

# Econometric Evaluation of Tourism as a Part of Khabarovsk Regional Economy

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**Abstract.** Today, tourism is an industry in its own right, having long surpassed many other industries in monetary terms. It involves both the hospitality industry and the sectors that support it. In some countries, tourism is the primary source of currency and budgeting. It is an important source of income that comes from both domestic and international tourists, vacationers, and businesspeople. The income is multifaceted, as it comes not only from tourists per se, but also from the production of goods and equipment for tourism, from training human resources for this industry, etc. At the same time, tourism-generated income is often 'lost' with other industries: transport, trade, catering, construction, agriculture, service sector, entertainment, banking, advertising, healthcare, education, culture, etc.

Beside that, another major hindrance of evaluating tourism as an economic contributor is that tourist traffic cannot be determined by conventional statistical methods. Moreover, identifying and isolating such traffic is difficult, as travel purposes are many.

For the present study, the research team has developed criteria to identify tourist traffic and to find 'hidden' fluxes for further analysis as part of evaluating tourism as a contributor to the regional economy.

## 1. Introduction

Tourism is the largest non-commodity sector in international trade; it is also the world's third largest export, only behind chemical and oil-and-gas industries. In real terms (given inflation and exchange rate fluctuations), international tourism generated 1,448 billion US dollars in revenue in 2018 alone.

Many countries understand how important tourism is for their economies and invest heavily in tourism and hospitality, strategizing upon how to further these industries and designing special-purpose development programs that target specific sectors. However, before any strategy could be made, it is necessary to understand what key points must be covered first for such investment to be effective; that requires understanding the patterns of tourist traffic. Competition for the tourist takes place on both international and interregional levels, which is why not only countries, but also regions, communities, cities, and even towns make emphasis on studying tourism as an economic contributor.

The goal hereof is to find the contribution tourism makes to the economy of Khabarovsk Krai. Special focus is made on identifying the 'hidden' fluxes and factors that hinder specific kinds of tourism. The research team has surveyed over 1,400 travelers in the region and in the city of Khabarovsk; we have also interviewed 30 specialists in tourism.

## 2. Theory

Tourist expenditure was “concern” as far back as in Tsarist Russia. Its balance sheets even had this item: “Russians’ spending abroad”, which was quite impressive: a billion rubles over 1881—1897; two billion over 1898—1912. In the 1920s, the Soviets knew already tourism could make a lot of money for the budget. *Izvestia*, a major national newspaper: “*In 1925, France generated 282 million US dollars from tourism; in 1927, tourists spent over six billion francs in France, over 10% of the country’s total exports of 58 billion francs. This year, some 1500 international tourists came to the USSR and spent only 1,2 million US dollars. Still, there’s no doubt our country could be an excellent destination.*” [7]

Further down the road, the Soviets tasked the tourism industry to provide the population with rehabilitation and recovery services, patriotic education, and ways to study the resources and opportunities the homeland could provide. Tourism had to be self-sufficient, not necessarily profitable. In the today’s Russia, the industry sets new goals for itself: to offer comprehensive and competitive destinations and services in the country, to provide state-of-the-art infrastructures, to make tourism as an industry more investment-attractive, and to boost tourism as an economic and social factor [5].

One major hindrance here is the lack of an efficient tourism data collection system. Russian tourism statistics methods and guidelines for evaluating the industry’s contribution to the GDP are not up to date with those used by UNWTO and OECD, which effectively prevents any international comparative analysis and any attempt to reliably evaluate how important the industry is for the Russian economy. Statistics lacks data on the key measurable indicators for over 10 years, lacks any data for interregional comparison, any reports on the community level. The weakpoint here is the unreliable sectoral statistics.

The problem is nothing new though. Unfortunately, any research in this area is bound to make a repeated discovery, to investigate something that has been studied on a regular basis. In 1969, Plekhanov Moscow Institute of Economy carried out a study in the cities of the North Caucasus. Only 1.6% of self-travelers lived in hotels in Sochi and Anapa, while 75% to 90% preferred private apartments. Hotels in most tourist destinations were not affordable [3, p. 100]. The statistics we have today is mainly collected from hotels.

Another problem is to tell whether a traveler is a tourist or not. The only reliable source of that categorization is a person’s attendance of touristic sights; visa type or any declaration of entry cannot be counted on. Conventionally, Russian statistics on tourist traffic comes from FSB rather than centers for tourism.

Thus, the statistics collected today rarely if ever matches the reality. Therefore, what must be done first when evaluating tourist as an economic contributor is to apply various econometric methods to identify the tourist traffic that goes beyond conventional statistics.

Tourist traffic is extremely difficult to analyze due to being impossible to fully register. Traffic statistics is far from exhaustive; rather, it represents only fragmentary data on the subject matter of the analysis. Tourist traffic studies require a comprehensive multifaceted methodology and data from multiple complementary sources. At the same time, such analysis requires expertise in locality-specific tourist traffic [1].

However, official statistics leaves behind a significant portion of data on European tourism. Many tourists choose accommodation providers that do not provide any data and are thus not covered statistically. This results in a significant flux of ‘undetected, hidden’ tourists. This fact is not to be ignored, as the whole situation is not about lack of statistics on some tourists; indeed, it concerns entire segments of motivationally and behaviorally specific consumers of tourist services that are left unobserved.

The European Union places great emphasis on hidden tourism. A study was carried out in Sicilia in 2009–2010 to analyze touristic demand and hidden tourism. The study found the place had received 3,935 tourists who spent over 38 thousand nights there over the research period. Thus, an average trip lasted 9.7 nights, cf. 4 nights per the official statistics. Thus, over 57% of nights were spent at unofficial accommodations the official statistics ignores [9, p. 253].

### 3. Research findings

To study the dynamics of tourist traffic in Khabarovsk Krai, the research team behind this paper referred to a paper prepared and published by the Far Eastern Market Research institute in 2014; the paper was titled *Tourism as a Contributor to the Economy of Khabarovsk Krai in 2011–2013: a Case Study for Guidelines on Supporting the Regional Tourism Statistics* [6]. The researchers polled 221 guests of Khabarovsk- and Komsomolsk-based hotels in October and November 2014. A similar study of 2009 helped plot the dynamics of tourist traffic in Khabarovsk Krai.

The purpose of travel shifted from 2009 to 2017 from professional and business travel to leisure and recreation (38.8%), with visiting friends/relatives coming second at 24.4%, business travels third at 17.8%, healthcare and recovery fourth at 13.4%, studies fifth at 11.8%, and sports last at 9.5% (note that sporting as a purpose of travel was omitted in the 2009 study).

Changes in the purpose of travel reflect changes in tourist traffic. 1,190 persons answered the question, “Who’s your company in Khabarovsk Krai?” It turned out people preferred to travel with their family members or alone, each answer accounting for approximately a third of the survey results; a quarter of tourists traveled with friends, and only 7% in pre-made tourist groups.

The question “What kind of services you used while in Khabarovsk (Krai)?” was answered as follows: 55% didn’t use anyone’s services, 27% had help from their relatives or colleagues, and only one in seven travelers was supported by a travel agency.

Railway started to regain traction as a mode of transport to and across Khabarovsk Krai. On top of that, air transport began losing ground. Some of the passenger traffic was lost to cars and buses. Water transport ridership doubled percentage-wise. Nearly 2% of respondents replied they used other transports (taxi, car sharing, military transport, hitchhiking, or even walking); interestingly, taxi was the preferred mode of transport for those who came to the region for healthcare or recovery.

In summer, nearly half of the trips within the region were taken by road transport: 27% by car and 22% by bus. Notably, of all those who chose ‘other’ mode of transport (1%), over a half traveled by walking [11].

What kind of finding can be made of this?

Travelers cannot be fully covered by statistics, as only 74.6% used public transit (railways, buses, flight, or water transport), while the rest relied on other modes of transport, mainly cars. Whether this is a significant percentage or not can only be stated by analysis of regional passenger traffic. Since, there is no reliable and regularly collectible data on passenger traffic within Khabarovsk Krai, this analysis uses 2016 data from different agencies for comparison.

By using the ratios of different transport modes in terms of passenger traffic, we calculate the tourist traffic for cars and ‘other’ transports, including walking routes. Below are the figures of thus calculated tourist traffic for non-public transit: 765.4 thousand persons by comparison against railways; 3,026.7 thousand against air transport; 2,452.4 thousand against water transport; and 92,489.6 thousand against buses. For ‘other’ transports, the figures are as follows (in thousands): 97,8, 386,8, 313,4, 11 819,8. Analysis shows the objectivity of the available statistics is insufficient for any reliable quantification of tourists that use personal or ‘other’ transports. This is due to the fact that statistics does not contain any data that could help identify passengers traveling solely within Khabarovsk Krai on intercity routes. Thus, the railway statistics is pertaining to the total passenger traffic of the entire Far Eastern Railway rather than Khabarovsk Krai alone; river transport data cannot be isolated from the general water transport stats; most of the bus statistics applies to intra-urban commuting.

Despite these reasons, even minimal data is enough to suggest the number of car passengers could well amount to 765.4 thousand, which correlates with the data of observing the car traffic on the A-370 Ussuri Federal Highway in August 2017.

The duration of stay in Khabarovsk Krai depends on the purpose of travel and determines what the person is going to visit. People tended to stay in Khabarovsk Krai longer if they came for sporting, leisure and recreation, healthcare and recovery, or as guests. Perhaps, a longer stay affected the attendance of the city’s cultural centers: museums, theaters, cinemas, and the Circus.

Notably, 9% of the respondents were not willing to say where they stayed; 6% stayed at home (implying they had housing in another town, which UNWTO automatically declassifies as tourism), 5% preferred other types of accommodation: student housing for students, car for car tourists, a tent for outdoor tourists, and even military barracks, as one person said. A rented apartment in this paper also means a rented room or a rented house. Those who came for healthcare or recovery stayed not only at spa resorts, but also at rehabs and hospitals. Besides, tourists would often stay at their relatives', friends', colleagues'.

While hotels constituted preferred accommodation for a short term, longer-staying tourists preferred an apartment or a student house (if they came for studies, retraining, or other educational purposes); in rare cases, a person would opt for a hostel or a relative's place.

To identify 'tourists proper' in Khabarovsk Krai, we removed the following categories from the sample: anyone coming for employment or moving from another place; anyone coming for any purpose for longer than six months, as the Russian law defines a tourist as a person who leaves their permanent residence for a maximum of six months; and anyone who stayed at their own house, as this is beyond the scope of the definition of tourism.

The distribution turned out to be the same; only the percentage of apartment renters didn't rise. While tourists proper preferred hotels, a longer stay would still tend to be at other types of accommodation.

For longer stays, tourists preferred anything but hotels or statistically accountable accommodations. Hotels were the top choice for stays of one day to one week. Stays of a week to a fortnight were mostly at relatives'; stays longer than that were mostly at rented apartments. Calculating the total nights places hotels as the fifth most popular option.

Analysis of tourism as a contributor to the national or regional economy requires calculating the tourist expenditure. UNWTO defines tourist expenditure as the total consumer spending made by a traveler or on their behalf for and during their trip as well as while at their destination. Depending on whether it is a domestic or an international tourist, tourist expenditure might as well be domestic or international. The time and place of spending is also to be accounted for [2]. The concept of tourist expenditure covers a lot of items, from purchasing consumer goods and services integral to the travel and stay to buying small things for personal use, souvenirs and gifts for friends and relatives [4]. To properly apply these guidelines to this research, some items of expenditure must be analyzed in detail.

To better analyze the abstract traveler, the research team used SPSS Statistics, a software suit for statistical processing of survey data.

This enabled us to find what kind of purpose low-income tourists would come to the region for. It turned out they mainly came for competitions or retraining, i.e. their expenses were covered by competition hosts and by employers. Aside from that, low-income tourists often travel for healthcare services and recovery. While on a trip, they can still make use of other services for tourists, such as guided tours. Tourists with below-average income mainly came as guests, for recreation and recovery. Those were mostly people visiting their friends and relatives and staying at the latter'. It was only middle-class tourists that predominantly came for recreation, visiting, or professional/business purposes, in that order. Professional and business travels were the top category among tourists with above-average income; those were mainly business tourists. Visiting their friends and partners, or recreation were on par with the primary purpose though. Finally, tourists of unconstrained budget, although not as prevalent in Khabarovsk, mainly came for business, other purposes being of lesser importance.

A survey of 490 tourists identified averaged costs, both general and category-specific. In 2017, an average tourist spent 506.07 rubles (19.7%) on accommodation, 634.19 (24.7%) on food, 423.67 (16.5%) on transportation, 409.54 (15.9%) on entertainment, 518.32 (20.2%) on purchases, and 79.32 rubles (3.1%) to cover sundry costs, on a daily basis. This totaled 2,571.12 rubles per tourist per day. According to the global stats, accommodation may run as high as 30 to 40%.

In Khabarovsk Krai, as noted above, tourists tried to minimize costs on top of high inevitable expenditures, and accommodation would be the first item to cut; they stayed at hotels for short time only and prefer cheaper hostels or rented apartments for longer stay. Besides, low-income tourists mainly trav-

eled for education or sports, in which case their accommodation was covered by a third party. Accommodation costs also dropped as the bulk of tourists turned away from hotels (hosting only 35% of the respondents) to other types of accommodation: friends and relatives (29%), hostels (14%), and rented apartments (12%), as well as the 'other' category: student housing, tents, someone's own car, etc.

The fact that food costs dominated the picture in Khabarovsk Krai does not come as a surprise. Non-hotel tourists, which turned out to be a majority, preferred buying food and alcohols at supermarkets rather than eating out, which raised the income of grocery stores and lowered that of bars and catering services. Money saved on accommodation and catering went to cultural and sporting events, equipment rental, and sundry entertainment. There was observed an upward trend in healthcare and recovery as a purpose of travel, and thus in healthcare expenditure; a greater shopping activity led to more money going into buying clothes and shoes, personal items, jewelry, and tech.

As noted above, collecting data on 'unorganized' tourism is one of the biggest challenges. Even more important is to account for self-travelers in resort areas, where they stay for a relatively long time but are still obscure to official statistics. Fill and accurate reporting of tourism is extremely important for Khabarovsk Krai's economy in general, not only for resort areas.

The region has the following unaccounted tourist traffic:

- self-travelers (outdoor tourists) that go hiking and rafting on their own;
- school tourism, as the bureaucracy associated with organizing a trip for schoolchildren has forced whoever organizes such trips to do that under the table;
- various local festivals and competitions, where the outside participants are hosted at the locals' homes or at any residential premises on the organizer's books;
- major festivals and forums, where tourists live at health farms;
- country houses and recreation centers, guest houses;
- microhotels, hostels, apartment agencies and rented apartments, rooms, and houses not covered by statistics;
- car tourists traveling across or via Khabarovsk Krai on federal highways, or those who travel from the north of the region to the Sea of Japan;
- persons who come for retraining courses and stay at student houses. This category also includes the summer influx of university applicants that come to the city with their parents and rent apartments or opt in for a student hostel;
- persons who come to Khabarovsk for hospital treatment or examination, as studies have shown they rarely stay at hotels;
- people who visit their friends, relatives, and colleagues, and stay at the receiving party's home.

Several studies have been carried out to determine these parts of tourist traffic, including surveying the passengers at the airport and at the railway station / bus terminal, as well as a summer observation of the car traffic on the A-370 Ussuri Federal Highway.

Even given that hostel stay data is covered by official statistics, there is still a portion of tourist traffic that is left unaccounted for. Hotels, hostels, spa resorts, and other healthcare institutions, commonly referred to as collective accommodations, received 55.8% of tourists for 40.8% of nights. Other tourists went for individual housing, be it a relative's/friend's/colleague's place (27.89% tourists or 34.24% nights), a rented apartment/room/house (11.81% tourists or 20.23% nights), or even a student house or a tent (4.52% tourists or 4.74% nights).

To evaluate the 'hidden' tourist flux, the research team used the official statistics provided and employed by the authorities. In 2016, hotels and similar accommodations hosted 584,033 guests for 1,394,264 nights, i.e. 2.39 nights per guest. Most of them (541,830) were Russians; 24,074 traveled on travel vouchers; 18,269 stayed for 183 nights or longer. Thus, only 4.12% of hotel guests came from travel agencies (voucher issuers), and it might be the case those were mainly international tourists. If the calculation omits all non-Russians and everyone who stayed for six months or longer, then we're left with 523,811 people. Based on the hotels-vs-non-hotel proportions, we derive that 261,906 persons stayed at someone else's home, 110,897 at rented apartments, 42,471 used 'other' types of accommodation, i.e. a total of 415,274 tourists were never accounted for. Calculating the nights spent at such ac-

accommodations returns the following results: 1,049,708 nights at friends'/relatives'/colleagues', 620,081 nights at rented apartments, 145,424 nights at 'other' accommodations, a total of 1,815,213 'hidden' nights. Thus, given the hidden flux, domestic tourist traffic in Khabarovsk Krai totals 939,085 tourists and 3,065,708 nights.

This data can further produce the recalculation factor to account for 'hidden' tourists: 1.79 for domestic tourists, 2.45 for nights. In fact, these values must be higher, as studies have identified a far greater average stay at collective accommodations (5.7 nights for hotels, 11.7 for hostels, and 12.6 for spa resorts); the calculations above use a coefficient calculated on the basis of official statistics. Applying the coefficient reduced the average stay at individual accommodations accordingly: from 12.8 to 4 nights as a guest at someone's place, from 17.9 to 5.6 at an apartment.

Calculating the money 'hidden' tourists spent in Khabarovsk Krai returns 4,667,130,449 rubles (1,815,213 nights x 2,571.12 rubles of daily expenses). However, even deducting the accommodation costs for those who stayed at their relatives' (1,049,708 nights x 506.07 rubles = 531,225,728 rubles), despite that being already accounted for by a reduced cost of accommodation, we still arrive at 4,135,904,721 rubles.

The next step was to study the car traffic to identify 'hidden' car tourists.

For objective reasons, tourist traffic has recently been quickly transforming from mainly outbound to mainly domestic. Experts assume some 15% of Russian domestic tourists prefer their personal cars as mode of transport, which makes for about 5 million people. Metasearch on tourism only proves the existing trend: people ever more deny themselves the luxury of travel agency services and prefer to travel on their own. In 2016, the number of self-travelers raised by 20% YoY, them mostly being motorists. Such travels boost not only domestic tourism but also the tourism infrastructure, mainly roadside infrastructures and services, which raises the amount of money the tourism industry can generate. As a rule, car traffic rises dramatically during summer holidays when people have time to travel with their family or friends.

For nearly the entire Far East, the only beach resort is the coastline of the Sea of Japan. Every summer, thousands of tourists drive their families and friends to Primorsky Krai only accessible by the A-370 Ussury Federal Highway, a 760-km road that used to be named M-60 until 2011. This greatly increases transit via Khabarovsk Krai. Aside from holidaymakers reaching for the warm Sea of Japan, there are ever more people who fancy long-distance travel and challenge their cars to reach the Russian West. The idea has been greatly facilitated by completing the Chita-Khabarovsk R-297 Amur Federal Highway (M-58 prior to 2011). This is a 2,165-km highway.

A part of researching tourism as a regional economic contributor, the team studied transit tourists as contributors to the economy of the region they pass through.

Given that going from Khabarovsk to the coastline by car is a day-long journey, it feels safe to say whoever's point of origin is to the north or to the west of Khabarovsk will have to make a long stop en route for a night.

Such transit traffic could be calculated by reference to the services they use.

Let's begin with some data on the traffic of the Ussuri Highway that connects Khabarovsk to Primorsky Krai. According to the Concept for the Advancement of Public Roads in Khabarovsk Krai in 2006–2008, the annual average car traffic at the right-bank approaches to the bridge over the Amur River was 6,840 transports (3,535 cars) a day in 2005, projected to amount to 8,104 (4,297) in 2008. The combined road-railway bridge over the Amur River connects Khabarovsk Krai with Jewish Autonomous Oblast (EAO) and further with other western territories. The bridge is essentially the endpoint of the Amur Highway; any car that comes from or to any region west of Khabarovsk Krai will drive on that bridge [12].

The authors of the above-mentioned Concept also estimated the mean annual increase in traffic for public roads in Khabarovsk Krai; according to their estimates, such increase would be 2% at least. Even if we ignore the fact that the Amur Highway, the one responsible for the dramatic increase in car traffic, was completed long after that research, which means the researchers could never take it into account; or

the fact that domestic tourism got traction as late as in 2014; even then the daily average car traffic on the bridge would be at least 5,135 personal cars a day in 2017.

Of course, the figure includes commuters. Proper evaluation of car traffic must use data collected far from major cities. Such data is provided, for instance, by the Consolidated Report of the Federal Budgetary Institution Dalupravtodor for 2014, which sums up the traffic at the 527-557 km section of the road (the Spassk-Dalny bypass). On average, 2,407 cars passed this section a day.

Consider the calculations for another part of the same highway: 294–300 km, between the towns of Luchegorsk (270 km) and Dalnerechensk (350 km). The reconstruction project for this part of the road was developed by the Khabarovsk office of OAO GIPRODORNII and reviewed by the Khabarovsk office of the Federal State Institution Glavgosexpertiza of Russia [8]; according to that project, the car traffic was projected to rise to 3,728 cars and other road transports a day by 2022. Given that cars account for 76.5% of the total annual traffic there, the daily car transit would be 2,852 units. Some parts of Siberian highways have higher car percentage: 78.84% at 799 km, 79.72 % at 5 km of the M-53 Baikal Highway, 80.49 % at 30 km, 85.45 % at 405 km of the M-54 Yenisei Highway, data for 2015.

Given that for this research, we picked sections of the highway each being located approximately a third of the total highway distance from the endpoints, Khabarovsk and Vladivostok, it's safe to assume the daily average ridership of cars on this road was at least 2,500 cars in 2017.

In August 2017, a section of the Ussuri Highway was observed from Khabarovsk to the border of Primorsky Krai (0 to 246 km, the location of the Rodnik Café in Primorsky Krai). Traffic peaked at 410 cars/h, 9,840 cars/day at 0–60 km in the morning, the rush hours for motorists leaving Khabarovsk, further dropping to 142 cars/h closer to Primorsky Krai in the evening. On the Ussuri Highway, car traffic averaged at 193 cars/h in daylight hours in August 2017.

The research team also observed cars in transit. Of 1,467 cars whose license plate was recorded during the observation, 1,117 cars (76.14%) were registered in Khabarovsk Krai (Region 27; *translator's note*: Russian license plates contain the regional code the car was registered with), 188 (12.82%) in Primorsky Krai (Region 25, 125), 96 (6.54%) in Amur Oblast (Region 28), 31 (2.11%) in Jewish Autonomous Oblast, 9 (0.61%) in the Republic of Sakha (Yakutia, Region 14), 6 (0.41%) in Zabaikalsky Krai, 4 (0.27%) in Moscow (Region 77 or 777), 3 (0.20%) in Irkutsk Oblast (Region 138), 2 (0.14%) in Krasnoyarsk Krai (Region 24, 124), Magadan Oblast (49), and Chelyabinsk Oblast (Region 74, 174) each, and one car (0.07%) from the Republic of Tatarstan (16), Kemerovo Oblast (142), Sakhalin Oblast (65), Tula Oblast (71), Ulyanovsk Oblast (73), and Moscow Oblast (750) each. One car was from Region 141, which could not be identified, although Region 41 is Kamchatka Krai. A total of 23.86% cars in transit originated from other regions. Aside from the above-mentioned regions, there were spotted cars from St. Petersburg (78), the Republic of Khakasia (19), Sverdlovsk Oblast (96), Nizhny Novgorod Oblast (152), Smolensk Oblast (67), Tambov Oblast (68), and Tomsk Oblast (70); these, however, never made it to the sample.

Calculating car tourist numbers will only involve July and August, as these months, the car traffic might be as large as 1.1 to 1.3 times monthly average. It is in July and August that the Primorye tourist traffic peaks, mainly due to the seawater becoming warm, schoolchildren and students being on holidays.

Observations also showed that any car going via Khabarovsk Krai would carry at least two passengers, thus a total of three people (including the driver) per car. Similar observations were made by other researchers; A.I. Tamov's thesis cites a poll "done by a group of specialists dispatched by the International Association for the Development of Free Economic Areas (IADFEA, Rus. МАРСЭЗ). The poll involved 750 respondents aged 37 on average, 88% of whom were men. It was found out that car tourists preferred to travel with their friends and families rather than alone; passengers per trip averaged at 4 to 5 people with an average distance of 2.4 thousand km over an average of 15.4 days." [10]

Based on these assumptions, we projected the following car tourist traffic via Khabarovsk Krai in July and August: 193 cars x 23.86% (cars in transit only) x 18 hours (daylight hours only) x 62 days (July and August only) x 3 persons (a minimum) = 154,174 people. This only includes tourists going via Khabarovsk Krai to Primorsky Krai or from Primorsky Krai to the western regions. There are mo-

tourists riding from Sakhalin Oblast to the west, but that portion of the traffic is negligible. Even less motorists go to Sakhalin. The author hereof traveled by car on the isle of Sakhalin with his family in 2016 and met motorists from as far as Ulyanovsk Oblast at the Vanino-Holmsk ferry crossing and on the ferry itself.

Transit calculations here are based on an assumption the residents of Khabarovsk Krai would not stop en route within the region; they were thus omitted from the calculations. It would be quite a different situation, however, for people coming from Komsomolsk-on-Amur and other places in the north of Khabarovsk Krai, including Vaninsky and Sovetsko-Gavansky Districts. Such people have to stop for a night somewhere in the south of the region, as daylight hours are simply not enough to reach the destination point, especially when traveling in a company. Identifying such tourists by their region of origin is not possible either. This necessitates a few more assumptions. First, for people from the North of Khabarovsk Krai, unlike those from Amur Oblast and other western territories, the Sea of Japan must be a preferable destination over western regions. Second, Komsomolsk-on-Amur has greater population than Blagoveshchensk or Birobidzhan. All of this suggests that there must have been (and anyway must be) more car tourists from Komsomolsk-on-Amur and other places in the north of the region going to the warm Sea of Japan than their counterparts from Amur Oblast and Jewish Autonomous Oblast, as well as more than those who'd prefer Primorsky Krai. Cars from Amur Oblast and JAO totaled 8.66%; assuming the same number of tourists from Komsomolsk-on-Amur and other places in the north of Khabarovsk Krai, there were 55,958 people more.

Thus, there are at least 210,132 tourists (only half that number in fact, as there is only one road via Khabarovsk Krai, and any car in transit passes it twice) that travel annually via Khabarovsk Krai and have to stop in the region to have food and rest. Given that in 2016, Khabarovsk Krai was visited by 541.8 thousand Russian tourists, 'hidden' tourists in transit account for at least 19.4% of the total statistically covered tourist traffic.

What kind of expenditure could they make while in Khabarovsk Krai? First, buying food, be it from grocery stores or roadside cafés. A person traveling to the sea for a few days often buys vegetables for those few days; en route back home to the northern regions, they often buy vegetables, honey, and other foods for good. Second, many people stop for a night at roadside hotels en route, which are frequently overbooked; the author of this paper had difficulty finding a free room in a roadside hotel in Bikinsky District. Nearly any roadside hotel today has a bath or a sauna for travelers. Third, when traveling via Khabarovsk Krai, car tourists, especially if accompanied by their children, often go to museums, zoos, cinemas, and other entertainment venues, another item of expenditure. Fourth, they still spend a lot on gas and other car-related things.

#### 4. Conclusion

Present research has identified tourist traffic state-of-the-art methodology cannot detect. These 'hidden' fluxes are nearly tantamount to the numbers covered by official statistics. Moreover, the revenue they bring far exceeds that generated from 'monitored' tourists, as their 'hidden' counterparts spend more time in Khabarovsk Krai.

Observations were made of visitors (tourists, travelers, guests) coming to Khabarovsk Krai and traveling over and across the region, as well as of transit cars going via Khabarovsk Krai. Tourist expenditure was analyzed breakdown-wise.

Thus, the researchers have been able to calculate not only the tourist traffic in Khabarovsk Krai but also the revenue it brings. A recalculation coefficient was derived that could be of help analyzing tourism as an economic contributor on the basis of the statistic guidelines applied.

Quantifying the tourist traffic, directions, and economic contribution is of use for the furtherance of tourism in Khabarovsk Krai, for adjusting the existing *Tourism Development Program for Khabarovsk Krai in 2013-2020*.

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