stated that publishing such a long questionnaire might create a negative attitude in the social network group, but it turned not to be true.

There were positive comments and many “likes” on the questionnaire link. Thus using social networks for questionnaire surveys is seen as a useful and not expensive method.

This year some operators, such as Megafon, started adopting LTE technology (4G) and started to sell also 4G modems. LTE technology allows download speeds of up to 100MB/s, while high-speed 3G modems are up to 27 MB/s. 4G coverage is still quite low and available only in large cities such as Moscow and Saint-Petersburg. The monthly fee is also quite high – starting from 999 rubles per month. Demand for 4G modems will eventually grow, while the demand for 3G-modems will eventually decrease. This could slightly affect this year’s sales of 3G modems, but there is currently no information on how. Results of this study can also be applied to future 4G modems, but to prove that would require running additional similar research.

References

- Grewal, D., Krishnan, R., Baker, J., Borin, N. 1998. The Effect of Store Name, Brand Name and Price Discounts on Consumers' Evaluations and Purchase Intentions. *Journal of Retailing*, 74, 3, pp. 331-352.
- Hamann, D., Williams, R.L. Jr and Omar, M. 2007. Branding strategy and consumer high-technology product. *Journal of Product and Brand Management*, 16, 2, pp. 98-111.
- Souiden, N., Pons, F., Mayrand, M. 2011. Marketing high-tech products in emerging markets: the differential impacts of country image and country-of-origin's image. *Journal of Product & Brand Management*, 20, 5, p 356–367.
- Gardner, D., Johnson, F., Lee, M., Wilkinson, I. 2000. A contingency approach to marketing high technology products. *European Journal of Marketing*, 34, 9, pp. 1053-1077.
- El-Sansary, E. 2006. Marketing strategy: taxonomy and frameworks. *European Business Review*, 18, 4, pp. 266-293.
- Calantone, R., Di Benedetto, C. A. 2007. Clustering product launches by price and launch strategy. *Journal of Business & Industrial Marketing*, 22, 1, pp. 4–19.
- Alvarez, B., Casielles. R. 2008. Effects of price decisions on product categories and brands. *Asia Pacific Journal of Marketing and Logistics*, 20, 1, pp. 23-43.
- Docters, R., Katz, R., Bernstein, J., Schefers, B. 2010. Is the price right? Strategies for new introductions. *Journal of business strategy*, 31, 3, pp. 29-37.
- Hart, S., Tzokas, N. 2000. New product launch “mix” in growth and mature product markets. *Benchmarking: An International Journal*, 7, 5, pp. 389-405.

Akhter, S. 2009. Niches at the edges: price-value tradeoff, consumer behavior, and marketing strategy. *Journal of Product & Brand Management*, 18, 2, pp. 136–142.

Stamer, H., Diller, H. 2006. Price segment stability in consumer goods categories. *Journal of Product & Brand Management*, 15, 1, pp. 62–72.

Hamlin, R. 2000. A systematic procedure for targeting market research. *European Journal of Marketing*, 34, 9/10, pp. 1038-1052.

Hultnik, E., Hart, S., Robben, H., Griffin, A. 1999. New consumer product launch: strategies and performance. *Journal of strategic marketing*, 7, pp. 153–174.

Meldrum, M., McDonald, M. 2007. *Marketing in a nutshell*. Elsevier, Oxford.

Ghauri, P. & Grønhaug, K. 2005. *Research methods in business studies: a practical guide*. 3rd ed. Pearson Education Ltd.

McDonald, M., Dunbar, I. 2004. *Market segmentation: how to do it, how to profit from it*. Elsevier, Oxford.

Jewell, B. 2000. *Integrated approach to business studies*. Pearson Education Ltd.

Hague, P., Hague, N., Morgan, C-A. 2004. *Market research in practice: a guide to the basics*. Kogan Page. London.

Janssens, W., Wijnen, K., Pelsmacker, P., Van Kenhove, P. 2008. *Marketing research with SPSS*. Pearson Education Ltd.

Burns, A.C. & Bush, F.B. 2010. *Marketing research*. 6th ed. Pearson Education. Upper Saddle River, New Jersey.

Schiffman, L. G., Kanuk, L. L. 2010. *Consumer Behavior*. Tenth Edition. Pearson Education Ltd.

Peter, J.P. & Olson, J.C. 2005. Consumer Behavior & Marketing Strategy. 7th ed. McGraw-Hill. NY.

Aaker, D.A., Kumar, V. and Day, G.S. 2001. Marketing Research. 7th ed. John Wiley & Sons, New York, NY.

Wikipedia. Broadband penetration. URL:

http://en.wikipedia.org/wiki/Broadband_penetration. Accessed: 28 Feb 2012.

Wikipedia. Internet usage. URL:

http://en.wikipedia.org/wiki/List_of_Internet_users_by_country. Accessed: 28 Feb 2012.

Attachments

Attachment 1: Questionnaire in Russian

Хочешь выиграть **3G USB-модем** который работает с любым оператором? Прими участие в конкурсе, ответив на вопросы.

3G USB-модемы, используются для подключения к Интернету через сотовую сеть и позволяют пользоваться Интернетом там где подключение по кабелю недоступно, например в общественном транспорте, в машине, на даче, в поездках и т.п.

В целях исследования рынка, компания **Intel** производит конкурсное анкетирование, которое проводится с 13.09.2012 по 30.09.2012. Кто ответит на анкету в течении данного срока, станут участниками розыгрыша двух 3G USB-модемов. Победители будут уведомлены 01.10.2012. Более подробную информацию смотрите в Условиях и Правилах ниже.



1. Вы ознакомились и согласны с условиями и правилами участия в конкурсе.

*

Да

2. В каком году была основана компания Intel? *

- 1965
- 1968
- 1972

3. Кто сейчас является главным исполнительным директором Intel? *

- Бил Гейтс
- Пол Отеллини
- Тим Кук

4. Сколько сотрудников в компании Intel? *

- 55 000
- 90 300
- 100 800

5. Где располагается штаб квартира компании Intel? *

- Нью-Йорк
- Портленд
- Санта-Клара

6. В каком филиале Intel в России работает наибольшее число сотрудников? *

- Москва
- Нижний Новгород
- Новосибирск
- Санкт-Петербург

7. Вы используете, когда-либо использовали или возможно хотели бы использовать 3G USB-модем? *

- Да
- Нет

Следующий -->

8. Пол

- Мужской
 Женский

9. Возраст

- 17
 18 - 24
 25 - 34
 35 - 44
 45 - 54
 55+

10. Род деятельности

Информационные технологии, автоматизация, телекоммуникации

11. Семейный доход в месяц

- ниже 10 000 Руб.
 10 000 - 19 999 Руб.
 20 000 - 39 999 Руб.
 40 000 - 79 999 Руб.
 80 000 - 119 999 Руб.
 120 000 - 159 999 Руб.
 выше 160 000 Руб.
 Не хочу указывать

12. Страна проживания

- Россия
 Другая

13. Округ Российской Федерации

- Дальневосточный
 Приволжский
 Северо-Западный
 Северо-Кавказский
 Сибирский
 Уральский
 Центральный
 Южный

14. Какой размер вашего населенного пункта? *

- 1000-
- 1000 - 9 999
- 10 000 - 99 999
- 100 000 - 499 999
- 500 000 - 999 999
- 1 000 000 - 4 999 999
- 5 000 000 - 9 999 999 (Санкт-Петербург)
- 10 000 000+ (Москва)

15. Сколько человек у вас в семье пользуются Интернетом? *

- 1
- 2
- 3
- 4
- 5 и более

16. Где и как часто вы пользуетесь Интернетом? *

	Каждый день	Несколько раз в неделю	Один раз в неделю	Один раз в месяц	Никогда
На работе *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Дома *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
В общественном транспорте *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
В машине *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
На даче *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
В поездках *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
В других местах <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

17. Какими способами вы подключаетесь к Интернету? *

Укажите все способы которыми вы пользуетесь.

- Подключение по кабелю
- 3G USB-модем
- 3G/WiFi роутер
- WiMAX USB-модем
- Встроенный 3G-модем
- Через телефон, используя его как модем
- Телефонный модем
- По другому, как?

18. Где и как часто вы пользуетесь 3G USB-модемом?

	Каждый день	Несколько раз в неделю	Один раз в неделю	Один раз в месяц	Никогда
На работе	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Дома	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

В общественном транспорте	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
В машине	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
На даче	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
В поездках	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
В других местах <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. Если вы хотите купить 3G USB-модем, то где планируете его использовать?

- На работе
- Дома
- В общественном транспорте
- В машине
- На даче
- В поездках
- В других местах

20. Для чего вам мобильный Интернет? *

- Посещать Интернет сайты
- Электронная почта
- Автонавигация
- Социальные сети
- Мгновенные сообщения (Чат)
- Интернет телефония
- Прослушивание музыки и радио
- Скачивание музыки
- Просмотр видео и телевидения
- Скачивание фильмов
- Онлайн-игры
- Другое, что?

21. Как для важны следующие свойства 3G USB-модема? *

	Очень важно	Достаточно важно	Важно	Слегка важно	Не важно
Размер *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Дизайн *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Скорость (более быстрый серфинг, скачивание) *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Поддержка широкого набора диапазонов (использование в различных регионах и странах) *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Малое потребление мощности (для увеличения времени работы от батареек) *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Красивая и практичная упаковка *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Гарантия *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Отсутствие привязки к оператору (без сим-лока) *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Бренд *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Цена *

22. Для Ultrabook (TM) намного предпочтительнее использовать маленький модем (ультра-модем) *

Полностью согласен Частично согласен Все равно Частично не согласен Полностью не согласен

23. Откуда вы предпочитаете узнать о 3G USB-модемах? *

- От друзей
- От продавцов в магазинах и салонах связи
- По телевидению
- Wikipedia
- На сайтах магазинов
- На сайтах операторов
- На компьютерных сайтах, каких?
- В компьютерных журналах, каких?
- В других местах, где?

24. Где вы купили или хотели бы купить 3G USB-модем? *

- Билайн
- Мегафон
- МТС
- Теле 2
- Евросеть
- Связной
- М-Видео
- Ситилинк
- Just
- Другое место, какое?

25. Вы хотели бы осуществить покупку 3G USB-модема онлайн с доставкой? *

- Да
 Нет

26. Как вы согласитесь со следующими высказываниями? *

	Полностью согласен	Частично согласен	Все равно	Частично не согласен	Полностью не согласен
Качество 3G USB-модема важно для меня *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3G USB-модем это продукт, где различия в качестве высоки *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Для 3G USB-модема, очень низкая цена может свидетельствовать о низком качестве *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Плата более высокую цену за 3G USB-модем, вы обычно получаете лучшее качество *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3G USB-модемы от известных брендов имеют в целом более высокое качество *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Бренд продукта это знак его качества *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3G USB-модемы от известных брендов имеют более высокое соотношение цена-качество *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Прежде чем я решу купить 3G USB-модему, я собираю много информации о нем *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
При покупке 3G USB-модема, качество важнее цены *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
При покупке 3G USB-модема, бренд является более важным, чем цена *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
При покупке 3G USB-модема, я рассматриваю большое количество альтернативных брендов *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
При покупке 3G USB-модема, я много сравниваю цены в магазинах или ищу специальные предложения *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

27. Что вы думаете о цене на 3G USB-модемы?

Укажите цену в рублях

Какую цену вы последний раз заплатили за 3G USB-модем	<input type="text" value="0"/>
Какую цену вы считаете нормальной для 3G USB-модем? *	<input type="text" value="100"/>
Какую цену вы считаете очень дорогой для 3G USB-модем? *	<input type="text" value="100"/>
Какую цену вы считаете дешевой для 3G USB-модем? *	<input type="text" value="100"/>
Какую максимальную цену Вы готовы заплатить за 3G USB-модем? *	<input type="text" value="100"/>

[<-- Предыдущий](#)

[Следующий -->](#)

28. Что вы думаете об Интел и продуктах Интел? *

	Полностью согласен	Частично согласен	Все равно	Частично не согласен	Полностью не согласен
Продукция Intel современная и инновационная *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Интел производит очень качественные продукты *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
У продуктов Intel хорошее соотношение цены и качества *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Логотип Intel "Intel-inside" является признаком высокого качества *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Мне нравится когда стоит лого "Intel-inside" *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Я уверен в продуктах Интел *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Это новый высокоскоростной, малоэнергопотребляющий и очень маленький 3G USB-модем чипсетом Интел от компании Huawei





Характеристика	Спецификация	Преимущества
Размер	65 x 24.5 x 8 мм	Самый маленький МШМ в мире. Превосходно выглядит с ультра-буком
Скорость	Высокая: 21.6 Mb/s	Быстрая работа в Интернете, экономится время.
Энергопотребление	На 30% меньше чем у других производителей	Более продолжительная работа компьютера от батареек
Диапазон частот	850/900/AWS/1900/2100	Глобальный охват для работы в любом регионе и стране
Экстра	Магнитный колпачок	Приятен в использовании
Гарантия	2 года	Отсутствие беспокойств
Цена	2500 Руб.	

29. Что вы думаете о E369 3G USB-модеме с чипсетом Интел? *

	Полностью согласен	Частично согласен	Все равно	Частично не согласен	Полностью не согласен
E369 имеет хорошие характеристики *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E369 хорошо выглядит *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E369 сочетает в себе характеристики, отсутствующие в других модемах *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E369 очень качественный продукт *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E369 очень надежный продукт *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Цена E369 меньше чем я ожидал *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Цена E369 меньше чем средняя цена на 3G USB-модемы *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Gender

- Male
- Female

9. Age

- 17
- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55+

10. Occupation

IT, automation, telecommunication

11. Family income

- below 10 000 RUR.
- 10 000 - 19 999 RUR.
- 20 000 - 39 999 RUR.
- 40 000 - 79 999 RUR.
- 80 000 - 119 999 RUR.
- 120 000 - 159 999 RUR.
- above 160 000 RUR.
- Do not want to tell

12. Country of residence

- Russia
- Other

13. Federal district of Russia

- Far Eastern Federal District
- Volga Federal District
- Northwestern Federal District
- North Caucasian Federal District
- Siberian Federal District
- Urals Federal District
- Central Federal District

Southern Federal District

14. Size of your municipality? *

- 1000-
- 1000 - 9 999
- 10 000 - 99 999
- 100 000 - 499 999
- 500 000 - 999 999
- 1 000 000 - 4 999 999
- 5 000 000 - 9 999 999 (Saint-Petersburg)
- 10 000 000+ (Moscow)

15. How many family members use Internet? *

- 1
- 2
- 3
- 4
- 5 and more

16. Where and how often do you use the Internet? *

	Every day	Few days a week	Once a week	Once a month	Never
At work *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At home *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On public transport *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
In a car *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At summer cottage *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
On holidays or business trips *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
In other places <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. How do you connect to the Internet? *

Укажите все способы которыми вы пользуетесь.

- Wired/fixed broadband (xDSL, Cable, etc)
- 3G USB-modem
- 3G/WiFi router
- WiMAX USB modem
- Internal 3G/WiMAX modem
- Via mobile phone, using it as a modem
- Dialup modem
- Other way, please specify

18. Where and how often do you use 3G USB-modem?

	Every day	Few days a week	Once a week	Once a month	Never
At work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

At home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
On public transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
In a car	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
At summer cottage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
On holidays or business trips	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
In other places <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. If you would like to purchase 3G USB-modem, where would you like to use it?

At work
 At home
 On public transport
 In a car
 At summer cottage
 On holidays and business trips
 In other places, where

20. Why do you need mobile Internet? *

Browse web pages
 E-Mail
 Auto navigation
 Social networks
 Instant Messaging (chat_
 Internet Telephony (Skype, VOIP, etc)
 Listen music and radio
 Download music
 View video and TV
 Download movies
 Online games
 Other, what?

21. How important for you are the following 3G USB-modem attributes? *

	Very important	Quite important	Important	Slightly important	Not important
Size *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speed (faster browsing, download) *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multiple bands (use in any region and country) *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low power consumption (longer battery life) *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nice packaging *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Warranty *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operator lock free (SIM-lock free) *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Brand *

Price *

22. For Ultrabook (TM) you would prefer to use small USB-modem (ultra-modem) *

Strongly agree Agree Neither/Nor Disagree Strongly disagree

23. From where do you prefer to learn about 3G USB-modems? *

- Friend
- Sales persons
- TV
- Wikipedia
- Shop web site
- Operator web site
- Technology sites, what?
- Computer magazines, what?
- Other places, where?

24. Where have you bought or consider to buy a 3G USB-modem? *

- Beeline (Билайн)
- Megafon (Мегафон)
- MTS (МТС)
- Tele 2 (Теле 2)
- Euroset (Евросеть)
- Svyaznoy (Связной)
- M-Video (М-Видео)
- Citilink (Ситилинк)
- Just
- Other place, where?

25. Would you prefer to purchase a 3G USB-modem online (with delivery)? *

- Yes
- No

26. What do you think about following statements? *

	Fully agree	Partially agree	Neither/Nor	Partially disagree	Fully disagree
The quality of a 3G USB-modem is important for me *	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A 3G USB-modem is a product where quality differences are high *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For a 3G USB-modem, very low prices may indicate low quality *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When paying a higher price for 3G USB-modem, you generally get a better quality *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- A 3G USB-modem from well known brand has better quality *
- The brand of the product is a sign of quality *
- A 3G USB-modem from well known brand provides more value for your money *
- I need to collect a lot of information on a 3G USB-modem before considering its purchase *
- When purchasing a 3G USB-modem, quality is more important than price *
- When purchasing a 3G USB-modem, brand is more important than price *
- When purchasing a 3G USB-modem, I consider a large number of alternative brands *
- When purchasing a 3G USB-modem, I collect a large amount of information on price via comparing prices in stores or searching for deals *

27. What do you think about prices for 3G USB-modems?

Specify price in Rubbles

- What was the price you have paid last time if you bought a 3G USB-modem?
- What is the price you would consider normal for a 3G USB-modem? *
- What is the price you would consider very expensive for a 3G USB-modem? *
- What is the price you would consider cheap for a 3G USB-modem? *
- What is the maximum price you would be prepared to pay for a 3G USB-modem? *

28. What do you think about Intel and its products? *

	Fully agree	Partially agree	Neither/Nor	Partially disagree	Fully disagree
Intel's products are modern and innovative *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intel's products are of high quality *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intel's products have a good price-quality ratio *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intel logo "Intel Inside" is a sign of high quality *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to have a logo "Intel Inside" on Intel-based product *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am always confident when buying Intel products *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Это новый высокоскоростной, малоэнергопотребляющий и очень маленький 3G USB-модем чипсетом Интел от компании Huawei



Идеально подходит для
Macbook Air и Ultrabooks™



Характеристика	Спецификация	Преимущества
Размер	65 x 24.5 x 8 мм	Самый маленький МШМ в мире. Превосходно выглядит с ультра-буком
Скорость	Высокая: 21.6 Mb/s	Быстрая работа в Интернете, экономится время.
Энергопотребление	На 30% меньше чем у других производителей	Более продолжительная работа компьютера от батареи
Диапазон частот	850/900/AWS/1900/2100	Глобальный охват для работы в любом регионе и стране
Экстра	Магнитный колпачок	Приятен в использовании
Гарантия	2 года	Отсутствие беспокойств
Цена	2500 Руб.	

29. What do you think about this Intel-based E369 3G USB-modem? *

	Fully agree	Partially agree	Neither/Nor	Partially disagree	Fully disagree
E369 modem has good features *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E369 looks nice *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E369 modem combines features, which are not available in other modems *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E369 modem is high quality product *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E369 modem is reliable product *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price is less than what I expected to be *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price is less than average market price *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>