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ASPECTS OF INCREASING ACCESSIBILITY OF RUSSIAN MUSEUMS AND EVALUATION OF ATTENDANCE

BASIC RESEARCH PROGRAM

WORKING PAPERS

SERIES: MANAGEMENT
WP BRP 43/MAN/2015

This Working Paper is an output of a research project implemented within NRU HSE’s Annual Thematic Plan for Basic and Applied Research. Any opinions or claims contained in this Working Paper do not necessarily reflect the views of HSE.
ASPECTS OF INCREASING ACCESSIBILITY OF RUSSIAN MUSEUMS AND EVALUATION OF ATTENDANCE

Accessibility is a key priority of public policy in the social sphere, a necessary condition to ensure equal opportunities and cultural participation. Analysis of the international practice reveals that the issue of accessibility has two aspects - objective and subjective. Regression models were used to conduct empirical analysis of the impact of economic factors on the museum attendance. The factor analysis of the data for the period of 2010-2012 conducted with the principle component method allowed to identify five factors. As a result, we estimated the impact of each factor on the museum attendance.

JEL Classification: Z

Key words: museum accessibility; increasing museum accessibility; international and Russian practice; social model to increase museum accessibility; evaluation of museum attendance.
Introduction

International and Russian context

In recent years in Russia accessibility studies have been conducted primarily in education. In the cultural sector many researchers have varied opinions about the impact of commercialization on the access to cultural goods and services and cultural participation, in particular these issues are discussed in the works of A. Rubinstein, E. Kostina, V. Muzychuk, E. Khaunina, and M. Gnedovsky (see for example, [Kostina, 2012], [Muzychuk et al., 2013], [Gnedovsky, 2007]). Several institutions, including the Russian Institute of Cultural Studies, the Cultural Policy Institute, and the Institute for Natural and Cultural Heritage, have been actively involved in the research of accessibility issues. The issues of spatial accessibility of cultural and leisure services have been studied in the Institute for Educational Studies, and the Higher School of Economics, by I. Abankina, T. Abankina, N. Osovetskaya (see for example, [Abankina et al., 2009], [Abankina et al., 2006]). Most researchers agree that regarding museum access, certain groups are discriminated against. This discrimination has social, as well as material and spatial dimensions. In addition to people with disabilities, another discriminated category is pensioners, especially single pensioners. The access to museums largely depends on the health, education level and well-being of the visitors, which is quite different in the Russian regions.

Access to cultural heritage: legal and regulatory framework

The access to cultural heritage and cultural rights of the citizens is enshrined in the major international and Russian documents - the Universal Declaration of Human Rights, the Constitution of the Russian Federation, Fundamental Principles of Legislation of the Russian Federation on Culture, Federal Law on Museum Fund of the Russian Federation. These documents guarantee access to cultural heritage, cultural rights and cultural participation for everyone.

State responsibilities in the implementation of these rights are established in Article 30 of the Fundamental Principles of Legislation of the Russian Federation on Culture, Article 32 regulates the state's responsibilities regarding the monopoly in the field of culture. General provisions of museum accessibility are set forth in the Federal Law on Museum Fund of the Russian Federation and Museums of the Russian Federation, including cases of possible restricted access (chapter VI, article 35).

Increasing Museum Accessibility
a) Ensuring access and audience participation

Access to culture largely depends on the activities of cultural institutions that collect, preserve and interpret cultural heritage and provide a range of services for the public. Improved accessibility of cultural institutions, and museums in particular, advantages both the audiences, the people who look for quality leisure activities, creative self-expression, meaning, communication and a sense of community and the cultural institutions implementing their mission and social functions.

The report *Making Culture Accessible* prepared by Annamari Laaksonen and published with the support of the Council of Europe underlines that 'Access is often described as a fundamental condition for people to participate in society as members with full rights and responsibilities. It is a concept linked to inclusion, representation and promotion of citizenship. Access to cultural services and expressions has slowly converted into the rationale of most cultural policies*.

Improving museum access is an area of common interest and collaboration of the government, museums and society.

Traditionally, the main functions of the museum include: documentation of phenomenon and processes in nature and society; education; recreation and communication (added at the end of the twentieth century); representation, informational, aesthetic, economic and other functions.

The museums' orientation to increase access and to promote a visitor-centered approach in their activities is enshrined in the mission of many international museum organizations, including the European Museum Forum, the International Council of Museums, the American Association of Museums and others.

There are also general trends that many cultural organizations take into account when planning their audience development program:

- Demographic trends and aging of the world population;
- Developing new educational concepts and formats (lifelong learning, informal education, etc.);
- A shift in consumption and distribution models: customers' involvement in the product creation and development, user-generated content, etc.;
- Developing information and communication technologies.

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6 https://www.coe.int/t/dg4/cultureheritage/culture/Moscow/Laaksonen.pdf
7 http://www.museum.ru/RME/dictionary.asp
Museums focus their activities on attracting a wider general audience and new target audiences, as well as targeting new audiences, including those with special needs.

Museums offer various modern facilities and a comfortable environment inside their buildings, including navigation and information systems, catering, museum and book stores, comfortable public spaces for meetings and events (lecture rooms, cinema halls, etc.). Particular attention is paid to provide access and special facilities for disabled visitors - special ramps, elevators, toilets, etc.; induction loops - for the deaf and hard of hearing, Braille information materials and exhibition booklets for the blind and visually impaired. Some large foreign museum have started developing specific programs for elderly people suffering from dementia and Alzheimer's disease and the people with learning difficulties and disabilities (e.g. Museum of Modern Art in New York, Brooklyn Museum).

The recently developed practice of museums going beyond their walls and holding open free events (thanks to government support), enables them to attract new audiences. The most vivid example is Museum Night, an international event traditionally held once a year and timed to coincide with the International Museum Day.

The variety of cultural and educational activities developed by the museums and tailored to the needs of different visitors increases access to culture and museum audience. In addition to the traditional practice of exhibitions and tours, museums offer public talks, consultations, scientific events (conferences, sessions, discussions, etc.); club activities (studios, workshops, etc.); performances and other cultural events (concerts, film screenings, theatre, literary soiree); special programs for families, games and master-classes. For example, museums often develop special activities for young working professionals and adjust their working hours so that young people can visit museums after work (e.g. from 18.00 till 21.00), meet their friends, see an exhibition and share their experiences, and participate in a workshop or master-classes.

Education becomes one of the core activities in the museums as they offer educational programs and events for visitors of different ages and learning styles. Often they design a special educational space for general or specific audiences (for example, la galerie des enfants in the Centre Pompidou, France).

To increase access to their collections, museums provide more opportunities to researchers and the general public, organizing open storages, multimedia libraries (especially, museums of contemporary art) and other facilities.
It is important to note that museums offer interactive exhibits enhancing visitors' engagement and develop more and more programs and activities in cooperation with their target audiences and visitors.

Museums also focus on developing community projects and initiatives; they establish contacts and collaborations with local communities and ethnic groups and engage them in their activities. An important instrument used by the museums to understand and develop their audiences is audience study that is conducted by the museum or by specialized organizations.

Recent years saw considerable transformations of museum activities, a shift from a collection-centered to a visitor-centered approach that resulted in a growing number and diversity of museum visitors. In Russia, it is also evidenced by the increased total number of visitors and the number of visitors per one thousand inhabitants (as a percentage of the population, see Table 1 in the Appendix).

b) Improving access to cultural resources and regional development

Many international examples relate to the emergence and dissemination of the practice that uses cultural resources for urban and regional regeneration. There are two evident trends of using museum resources here - establishing regional branches of large museums (both in and outside their country) and enhancing and promoting local museum and cultural resources to attract tourists to the region.

Well-known examples of foreign branches opened are the Guggenheim Bilbao Museum (opened in 1997) and the prospective Guggenheim Abu Dhabi.

A recent example of opening a regional branch inside the country is the Louvre-Lens that was inaugurated in December 2012 in the former mining town of Lens. President Francois Hollande attended the opening ceremony of the museum which is considered to be a project for the urban renewal.

The regional project of the Tate Gallery includes branches in different parts of Great Britain - Tate Liverpool opened in 1998, on the north-east coast and Tate St. Ives opened in 1993 in Cornwall, in the south-west. In 2000, to revive one of the industrial areas in London and to improve access to the museum collections Tate Modern was opened in the former Bankside Power Station. It is a branch of the Gallery which houses a collection of artwork created since 1900. In 2013, the Gallery launched a four year special program connecting 15-25 year olds to the arts in galleries and museums working in partnership with the youth and cultural sector.
Some of the most interesting projects using local museum and cultural resources for regional development include those in cities such as Stratford-upon-Avon (Great Britain) and Weimar (Germany).

Stratford-upon-Avon is famous for being Shakespeare's birthplace. Nowadays, Stratford with a population of about 27 thousand people receives some 5.5 million visitors annually, including one million people regarded as tourists (50% of them are foreigners) who visit local museums and theatres. Developing the tourism sector pushed a dynamic development of the Stratford economy in the 19-th century; due to the rise of tourism, Stratford possesses high-capacity infrastructures. At present, Stratford may feel proud of its ranking among the top in Great Britain for the quality of life.

Weimar has vivid connections with several important historic and cultural epochs in Germany, in particular it is known as the city of Goethe and Schiller. In 1999, the city became European Capital of Culture. It coincided with the 250-th anniversary of Goethe's birth and the 240-th of Schiller's. By that time, the city's population was over 65 thousand. Since the time of Goethe's arrival to the city in 1775, Weimar has become eleven times as big. The uniqueness of the city's development that it is always the growth of its cultural sector and not manufacturing that influences the pace of its economic development. However, Weimar has turned out to be the smallest city in the whole history of the European Capital of Culture program with its growing education and business tourism sectors and developed hospitality and leisure infrastructure.

As can be seen from the above examples, such projects require significant additional investments, developing appropriate infrastructure, and coordinated partnerships of government, private and non-commercial organizations.

The museum audiences and main aspects of accessibility

The concept of accessibility has various aspects and includes different tools enabling different audiences to get access to culture (Fig. 1).
The economic aspect includes visitors’ income level and museum pricing; the spacial aspect implies access to museum building and appropriate facilities inside the building; the educational aspect concerns access to museum collections through special programs with regard to the educational level and needs of the audiences; the social and psychological aspects include a comfortable atmosphere in the museum attentive attitudes of the museum personnel as well as developing special programs for target audiences.

**Economic aspect**

In terms of economic accessibility, museums are between the two poles in the cultural sector that is between public libraries (the most widespread network and accessible institutions with no admission fee) and theatres (compulsory admission fee and high maximum ticket price). To improve access here, museums introduce flexible ticket prices or free entrance for certain categories of visitors.

Such categories in Russia and abroad usually include young people (generally under 16-18, which in Russia is guaranteed by *Fundamental Principles of Legislation of the Russian Federation*...
on Culture), pensioners and elderly people, representatives of professional communities (museum workers, art-historians, art critics, etc.), disabled people and low-income groups.

In addition, museums can designate a special free entrance day for special audiences or for all audiences (e.g. according to the order of the Department of Culture of Moscow № 665 of 1 November 201, the city museums are to fix one day a month for free admission).

In this area, it is important to have an economically viable balance of free and paid services (some museums have an operation model with no general admission fee at all) that ensure 'financial' access to all audiences and enable museums to develop compensatory opportunities and benefits (among them, promotion of the museum and its growing reputation, a wide offer of various paid services, souvenirs, museum cafe and shops, tickets for temporary exhibitions, special tours, etc.)

Museums, in Russia and abroad, have quite comparable admission fees and a system of flexible prices with regard to the needs of different social groups. One exception, for example, is the unemployed who, in Russian museums, are not included in the list of special categories, but are commonly included in France).

Spacial and temporal aspects

a) People with disabilities

The aspect of accessibility for disabled people, as a rule, is regulated by general programs on the issue, and not exclusively to museums. Russia also developed a relevant program (Accessible Environment Program and related documents adopted by the Russian Government in 2011) after the accession to the UN convention.

Major foreign museums have more experience, including adaptation of the museum buildings, special facilities, trained personnel, etc. Most Russian museums are working towards the same aim, trying to improve relevant infrastructure, installing special equipment and facilities, and establishing partnerships with the specialized institutions (this aspect of accessibility is closely connected with the psychological aspects).

b) Residents of remote areas

Providing access to culture and museum collections to the residents of remote areas is an important issue for Russia (regarding its vast territory). Here, museums actively use information and communication technologies, such as the recent increase in various Internet art projects (e.g. the project initiated by Google in collaboration with dozens of world museums, including the Russian
ones). In addition, major museums organize outreach programs, travelling exhibitions and regional branches in provincial areas (examples are the Tate Gallery, Louvre, the Russian Museum, and the Hermitage) which as well contribute to the regional development. There is also a counter motion whereby provincial museums present their exhibitions in the capital cities and develop off-site programs.

c) Temporal aspect

Museum working hours depend on the museum's type and size, its location, the season and intensity of tourist flow (it is especially true for the Russian memorial museums located in the countryside). As a rule, a day off in both Russian and foreign museums falls on a weekday (mainly, Monday or Tuesday). Recently, many museums have allocated a special day when they work till 20.00-21.00 providing an opportunity for people to visit a museum after work.

Social and psychological aspect

a) People with disabilities

The museums working with these audiences contribute to, at least, two important processes - inclusion and rehabilitation. Large international museums develop special programs and offers for various groups such as elderly people suffering from dementia and Alzheimer's disease, people with learning difficulties and disabilities, and special audio-recordings for the blind and visually impaired. Major Russian museums have special rehabilitation programs for different audiences but they are still to become a widespread practice here. So far museums are primarily focused on improving their facilities and infrastructure and providing access to wheel-chair users. However, sometimes the museum institutions involved in the activities (through educational, art-therapy and art-rehabilitation programs) are not present in the information space and their activities are not sufficiently covered and promoted.

b) Specific audiences (ethnic, different language, and other groups)

To attract and to work with these audiences, museums develop special activities, as a rule, in collaboration with the representatives of the target audiences and local communities. Often these initiatives are supported by different charity foundations, NGOs and associations of friends of the museum. The concept of participation is especially important for such projects and contributions of the museums’ board of trustees and advisory boards could also be significant.

http://www.googleartproject.com/
Educational aspect

Nowadays, educational programs are popular and welcomed in all museums, indeed, most museums have their own educational department or specialist. The growing interest of the public in various educational formats and new concepts (life-long learning, informal education, etc.) encourages museums to develop a wide range of educational programs both in collaboration with formal educational institutions (schools, universities) and their own unique ones.

Russian museums still need to intensify their educational and related activities such as organizing open storages, preparing special hand-outs, educational content and publications, developing educational programs for different age groups and families, using new technologies and devices, such as audio guides, mobile applications, and others.

Core opportunities and incentives to improve accessibility

Focus group discussions on the issues of the museum accessibility held with the participation of the Russian museum workers (from different types of museums - art, local history, memorial, etc.) and museum experts identified the following four areas contributions to which could help improve access to the museums in Russia:

Financing

- Public financing and support for the development of museum collections - acquisitions, research, digitalization, etc., which would contribute to improved access and expanded educational offer of the museums.

- Earmarked financing from both budgetary and non-budgetary sources for special programs and initiatives addressing the needs of specific target audiences. Here, the focus group participants stressed the importance of expanding extra-budgetary sources, including charity foundations involved in the museum programs, and museums’ own income (as a rule these funds are important when museums develop small breakthrough and experimental projects to attract new audiences).

- Public support for major open collaborative events and initiatives aimed at promoting museums, for example, Night of Museums, Night of Arts (held in Moscow) and others.

- Developing joint programs between the state, NGOs and the professional community (museum workers, architects and designers) to improve museum infrastructure and design such as adaptation of the museum buildings and improving the interior design and facilities.
Legal framework

- Adoption of the federal and regional reference documents providing museums with framework recommendations to establish flexible ticket prices, depending on the specifics of the museum and its location.
- Working with the professional museum community and experts to develop and promote museum operational standards with regard to international practices.

Social advertising

- Including museums and museum issues in the social advertising program to further promote them and change their image in front of different audiences.
- Improving outside navigation with special signs of museums' location and directions to the museums.
- Study the possibilities to improve the registration of museum visitors with regard to different social groups they belong to.

Further training for museum workers

Public financing and support for special training programs for museum workers developed to improve their skills and competences in the following areas:

a) Programs for people with disabilities and special needs;
b) Design and comfortable space of museum buildings;
c) Use of ICT and intellectual property rights and copyright on the Internet;
d) Development of special museum programs;
e) Audience study;
f) Fund-raising and attracting more support from different financial and non-financial sources.

Social model of museums’ accessibility increase, including the assessment of opportunities to visit by people with health limitations

The state-run Program “Accessible Environment” for 2011-2015 includes the creation of Accessibility Maps for disabled people in federal subjects of Russia\(^9\). It means that social, administrative and cultural objects with accessibility passport for disabled people of various groups are marked on a single map.

Only 28 maps have been created to date. Most of the maps are still under preparation and not all of the maps created include museums as places to visit by physically challenged people. Many experts highly appreciate the Moscow accessibility map for the disabled.

The state-run Program “Accessible Environment” for 2011-2015 envisages the provision of cultural institutions with special equipment for disabled people (electronic storage media, audio and video players, braille books for the blind, computers equipped with special keyboard, sound programs, radio and television equipment), as well as provision of physical accessibility at museums, monuments and sites of national and cultural importance. Access provision for disabled people should be funded according to the principle of co-financing out of the funds of federal budget, the budgets of the federal subjects of Russia, local budgets and extra-budgetary sources. However, according to the director of the Russian Museum Vladimir Gusev, “there is no target financing for making museums disabled-friendly. There is a need to make the overall program work practically”\textsuperscript{10}.

RIA Novosti prepared the rating of Moscow and Saint Petersburg museums, which are accessible to physically challenged people\textsuperscript{11}.

The composite index is measured in percentage terms (the maximum level of compatibility with accessibility criteria is 100%). The final rating is formed by arranging the museums’ composite indexes in descending order.

In Moscow, 201 state museums and exhibition centers (under municipal as well as federal jurisdiction) were included in the rating, in Saint Petersburg – 62 museums and exhibition centers with respective territories. Official statistics were not fully completed with relevant information for composing the rating, which is why the data was collected by the interviewers who visited the facilities on a general basis.

There were only four museums from the sampling in Saint Petersburg with more than 50% level of composite index. They were:

- the State Hermitage Museum;
- St. Isaac’s Cathedral Museum-Memorial, the Museum Complex “The State Museum St. Isaac’s Cathedral”, also known as the museum of four cathedrals;
- Pavlovsk Palace, Pavlovsk State Museum Reserve;

\textsuperscript{10}http://invahelp.ucoz.ru/news/direktor_russkogo_muzeja_predlozhil_programmu_po_dostupnosti_muzeev_dlja_invalidov/2012-07-24-1116

\textsuperscript{11}http://ria.ru/social_ratings/physically_challenged_museum_msk/
• Costume Museum of Pavlovsk Palace.

At the same time, the composite index of top-list Moscow museums (24) was between 50% and 80%. Five Museums from Moscow scored more than 65 points in the evaluation of accessibility for disabled. They were State Historical, Architectural, Art and Landscape Museum-Reserve Tsaritsyno, Municipal Museum “The House on the Embankment”, State Darwin Museum, Solyanka State Gallery, The State Tretyakov Gallery on Krymsky Val.

Therefore, visiting a museum is a highly problematic issue for disabled, because the majority of museum complexes do not satisfy the requirements of architectural accessibility for people with disabilities. Surrounding areas meet the availability criteria significantly better compared to the inner architectural environment.

A series of restrictions are imposed on the architectural changes needed to ensure the conditions of visiting multi-level structures by physically challenged people (primarily stair lifts installation) in museums located in historic buildings. Cultural objects located in the historical and memorial buildings, with some minor exceptions like “first-magnitude” museums, provide a very limited range of accessibility conditions. Museum buildings that have undergone modernization, remedial or restoration work recently are an exception.

The reasons preventing changes of architectural environment according to disabled people’s needs are lack of both funding and concerted program implementation effort.

Integration and cooperation between museums, educational institutions and organizations of social sphere

All federal subjects of Russia, including Moscow – the city of federal significance, have experience of integration and cooperation between different types of educational and cultural and sports institutions in one form or another. Compared to other regions, Moscow has less financial, demographic, transport issues that is why the problem of integration and cooperation between different types of educational, cultural and sports institutions was not particularly acute. For these reasons, primarily soft, contractual forms of integration and cooperation between different types of educational, cultural and sports institutions have been developed over a long period.

Analysis of common practice of cooperation between educational and cultural institutions shows that those forms of cooperation that did not require global institutional changes, and were easily formalized under the pre-existing status of the state-run (municipal) institutions, were most widely used.
From October 1, 2012 onwards Moscow Department of Education has implemented the cooperation project between educational organizations of Moscow Department of Education and organizations of Moscow Department of Culture. The project operates in such spheres as theatre and concert activities, museum activity, cooperation with libraries, education in the field of culture and arts, artistic education in the South-East Administrative District, music education in Zelenograd Administrative District. The project is financed by extra-budgetary funds attracted by educational institutions. Visit schedules of cultural institutions are advisory in nature and the list of theaters and museums can be extended according to the capabilities of cultural and educational institutions. For the purposes of project implementation, a ticket booking service was organized in theatres and museums.

We can mention the interaction between educational institutions of the South-Eastern District Department of Education and organizations of Moscow Department of Culture as an example. They have a scheduled plan of joint arrangements and a list of museums participating in a free access program for students and special cooperation conditions with Moscow State Academic Philharmonic Society, state budgetary institution of culture “Mosconcert”, State Musical Theatre of Moscow “On Basmannaya Street” etc.

Cooperation between state educational institutions and non-governmental organizations, including those working in the field of education, culture and sport has been maintained in Moscow over a protracted period. Cooperation contracts were concluded for joint organization of events, provision of material and technical, personnel and financial support for state educational institutions.

**Empirical analysis of the impact of economic factors on museum attendance**

How can we assess measures aimed at increasing museums accessibility, as well as citizens’ engagement in cultural life and consumption of cultural goods and services? How can the value of cultural heritage in the sphere of museum activities be quantified? These questions lead us to difficult analytical problems, which can be resolved with the help of an empirical investigation, which accesses the consumption of cultural goods and services in the sphere of museum activities. Attendance figures are the most effective indicator of demand for services that museum provides.

**Areas of empirical research in the sphere of culture and museum activities in foreign countries**

Some foreign authors claim that cultural industry has a significant impact on the economy and society through the introduction of a new economic growth and development concept, and that
it is one of the few sectors of the economy, which is expected to be fast-growing in future (Lash and Urry, 1994; Jensen, 1999; Pine and Gilmore, 1999). In many studies, cultural activities are considered to play the central role in the development of the creative economy sector. (Howkins, 2001; Florida, 2002; Ellmeier, 2003; Conference Board of Canada, 2008; UNDP, 2010; Rikalović, Mikić, 2011).

The economic model of cultural activities uses the traditional and modified Cobb-Douglas function as a clear explanation of the quantitative relations between the results of production and factors of a certain cultural sphere, as well as for indirect estimation of the possible relations between culture and other areas of economic development.

In order to research South West of England technical museums’ effectiveness the production function was used and in addition to an assessment of labor and capital input, the impact of public funding and volunteer activities on the technical effectiveness of museums was assessed (Bishop and Brand, 2003). The production function was also used for theatre activities research and for the Royal Shakespeare Company analysis (Gapinski, 1980, 1984).

The investigation of economic contribution in some areas of culture, e.g. museums, performing arts, etc., can be conducted using such indicators as attendance figures, size of the exhibition area or number of performances as dependent variable (Measuring the economic contribution of cultural industries, in 2012).

Traditional perception of the museum as an expert scientific center has changed over time and now is considered as a socially-oriented establishment aimed at expanding people’s knowledge about society, culture, history and science. (Travers, 2006; MLA, 2009; BDRC Continental, 2010).

At the same time, some authors express concern over the fact that the policy of museums may move towards concentration of the large collections in the most famous ones - centers of excellence, and this can have a negative impact on the performance of small museums (Cross and Wilkinson, 2007).

A brief economic review of Russian museum activities

During a relatively stable 2000-2008 the country experienced a steady increase in the total number of museums, visits and exhibitions. The trend changed in 2008 due to the economic crisis, which caused a decline in the budgetary financing of cultural institutions and a reduction in families’ effective demand for cultural services.
However, in 2008-2011 there was a slight slowdown in the number of museums and excursion visits; the number of museum visits per 1,000 people in Russia did not change significantly, and by 2011 had reached its peak. An increase in exhibition activities made it possible to raise the number of individual visits and total attendance figure in 2011 up to 85857,8 thousand people (6 per cent rise comparing to 2010 level). Such high results in museum attendance were never previously observed (see Table 1 in the Appendix).

By 2011, the total square area of Russian museums decreased by 7% comparing to 2006, but at the same time there was an increase in the total attendance figure by 12.9%. Scientific employees and guides enriched museum personnel by 33% comparing to 2010 (see Table 2 in the Appendix). Still, the number of buildings in critical conditions increased, but, at the same time, the number of building requiring capital repair decreased.

There has been a stable trend in families’ effective demand for cultural services in 2002-2006. Families’ effective demand for cultural services reached its peak in 2004 (2.5% of aggregate effective demand), but decreased in 2007 (1.7%), i.e. even before the financial crisis. Organizations of social and cultural sphere lost financial resources because of the drop in earnings from commercial services.

Annual people’s expenditures on cultural services vary from 2.5% in 2004 to 1.6% in 2011. Cultural expenditures is the group of people’s expenditures that has structurally transformed, but is consistent in the structure of expenditures, and has not undergo significant changes unlike legal services. Since 2007, the share of private consumption of cultural services keeps in scale with tourism services and is slightly higher than health resort treatment.

*The impact on museum attendance: resources and economic potential of Russian regions*

Museum attendance is the most important indicator in the process of demand for services assessment. It was used as the dependent variable in the regression equations. We applied the method of independent variables elimination and selected factors that corresponded to the admissible criteria for dependent variable description most. The factors investigated as independent variables describing resources for museum activities were as follows: number of excursions, museums’ representation on the Internet, the budgetary funding of museums, financing by sources of income-generating activities and average annual labor cost of museum workers. Independent variables describing industrial and economic development of the region, that is physical and human capital, were represented by the following factors: fixed assets investment, the amount of
individual deposits in credit institutions, income per capita, the number of people with a university degree employed in the economy of the region and urban population size.

We used the modified Cobb-Douglas function to explain quantitative relationships between the resources for museum activities and factors of production of regional development. Data was limited to the three-year period (2010-2012) that is why we used the methodological approach based on the spatial statistical analysis of regional economic development (physical and human capital) to identify factors that determined the potential for museum attendance increasing. The results of six variants of regression equations were assessed.

We investigated two variants of the equations which demonstrate basing of correlations between independent variables and the dependent variable. The best results were achieved in log-transformed nonlinear regression.

\[
Y^*_t = A + \alpha_1 X^*_{1i} + \alpha_2 X^*_{2i} + \alpha_3 X^*_{3i} + \alpha_4 X^*_{4i} + \alpha_5 X^*_{5i},
\]

(1)

Where \( Y^*_t = \ln y^*_t, A = \ln a, X^*_{1i} = \ln x^*_1, X^*_{2i} = \ln x^*_2, X^*_{3i} = \ln x^*_3, X^*_{4i} = \ln x^*_4, X^*_{5i} = \ln x^*_5 ; \)

\( y^*_t \) – museum attendance per 1000 people in i-th region in year t (people);
\( x^*_1 \) – number of museum webpages per 1000 people in i-th region in year t (in units);
\( x^*_2 \) – number of excursions, per 1000 people in i-th region in year t (in units);
\( x^*_3 \) – number of employees with higher education in the region's economy per 1000 people;
\( x^*_4 \) – museum financing by sources from income-generating activities per capita in i-th region in year t (in RUB);
\( x^*_5 \) – fixed assets investment per capita in i-th region in year t (in thou. RUB).

We used the statistics of 80 regions of Russia, but in certain periods, in 2010, for instance, Jewish Autonomous Region, Karachay-Cherkess Republic, the Republic of Adygea, Ingushetia and the Republic of North Ossetia-Alania were excluded for lack of relevant information\(^{12}\). However, available data allowed us to assess the involvement of the entire population at the regional level. Coefficients of determination of the regression equations during the whole research period were quite high and fluctuated within 79-86%. The confidence coefficient was 95%.

Table 1 – Correlation between museum attendance and number of museum websites, number of excursions, museum financing by sources from income-generating activities, number of employees with higher education, fixed assets investment in the regional economy in 2010-2012

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\(^{12}\) We used data from Russian Federal State Statistics Service listed in reference books “Russian Regions. Social and economic indicators”, “Statistical Yearbook” and “Work and employment in Russia”.

18
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<th>Variables</th>
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<td>131,798***</td>
<td>26,157***</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>(0.086)</td>
<td>(0.082)</td>
<td>(0.091)</td>
</tr>
<tr>
<td>Employees with higher education</td>
<td>Coefficient-(\alpha_3)</td>
<td>0.366*</td>
<td>-0.194</td>
<td>0.137</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.216)</td>
<td>(0.206)</td>
<td>(0.231)</td>
</tr>
<tr>
<td></td>
<td>Beta-coefficient</td>
<td>0.095*</td>
<td>-0.048</td>
<td>0.037</td>
</tr>
<tr>
<td>Museum income-generating activity</td>
<td>Coefficient-(\alpha_4)</td>
<td>0,146***</td>
<td>0,230***</td>
<td>0,091*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.050)</td>
<td>(0.045)</td>
<td>(0.048)</td>
</tr>
<tr>
<td></td>
<td>Beta-coefficient</td>
<td>0,247***</td>
<td>0,433***</td>
<td>0,162*</td>
</tr>
<tr>
<td>Fixed assets investment</td>
<td>Coefficient-(\alpha_5)</td>
<td>-0.022</td>
<td>0.050</td>
<td>0.036</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.081)</td>
<td>(0.060)</td>
<td>(0.075)</td>
</tr>
<tr>
<td></td>
<td>Beta-coefficient</td>
<td>-0.015</td>
<td>0.039</td>
<td>0.027</td>
</tr>
<tr>
<td>Determination coefficient</td>
<td></td>
<td>0.826</td>
<td>0.856</td>
<td>0.787</td>
</tr>
<tr>
<td>F-statistics</td>
<td></td>
<td>65.5</td>
<td>85.7</td>
<td>53.9</td>
</tr>
<tr>
<td>Number of regions</td>
<td></td>
<td>75</td>
<td>78</td>
<td>79</td>
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</tbody>
</table>

Standard error in parentheses.  
* Parameter has 10% significance.  
** Parameter has 5% significance.  
*** Parameter has 1% significance.  

Financing museums by sources of income-generating activities is a significant factor that characterizes the resource potential of museum activities and has a positive effect on museum attendance figures.

The potential of modern Internet technologies allows the development of corporate websites and the expansion of museums’ representation on the Internet. In spite of the fact that, especially in remote regions, museums have only just begun to represent themselves on the Internet, the first taken steps in this direction had a positive impact on regional museums attendance figures (we observed a steady relationship since 2012). An independent variable, which is a number of museum excursions, is another important factor from the category of the museums resource base that had a positive effect on museum attendance.

City people manifest the greatest interest in museum activities. Growing people’s income and individual deposits contribute to museum attendance increase. These facts give evidence that people give a positive response to museum services supply.
We also conducted regression analysis to assess the influence of independent variables characterizing individual deposits and urban population on museum attendance. We took the logarithm of the nonlinear regression in order to transform it into the linear. Parameters of the model include:

\[ Y'_i = A + \alpha_1 X'_{1i} + \alpha_2 X'_{2i} + \alpha_4 X'_{4i} + \alpha_6 X'_{6i} + \alpha_7 X'_{7i}, \]  

(2)

Where \( Y'_i = \ln y'_i \), \( A = \ln a \), \( X'_{1i} = \ln x'_{1i} \), \( X'_{2i} = \ln x'_{2i} \), \( X'_{3i} = \ln x'_{3i} \), \( X'_{6i} = \ln x'_{6i} \), \( X'_{7i} = \ln x'_{7i} \); \( y'_i \) – museum attendance per 1000 people in i-th region in year t (people);
\( x'_{1i} \) – number of museum webpages per 1000 people in i-th region in year t (in units);
\( x'_{2i} \) – number of excursions, per 1000 people in i-th region in year t (in units);
\( x'_{4i} \) – museum financing by sources from income-generating activities per capita in i-th region in year t (in RUB);
\( x'_{6i} \) – amount of individual deposits in credit institutions per capita in i-th region in year t (in thousands of RUB);
\( x'_{7i} \) – urban population per 1000 people in i-th region in year t (people).

Table 2 – Correlation between museum attendance and number of museum websites, number of excursions, museum financing by sources from income-generating activities, urban population and individual deposits in credit institutions in 2010-2012

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression coefficients</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant - A</td>
<td>0.448</td>
<td>12.633</td>
<td>0.473</td>
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<tr>
<td></td>
<td>(1.588)</td>
<td>(1.752)</td>
<td>(1.472)</td>
<td></td>
</tr>
<tr>
<td>Museum webpages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient-( \alpha_1 )</td>
<td>-0.078</td>
<td>-0.048</td>
<td>-0.002</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.082)</td>
<td>(0.062)</td>
<td>(0.080)</td>
<td></td>
</tr>
<tr>
<td>Beta-coefficient</td>
<td>-0.059</td>
<td>-0.041</td>
<td>-0.002</td>
<td></td>
</tr>
<tr>
<td>Excursions in museums</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient-( \alpha_2 )</td>
<td>0.715***</td>
<td>0.585***</td>
<td>0.726***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.082)</td>
<td>(0.081)</td>
<td>(0.084)</td>
<td></td>
</tr>
<tr>
<td>Beta-coefficient</td>
<td>0.686***</td>
<td>0.593***</td>
<td>0.708***</td>
<td></td>
</tr>
<tr>
<td>Museum income-generating activity</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient-( \alpha_4 )</td>
<td>0.107***</td>
<td>0.187***</td>
<td>0.053</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.051)</td>
<td>(0.050)</td>
<td>(0.044)</td>
<td></td>
</tr>
<tr>
<td>Beta-coefficient</td>
<td>0.181***</td>
<td>0.352***</td>
<td>0.094</td>
<td></td>
</tr>
<tr>
<td>Individual deposits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient-( \alpha_6 )</td>
<td>-0.033</td>
<td>0.047</td>
<td>0.042</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.065)</td>
<td>(0.059)</td>
<td>(0.042)</td>
<td></td>
</tr>
<tr>
<td>Beta-coefficient</td>
<td>-0.027</td>
<td>0.039</td>
<td>0.035</td>
<td></td>
</tr>
<tr>
<td>Urban population</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient-( \alpha_7 )</td>
<td>0.764***</td>
<td>0.228</td>
<td>0.734***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.256)</td>
<td>(0.282)</td>
<td>(0.240)</td>
<td></td>
</tr>
<tr>
<td>Beta-coefficient</td>
<td>0.191***</td>
<td>0.053</td>
<td>0.199***</td>
<td></td>
</tr>
<tr>
<td>Determination coefficient</td>
<td>0.839</td>
<td>0.858</td>
<td>0.816</td>
<td></td>
</tr>
<tr>
<td>F-statistics</td>
<td>72.1</td>
<td>86.7</td>
<td>64.9</td>
<td></td>
</tr>
<tr>
<td>Number of regions</td>
<td>75</td>
<td>78</td>
<td>79</td>
<td></td>
</tr>
</tbody>
</table>

Standard error in parentheses.
Regional fixed assets investment has also had a positive impact on museum attendance since 2011. It appears that in order to form the industrial potential of the region the level of fixed assets investment has to be increased, which in turn will contribute to the total cost formation directed to the renewal of fixed assets in the social sphere, and, consequently, in the sphere of the museum activities.

In the investigation of such an important factor of museum activities support as the budgetary funding, we found out that coefficients of the regression equation were not statistically significant, which to some extent disprove its positive impact on museum attendance. We can interpret these results in the following way: there is a minimum financial support requirement, which is directed to the museum only to maintain the functioning of current activities, and which does not lead to proactive and creative development.

There was also no positive correlation between salaries of museum workers and museum attendance figures. It is likely that salaries of the museum workers as an important part of their remuneration and provision of incentives, does not allow museums to reap certain benefits and increase the results of performance and creative activity.

**Analysis of the factors having impact on museum attendance in Russia in 2010-2012**

Factor analysis is a statistical tool to reduce the number of considered factors affecting museum attendance (dependent variable Y). We selected 35 specific indicators characterizing the different aspects of museum activities.

Factor analysis involves forming “summarizing factors” (components) in which “original factors” are grouped if the original factors are highly correlated with each other. These summarized components have a lower correlation with each other, that is why inclusion of components as independent variables in the regression model solves the problem of autocorrelation.

We conducted a factor analysis of data from 2010-2012 using the method of the principle component (Moosmyuller, Rebikov, 2009). A correlation matrix shows the paired relationships between the indicators. Quite a high number of correlation coefficients, whose absolute value is close to 1, indicates that the relationships between the factors are numerous and it is advisable to conduct a factor analysis.
The Kaiser-Meyer-Olkin Measure of Sampling Adequacy for 2010 data is 0.85, 2011 – 0.876, 2012 – 0.86. The actual value is more than the threshold level of 0.5 and is close to 1. This means that the developed factor model adequately describes the structure of museum activities parameters.

The value of the Bartlett test of sphericity is significant at the 0.000 level. The actual value is lower than the 0.05 threshold level of significance. Consequently, there are correlations between the factors, and that is why there is a possibility of grouping them into components.

We identified five components of the factor model, because they explain the cumulative dispersion at the level of 84.94% in 2010, 84.90% in 2011 and 85.017% in 2012. Analysis of the cumulative dispersion chart shows that after the fifth factor, this relationship transforms almost into a horizontal line, which means a zero contribution of other components into the dispersion.

In order to resolve the problem of the high correlation of many factors with different components, we carried out the rotation of components by the “Varimax” method, which allowed us to identify the factors that form the components more clearly. Therefore, we identified the original factors that steadily correlated with components (correlation coefficients with rotated components was more than 0.5) during the entire three-year period:

Component 1. Museum resources
X2 Number of items of the museum’s basic fund per 1000 people (in units);
X4 Number of PCs in museums per 100 people (in units);
X7 Number of museum items included in the electronic catalogue, per 1000 people (in units);
X8 Area of premises (buildings) per 1000 people (in square meters);
X9 Exposition area, per 1000 people (in square meters);
X10 Number of excursion visits per 1000 people (people aged under 18);
X11 Number of excursions, per 1000 people (in units);
X15 Number of museum workers, per 100 000 people;
X16 Number of scientific workers and museum guides per 100 000 people;
X17 Number of museum workers with a university degree, per 100 000 people;
X18 Number of museum workers with working experience from 3 to 6 years, per 100 000 people;
X19 Number of museum workers with working experience from 6 to 10 years, per 100 000 people;
X20 Number of museum workers with working experience of over 10 years, per 100 000 people;
X21 Total volume of museums’ funding per capita per annum, RUB;
X22 The volume of the budget financing of museums per capita, RUB;
X23 The revenue from entrepreneurial and other income-generating activities per capita, RUB;
X24 Expenditures of museums per capita, RUB;
X25 Labour payment expenses, RUB;
X31 Amount of individual deposits in credit institutions per capita (in thousands of RUB).

Component 2: The scale of museum activities
X1 Number of museums per 100 000 people;
X3 Number of exhibited objects from fixed assets in the reporting year per 1,000 people;
X6 Availability of mail address of a museum, per 100 000 people;
X13 Number of exhibitions, per 100 000 people;
X14 Exhibitions opened during the reporting year, per 10 000 people.

Component 3: Regional economic development
X26 Fixed assets investment per capita, thou. RUB;
X27 Gross regional product per capita, RUB;
X28 Average income per capita, RUB;
X30 Value of fixed assets per capita, thou. RUB;

Component 4: Human Capital of the Region
X33 Share of employees with higher education in the economy, %;
X35 Number of employees with higher education in the region's economy per 1000 people.

Component 5. Structure of the regional population
X29 Population younger than working age per 1000 people. This parameter has a negative correlation so, in fact, the component includes the “reverse” indicator – “population older than working age per 1000 people”;
X34 Share of urban population, %.

Regression analysis of latent factors (components) of museums

In order to identify latent factors we have conducted a regression analysis. Museum attendance per 1000 people was the dependent variable (Y) in the regression model. The independent variables were represented by the five components formed as a result of factor
analysis. Subsequently, stepwise multiple regression was built. As a result, for 2010 and 2011 the first and the fifth components were significant, and for 2012 – the first, second and fifth. In this case, the component 1 “Museum resources” explains the dispersion from 72.1% to 80.7% in 2010-2012, the component 5 “Structure of the regional population” – the dispersion from 6.7% to 9.9% in 2010-2012, component 2 “The scale of museum activities” - 0.8% of the dispersion in 2012.

Results of the Factor Analysis

Factors that have an impact on the museums’ activities can be grouped into 5 components (or “latent factors”): museum resources, the scale of museum activities, regional economic development, human capital of the region and the structure of the regional population. The component “Museum resources” (including human, physical, cultural, information and financial resources) makes the greatest contribution into the explanation of attendance figures (75-80% of the dispersion). This component reflects the cultural value of museums. It is reasonable to argue that a museum with a high potential of resources has the highest attendance figures.

The component “Structure of the regional population” is the next in the order of importance. However, its explanatory power is much lower (7-8% of the dispersion). It is arguable that the urban population over the age of 18 form the target audience of museums, therefore this factor has such a significant influence on museum attendance.

The third important component is “the scale of the museum activities”, but its explanatory power is much lower (0.8% of the dispersion) and it is true only for 2012. Innovation activity of museums makes a humble contribution to the museum attendance, but the dynamics is positive.

Conclusion

Scientific and methodological support of Russian cultural policy priorities, envisaged in the Concept of long-term socio-economic development of the Russian Federation until 2020, is primarily connected with the highest possible accessibility provision of cultural goods and education in the sphere of culture and arts; creating conditions for improving the quality and diversity of cultural services; preservation and promotion of cultural heritage of peoples of the Russian Federation and enhancement of organizational, economic and legal mechanisms for cultural sphere development.

The issue of increased museum accessibility in the Russian Federation is complex, which is confirmed by the direct correlation of museum attendance and descending dynamics of tourism - both domestic and international. According to the World Economic Forum, Russia ranks 9th out of
133 countries in the world regarding its number of cultural objects. However, experts estimate that the wealthiest natural, historical and cultural potential of the Russian Federation is used at no more than a 20% level. Many cultural goods became inaccessible not only for tourists but also for a large part of the local population due to the catastrophic underdevelopment of modern infrastructure of museums and their inadaptability to work with different social groups, including visitors with disabilities. Resolution of this problem at the present stage of economic development of the society is restrained by a low provision level of special equipment for museums and insufficient development of information technologies in the sphere of culture. Due to the unsatisfactory condition of the buildings and equipment of most museums, located in the regions of Russia, it is reasonable to pay attention to attracting investment in the sphere of culture as well as development of mechanisms for public-private partnerships.

Implementation measures aimed at increasing Russian museums’ accessibility, were accessed through the empirical analysis of consumer demand for museum services (we used attendance figures as a dependent variable). In the course of this study the analytical calculations about increasing the museums’ accessibility through the extension of excursion activities, museums’ representation on the Internet as well as extra-budgetary sources (using public-private partnership) were confirmed. These factors, as a consequence, have a positive impact on the system of remuneration in museums and encourage creative activities.

Factor analysis confirmed the influence of the five components of the factor model on museum attendance figures. They are museum resources, the structure of regional population, regional economic development, human capital of the region and the scale of museum activities. Museum resources is the component that makes the greatest contribution to the explanation of attendance figures (human, physical, cultural, information, financial). This component reflects the cultural value of museums and their greatest attraction to visitors.
References


Travers, T., 2006. Museums and galleries in Britain: economic, social and creative impacts London, National Museum Directors’ Conference and Museums, Libraries and Archives Council,

Table 1. Museum activities in the Russian Federation, 2000-2011

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Population, mln</td>
<td>146,6</td>
<td>144,8</td>
<td>144</td>
<td>143,1</td>
<td>144,2</td>
<td>143,5</td>
<td>142,8</td>
<td>142,2</td>
<td>142,0</td>
<td>141,9</td>
<td>142,9</td>
<td>143,0</td>
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<td>Total number of museums</td>
<td>2047</td>
<td>2113</td>
<td>2189</td>
<td>2229</td>
<td>2269</td>
<td>2285</td>
<td>2368</td>
<td>2468</td>
<td>2495</td>
<td>2539</td>
<td>2578</td>
<td>2631</td>
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<tr>
<td>Increase in the number of museums compared to the previous year</td>
<td>66</td>
<td>76</td>
<td>40</td>
<td>40</td>
<td>16</td>
<td>83</td>
<td>100</td>
<td>27</td>
<td>44</td>
<td>39</td>
<td>53</td>
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<tr>
<td>Total number of museum visits, thsnd</td>
<td>73200</td>
<td>74310,7</td>
<td>75059,1</td>
<td>73844,4</td>
<td>74337,1</td>
<td>75603,1</td>
<td>79198,2</td>
<td>78807,7</td>
<td>80777,2</td>
<td>78941,8</td>
<td>81019,3</td>
<td>85857,8</td>
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<td>including:</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>individual</td>
<td>43347,3</td>
<td>43974,5</td>
<td>40378,2</td>
<td>41047,3</td>
<td>44424,5</td>
<td>46420,7</td>
<td>46145,2</td>
<td>47776,8</td>
<td>47855</td>
<td>49027,3</td>
<td>52706</td>
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<td>guided tours</td>
<td>30963,4</td>
<td>31084,6</td>
<td>33466,2</td>
<td>33289,8</td>
<td>31178,6</td>
<td>32777,5</td>
<td>32662,5</td>
<td>33000,4</td>
<td>31086,8</td>
<td>31992</td>
<td>33151,8</td>
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<tr>
<td>Number of visits per 1,000 people</td>
<td>499</td>
<td>513</td>
<td>521</td>
<td>516</td>
<td>516</td>
<td>527</td>
<td>555</td>
<td>554</td>
<td>569</td>
<td>556</td>
<td>567</td>
<td>601</td>
</tr>
<tr>
<td>Number of lectures, thsnd</td>
<td>122,7</td>
<td>128,3</td>
<td>121,8</td>
<td>133,6</td>
<td>131,1</td>
<td>149</td>
<td>150,4</td>
<td>137,7</td>
<td>139,5</td>
<td>154,2</td>
<td>138,7</td>
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<tr>
<td>Number of exhibitions, thsnd</td>
<td>28,1</td>
<td>31,7</td>
<td>30</td>
<td>33</td>
<td>35,6</td>
<td>38,6</td>
<td>40,2</td>
<td>41,6</td>
<td>44,8</td>
<td>47,6</td>
<td>50,5</td>
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</table>

Table 2. Museums’ buildings, collections and staff, 2006-2011.

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<tr>
<th>Indicators</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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<tr>
<td>Number of museums</td>
<td>2 368</td>
<td>2 468</td>
<td>2 495</td>
<td>2 539</td>
<td>2 578</td>
<td>2 631</td>
</tr>
<tr>
<td>including, branches</td>
<td>613</td>
<td>590</td>
<td>555</td>
<td>562</td>
<td>576</td>
<td>612</td>
</tr>
<tr>
<td>Total area of the museums’ territories, ha.</td>
<td>493 073</td>
<td>486 539</td>
<td>485 208</td>
<td>480 072</td>
<td>479 924</td>
<td>457 822</td>
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<tr>
<td>Total area of the museums’ building, sq. m.</td>
<td>3 879 680</td>
<td>4 028 735</td>
<td>4 025 915</td>
<td>4 148 259</td>
<td>4 247 890</td>
<td>4 378 839</td>
</tr>
<tr>
<td>Number of buildings – total</td>
<td>8 016</td>
<td>8 214</td>
<td>8 646</td>
<td>8 734</td>
<td>8 977</td>
<td>9 159</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>under operating management</td>
<td>7 369</td>
<td>7 600</td>
<td>8 073</td>
<td>8 184</td>
<td>8 428</td>
<td>8 607</td>
</tr>
<tr>
<td>tenancy</td>
<td>647</td>
<td>614</td>
<td>573</td>
<td>550</td>
<td>549</td>
<td>552</td>
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<td>requiring major repairs</td>
<td>3 006</td>
<td>3 011</td>
<td>3 011</td>
<td>3 009</td>
<td>3 090</td>
<td>2 811</td>
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<td>in disrepair</td>
<td>541</td>
<td>505</td>
<td>554</td>
<td>526</td>
<td>544</td>
<td>1 016</td>
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<tr>
<td>Museum collections, thsnd of depository items</td>
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<tr>
<td>Total number of items</td>
<td>82 975</td>
<td>80 748</td>
<td>81 535</td>
<td>82 931</td>
<td>82 860</td>
<td>80 188</td>
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<td>including, items of core collection</td>
<td>64 354</td>
<td>61 664</td>
<td>61 995</td>
<td>62 647</td>
<td>63 714</td>
<td>60 659</td>
</tr>
<tr>
<td>Restored items in the reporting year</td>
<td>53</td>
<td>52</td>
<td>48</td>
<td>53</td>
<td>63</td>
<td>47</td>
</tr>
<tr>
<td>Exhibited items (of the core collection)</td>
<td>4 462</td>
<td>4 469</td>
<td>4 464</td>
<td>4 668</td>
<td>4 861</td>
<td>4 935</td>
</tr>
<tr>
<td>Number of electronic catalogues entries</td>
<td>11 030</td>
<td>14 093</td>
<td>15 695</td>
<td>17 860</td>
<td>20 204</td>
<td>23 538</td>
</tr>
<tr>
<td>Museum staff, thsnd of employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of employees - total</td>
<td>71 731</td>
<td>73 161</td>
<td>73 330</td>
<td>74 852</td>
<td>75 848</td>
<td>77 690</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>researchers and guides</td>
<td>20 200</td>
<td>20 545</td>
<td>19 897</td>
<td>20 325</td>
<td>20 262</td>
<td>27 149</td>
</tr>
<tr>
<td>including, with higher education</td>
<td>17 135</td>
<td>17 411</td>
<td>16 670</td>
<td>17 291</td>
<td>17 241</td>
<td>21 305</td>
</tr>
</tbody>
</table>

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