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## **Deliverable D3.1 Analysis of the survey results**

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<b>PP</b>	Restricted to other programme participants (including the Commission Services)	
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## ANALYSIS

### **of the sociological survey results concerning the opinion of Bulgarian researchers for the profession "Researcher"**

An important element of the REKS project within the EC Initiative 2005 "Researchers in Europe" is the sociological survey of the profession "Researcher".

The main objective of this survey was to collect reliable original information about the researchers opinion on the opportunities which the state and the academic institutions are providing for their development and career advancement, as well as on the perception of the researcher's profession in the society. Another important objective of the survey was to draw conclusions about the reasons for the researchers' status on the basis of the generalized information and to lay down measures and directions to improve the opportunities for career development of young researchers.

#### **The sociological survey tasks are as follows:**

- To study the opportunities for development of researchers in Bulgaria and in particular the opportunities for women and young researchers;
- To analyze the factors which determine the development of researchers;
- To study the share of women and men in the governing bodies of the institutions, included in the sample;
- To study the researchers' participation in research financed by their institution or by the state;
- To study the researchers' opinion on the working conditions and the salaries in the research institutions, as well as on the conditions for development of young researchers;
- To analyze the researchers' opinion on the respect and prestige of the profession "researcher" in the society;
- To study the intentions of researchers and in particular of young researchers related to their profession in the years to come.

This survey of the opinion of Bulgarian researchers on the profession "researcher" covered a sample of 220 persons. The distribution according to gender is: 50.3% women and 49.7% men. The generalized results show that 28.2% of the respondents are at the age of 35 years or less and over half of them - i.e. 61.3% are at the age of over 40 years (see Table 1).

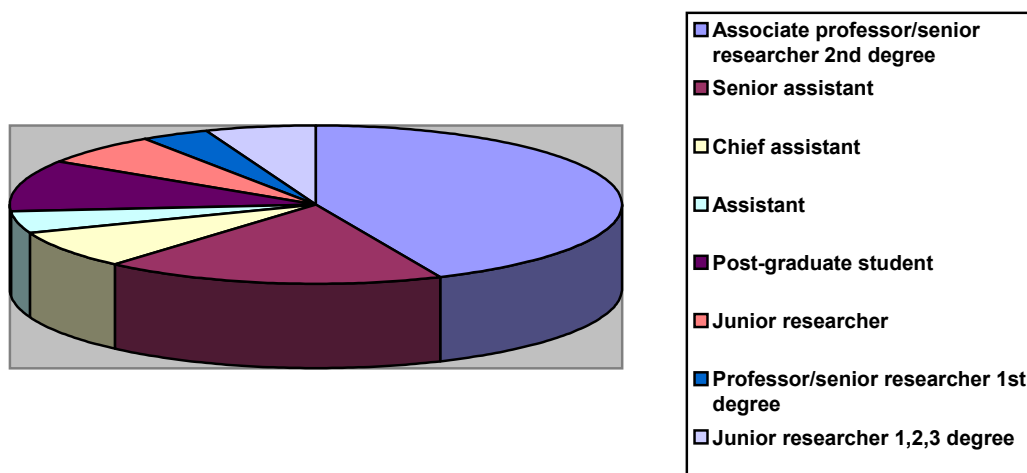
**Table 1 Age distribution of the surveyed researchers**

Age groups	Ratio (%)
25-30 years	18.2
31-35 years	10.0
36-40 years	10.5
41-50 years	27.3
51-60 years	26.4
Over 60 years	7.6
Total	100.0

The researchers' distribution by gender in the Bulgarian research institutions according to the data is as follows: 48.3% of the respondents state that the women ratio in their institution is over 40%, while 13.5% of the researchers note that it is over 60%. According to the generalized data the surveyed persons' distribution by academic rank is as follows:

**Researchers' distribution by academic rank**

Academic rank	Associate professor/ senior scientist 2nd degree	Senior assistant	Head assistant	Assistant	Post-graduate student	Junior scientist 1,2,3 degree	Professor/ senior scientist 1st degree	Didn't answer
Ratio (%)	43,20	18,20	7,70	4,50	10,50	6,40	3,60	5,90



**Figure 1 - Researchers' distribution by academic rank**

Taking into consideration the fact that this is a probability<sup>1</sup> sampling and the validation of the data with the data on the researchers in Bulgaria for 2005 shows a quite similar distribution by academic ranks with insignificant variations in the figures about the associate professors, the generalized survey results can be considered to be representative of the Bulgarian scientific community.

One of the first items included in the questionnaire was about the age at which the persons under survey have started their academic career. According to the data a little less than half of them have started their career at the age between 26-30 years - 43,2%, which is a suitable age for an academic career start. Less than 1/5 of the persons have started their academic development at the age between 31 and 35 years and only 6,4% - at the age of over 35 years, which is a comparatively late start for such kind of work. According to the survey results a little over half of the respondents have the academic degree "doctor", i.e. the first doctor's degree - 54,5%. There are doctors of economy, mathematics, informatics, electronics, biology, chemistry, psychology, physics, sociology, pedagogy, law, veterinary medicine, geography, etc. and nearly 15% are doctors of science - 9% doctors of economical sciences and 5.9% - of technical and agricultural sciences.

An important issue, related to the researchers' professional development, is when - i.e. at what age the Bulgarian academic worker defends its doctor dissertation and obtains the "doctor's" degree.

***The survey shows that the average age at which the Bulgarian researcher becomes doctor falls in the interval between 31 and 35 years - this is the situation with 37.6% of the respondents, while a little over 1/4 of the rest become doctors even later - at the age between 36 and 40 years - 27.8%. The second doctor's degree, according to the survey, is usually conferred at the age of over 45 years - 66.7% of the survey persons and only 26.7 % have obtained it at the age of 41-45 years.***

In respect of the age of obtaining the academic ranks the generalized results show that over 40% of the surveyed persons have obtained the title associate professor at the age between 46 - 50 years and only 13.4% of the associate professors have obtained their title at an earlier age - between 36-40 years (see table 2). The title professor has been conferred to the respondents most often at the age between 50-60 years - 80% and 1/5 of the persons have become professors at the age of over 60 years. *These facts, compared to the practice in West European countries show that the academic career in Bulgaria is slower and the attainment of academic rank comes generally much later.*

As far as the researchers' participation in the research activity management is concerned, approximately 27% of the researchers in the sample have occupied a managerial position for a certain period of time. Most often they have been in charge of "chair" - 8.2% and "vice-dean" - 17.7%.

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<sup>1</sup> See the Statistical reference book, National Statistical Institute, Sofia, 2005, page 44; the minimum calculated necessary size of the sample was 210 respondents with guaranteed probability of 95% and maximum representativeness error of 0.03.

**Table 2 Age distribution of the Bulgarian researchers at the time they were conferred the academic rank "associate professor"**

Age interval	ratio (%)
Under 40 years.	13.4
From 41 to 45 years	40.2
From 46 to 50 years	43.8
From 50 to 60 years	2.6
Over 60 years	-
Total	100.0

The ratio of the persons with academic rank - associate professor and professor who have occupied the position of vice rector is significantly lower - 4.5% and 2.3% respectively. The data about the percentage of the persons who have occupied a managerial position in another structure are more interesting: it turns out that only 15.5% of the total sample have occupied a managerial position in another institution or structure - Specialized Research Council, Research Commission attached to the Higher Attestation Commission, Research and Development unit/center, etc.

At several research forums - conferences, seminars, etc. it has been discussed that the *state does not use the country's research potential for the needs of its economy management. This is proved by the fact, that according to the survey a mere 5.5% of the researchers covered by it, have been board members of a state-owned company during the last 15 years.* Besides, even those who have been members of a board have occupied this position for a short period of time and only 1.4% have been members of a state company board for over 5 years.

One of the tasks of the sociological survey was to study the researchers' participation in research financed by the state or by their own institutions respectively during the last 10 years, split into two periods of 5 years each. As the table shows, during the second period the percentage of the researchers who have taken part in 2-3 research projects has increased slightly - by 7 %, as well as the ratio of those who have taken part in 4-5 research projects - by 11%. ***The ratio of researchers who have taken part in 1 research project has decreased by 6 % and even more drastically - the ratio of researchers who have taken part in over 5 research works, funded by the state or by their own institution - by 12%.*** This confirms on practice the well known fact that the subsidies for scientific research in Bulgaria are very small - below 0.5% of GDP against 2.0% in the EU -15<sup>2</sup> and they do not meet the needs of the society. The financing schemes of the research institutes and higher education institutions do not stimulate the obtaining of more high quality "development and research product". ***The data show that on average a researcher takes part in less than 1 research project per year, financed by the state or by his own institution.***

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<sup>2</sup> The value of the indicator is 1.9% even when taking in consideration the New Member States.

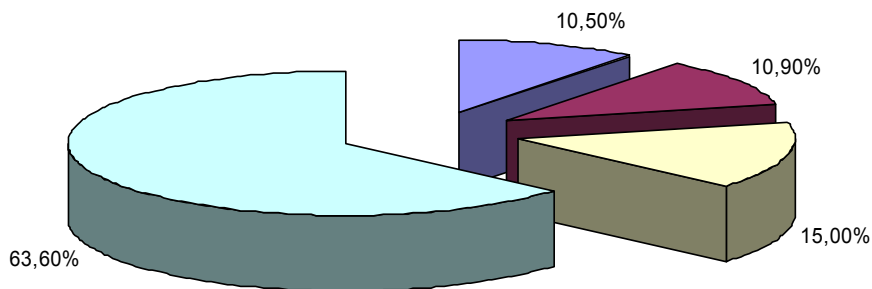
**Table 3 Participation of the researchers in research projects, financed by the state or their own institution**

	Period 1995-1999 ratio (%)	Period 2000-2005. ratio (%)
Once	24.8	18.9
2- 3 times	<b>33.3</b>	<b>40.5</b>
4-5 times	<b>9.5</b>	<b>20.6</b>
More than 5 times	32.4	20.0
Total	100.0	100.0

The participation of Bulgarian researchers in applied research for the needs of Bulgarian and foreign companies, funded by them, looks even worse. For the last 10 years only about 36% of the researchers have taken part in research, financed by the industry, while 64% of them have never participated in any project, ordered by a company for its practical needs (see Figure 2). *This is a serious problem in Bulgaria: insufficiently close relationship between the theory and the practice. The Bulgarian business as a whole is not relying often on the scientific personnel knowledge and expertise.*

**Participation of the researchers in research projects, financed by Bulgarian or foreign companies during the last 5 years**

Участие на учените през последните 5 год. в изследване, финансирано от български или чужди фирми



Legend: haven't taken part in any research project - 63.6%;

The conclusion is that at this stage the relationships between the research organizations and the business sector are highly underdeveloped.

In many cases the research institutions offer to the companies different possibilities for research, from which both parties could benefit: the company resolves a research problem while the research personnel could use the data for its seminars or other purposes, but even then the companies are not ready to pay for the research<sup>3</sup>. Out of all researchers who have taken part in three or more research projects for the needs of practice during the last 10 years, most active are the associate professors/senior researchers - 50% of all participants, and the chief assistants - 25% of all participants in these research projects.

While analyzing the status of the profession "researcher", it is important to study the opinion of the researchers on the career development conditions for young researchers in their research organization. The data of this survey show that *over half of the researchers feel that the organization is helping and encouraging the young researchers* (see Table 4). *One third of the respondents give a positive answer as well, but with a restriction: they affirm that their institution creates conditions for career development of young researchers, but no more than the other institutes for higher education.* Only 7.7% of the respondents assert that their institution is not supporting the young researchers adequately. Some of them, mostly from state Institutes of Higher education have noted that they find obstacles and restrictions even to their participation in conferences and seminars in Bulgaria. Another problem of the research institutions in Bulgaria - universities and institutes is also the provision of West -European periodicals for the needs of the researchers - research assistants, tutors and young postgraduate students.

**Table 4 Opinion of the respondents on the young researchers' career development conditions in their institution**

Evaluation of the researchers of their young colleagues career development conditions	ratio (%)
Yes, the institution helps and supports the young researchers	52.7
Yes, but no more than the other Higher Institutes	33.2
Rather not	8.1
I can't tell	5.5
Did not answer	0.5
Total	100.0

The data show a quite elevated satisfaction level of the researchers from the young researchers' career development conditions in their institutions, which is a very positive fact. This is important because the sociological survey generalized results show *that the*

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<sup>3</sup> Although the state expenditures for research are still very small, it should be noted that the major burden of funding the research and development projects falls on the state: only 1/3 of the funds come from the business, while in Europe the situation is exactly the opposite.

*most important incentive for researchers in their job are the excellent working conditions and the opportunities for career development - 81.7% have indicated this factor as the most important one.* All other incentives have similar weight; they are pointed at as very important by over 3/4 of all survey respondents (see Table 5).

Table 5 Ranking of the importance of different incentives in researchers' work

Importance level Incentives	Most important (%)	Very important (%)	Not very important (%)	Total (%)
Excellent conditions of work and development	81.7	16.87	1.5	100.0
Social acquisitions and general material benefits	19.1	73.5	7.4	100.0
Intellectual incentives	37.6	52.8	9.6	100.0
Financial incentives	26.5	58.3	15.2	100.0

In contrast to the relatively high satisfaction level of researchers from the conditions offered by the research institution they are working in, the satisfaction level in respect to the state and its institutions is significantly lower: *nearly 2/3 of the respondents - 64.4% think that the state does not support researchers and their work and only 14.2% of them assert that the state in the person of its institutions supports science and research.*

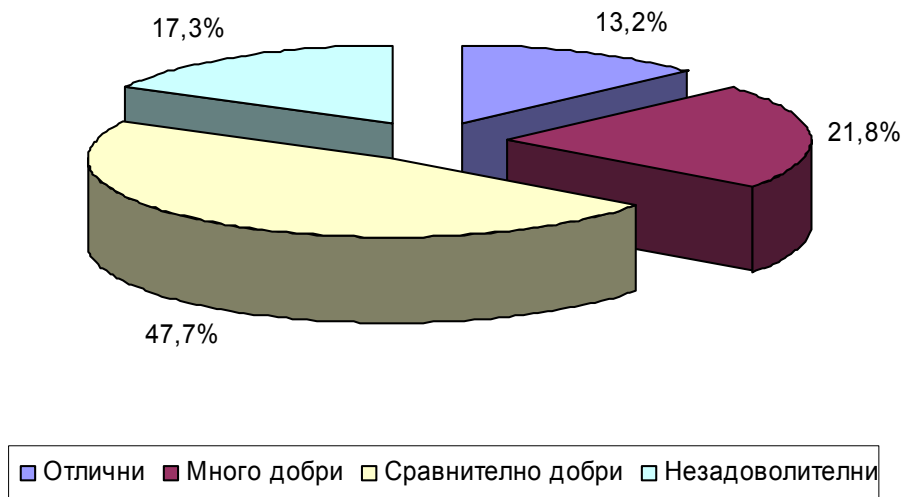
According to the survey's generalized data, the working conditions and career development conditions are one of the most powerful incentives for work. Because of that it is important to find out what is the satisfaction level of Bulgarian researchers from the working conditions in their institutions. The fact that over 1/3 of all respondents state that the conditions are excellent or very good is positive. At the same time, 47.7% share this opinion, but with a restriction, i.e. that the conditions are comparatively good (see Figure 3) and about 17.3% assert that the working conditions in their institution are unsatisfactory.

*The data analysis according to the acquired academic ranks and titles shows that most dissatisfied with the working conditions are the assistants and senior assistants from the state Institutes of Higher education and the junior researchers from the Institutes of the Bulgarian Academy of Science - over half of this category respondents have indicated that they are not satisfied with the working conditions and their institution's material- technical base.*



**Figure 3 - Researcher's Evaluation of their institutions working conditions**

**Оценка на учените за трудовите условия в техните институции**



Legend: 1- excellent 2- very good 3- comparatively good 4- unsatisfactory

There are differences, which can be easily explained, taking into consideration these results, in the satisfaction level by this indicator of the different age groups: obviously the elderly researchers are more satisfied against the younger researchers. One other difference in the opinions on the working conditions can be observed: according to the survey results the satisfaction level from this factor's status is much higher in the private Universities than in the state Institutes of Higher Education.

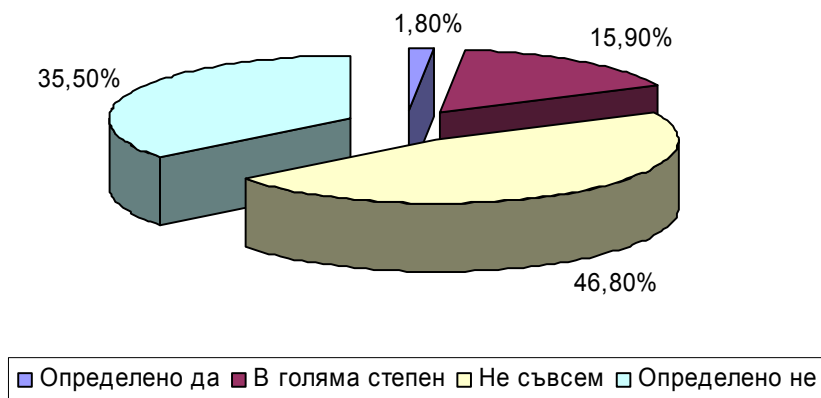
The data about the availability of a researchers' development strategy in the Bulgarian research institutions are very contradictory. According to the generalized results about 60% of the researchers have indicated that their institutions have either 3-years or 5-years development strategies and only 16.8% have pointed that their institution does not have such strategy. On the other hand the data on most institutions are contradictory: for example for the Bulgarian Academy of Sciences - 51.5% of the surveyed researchers say that their institution has a 3-years strategy, while 21.2% deny this. In a great part of the universities between 40 and 50% of the researchers note that their institution has 3- or 5-years strategy and a little less assert exactly the opposite for the same university.

Despite the fact that according to the survey results the most important factors for the researchers are the excellent working conditions and the opportunities for development and professional career, the salaries remains a strong incentive for the researchers. The

generalized information from the research community survey shows that a little less than 20% of them are fully or to a great extent satisfied with the remuneration. As it could have been presumed, nearly half of the researchers are not quite satisfied and over 1/3 of the respondents are absolutely dissatisfied with the remuneration - 35.5% (see Figure 4).

**Figure 4 - Satisfaction of the researchers with the labour remuneration**

**Удовлетвореност на научните работници от  
заплащането на труда**



Legend:

1-perfectly satisfied 2 - to a great extent 3 - not quite 4 - definitely not

The analysis of the researchers' satisfaction with their salaries depending on the different academic titles and positions shows that most dissatisfied with the payment for work are the junior researchers, the assistants and the professors - i.e. the most junior and the most senior researchers (see Table 6). At the same time the survey results show that most satisfied are the senior assistants and chief assistants.

*The analysis of the researcher's satisfaction in Bulgaria with the salaries shows that it is significantly higher in the private institutes for higher education than in the state universities and institutes.*

**Table 6 Satisfaction of the researchers with different titles with the payment for their work**

<b>Satisfaction level</b> <b>Academic title</b>	<b>Definitely yes (B%)</b>	<b>To a great extent (B %)</b>	<b>Not quite (B %)</b>	<b>Not</b>	<b>Total</b>
<b>Assistant</b>	10.0	10.0	30.0	50.0	<b>100.0</b>
<b>Senior Assistant</b>	-	29.4	58.8	11.8	<b>100.0</b>
<b>Chief assistant</b>	-	21.5	33.3	45.2	<b>100.0</b>
<b>Associate professor/Senior researcher II degree.</b>	2.9	18.6	52.4	26.1	<b>100.0</b>
<b>Professor/Senior Researcher I degree.</b>	-	2.1	20.1	77.8	<b>100.0</b>
<b>Junior researcher I,II or III degree</b>	-	-	40.0	60.0	<b>100.0</b>
<b>Without title/ post graduate student</b>	-	<b>17.4</b>	<b>56.5</b>	<b>26.1</b>	<b>100.0</b>

The information about the increase of the researchers payment for work for the last 3 years shows that only about 18% of the researchers have obtained for the 3 years a wages increase of over 30%, while the salaries increase of 44.8% of the respondents has been below 20% (See Table 7).

**Table 7 Increase of the researcher's payment for work during the last 3 years**

<b>Amount of the increase</b>	<b>ratio (%)</b>
Under 20%	44.8
From 20 to 30 %	<b>37.7</b>
From 30 to 40 %	12.7
Over 40%	4.8
<b>Total</b>	<b>100.0</b>

In respect of the Bulgarian researchers mobility the survey data show that a little less than half of the surveyed researchers have not been abroad through any mobility program, while about 40% of the researchers have visited a foreign institution only once in 10 years. That indicates poor mobility activity, taking in consideration the multitude of

European programs and opportunities for scientific exchange. *A mere 5% of the researchers have visited over 3 times (for a 10 years period) a foreign university or research institute through some program. No significant differences between the women and men researchers are found in respect of the number of visits for the 10-years period.*

*One of the main reasons for the low mobility of the Bulgarian researchers is the fact that they have a poor command of West European languages, which is a serious barrier to the scientific exchange.*

**Table 8 Respondent's mobility during the period 1994-2004**

Number of visits for the period	Ratio (%)
Once	39.2
2 times	3.5
3 times	4.9
More than 3 times	4.9
I haven't visited any institution abroad	47.5
Total	100.0

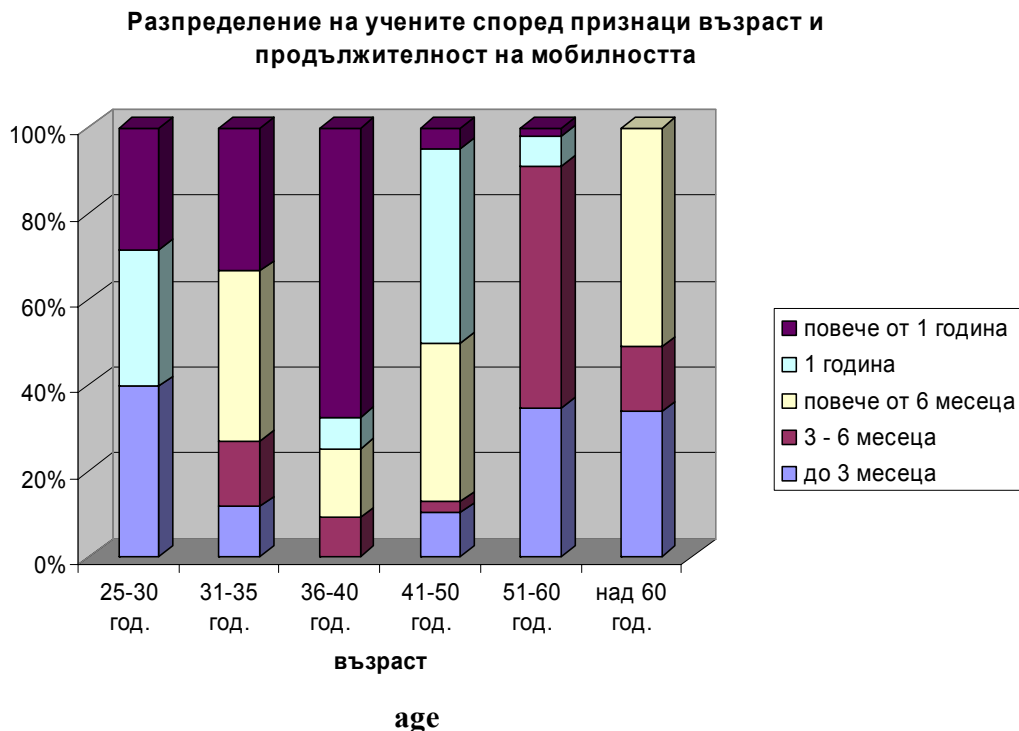
At the same time a greater activity is required on the part of the researchers themselves, especially of the younger researchers, who should apply for individual research grants, when this is possible. *In respect of the age and the different duration of the visits it turned out that for the shortest stays - up to 3 months - the ratio of the eldest is the highest - from 50-60 years - 47.1% and for the longest stays - over 1 year the share of the younger researchers is the greatest - 36- 40 years, i.e. 56.5% of all respondents with long term stays (see Figure 5).*

The generalized survey data show further that the youngest researchers percentage - in the age group of below 35 - does not exceed 20% for all kinds of visits (see again Figure 5), which is worrying, i.e. the young researchers should be much more active in putting forward their candidatures for visits abroad or for mobility.

Regarding the distribution by gender of the different kinds of visits, the generalized results show that the ratio of men with shorter stays of up to 3 months is bigger - 66.7% of all persons who have indicated this answer are men, but in the case of longer stays - of over 6 months - 75% of the researchers are women and only 25% - men.

In respect of the states visited through different programs, the data show that in respect of TEMPUS and ACE PHARE programs, Great Britain has been visited most often; through the Erasmus program, the respondents have visited most often Germany and France, and through the Leonardo Da Vinci program - Spain and Portugal and less often Ireland, Greece, etc.

**Figure 5 Distribution of researchers by the indicators age and duration of stay**



Legend:

1 - over 1 year

2- 1 year

3 - over 6 months

4- 3 to 6 months

5 - less than 3 months

Other programs through which there has been scientific exchange during the last 10 years are IESI-IFDP, USNSF, Danubs, CEEPUS, Marie Actions (6th framework), etc. **It is positive that to the question "How did the researchers mobility reflect on their career?" nearly 60% of the survey respondents have answered that the mobility has helped in a positive sense their career in particular through the experience gained and only 4.5% have indicated that it did not affect in any way their development.**

Concerning the role of the media for building a deserving respect to researchers in the society, the generalized facts show hard-hitting results: the greatest part of researchers - over 60% of those who took part in the survey, state that the different media - newspapers, magazines, TV and Radio - do not play a role for the popularization of the researchers' profession and for building the researcher proper image in the society. Over 1/3 of the researchers under survey think that the media are more interested in "yellow" news about the academic institutions, i.e. that they accentuate on the scandalous news and not on the achievements in the scientific area and on the academic forums, which according to the researchers are reflected on the last pages of the publications.

The survey included also questions about the realization of women-researchers, who along with their career have given birth and have brought up children. The greatest part of the women-researchers has returned to work less than 1 year after they gave birth. According to the survey data over 3/4 of the women researchers have found support and understanding in their direct boss and the colleagues and the interruption of their labour activity did not have a negative impact on their career. 1/3 of them have been afforded even better opportunities for development (see Table 9). **A positive fact is that more than half of the women-researchers with children have answered that even if they had the opportunity for a more highly paid job they would return to the same job. This shows a high motivation and moral responsibility level towards the profession.**

**Table 9 Evaluation of the women-researchers of the development opportunities after the birth of their child/children**

	Ratio (%)
No, even after my return I have afforded better opportunities	29.0
No, I had support and understanding	57.3
Yes, I had some difficulties and problems on the part of my direct boss	13.3
Yes, my development slowed down and I lost some opportunities	0.4
Total	100.0

### **EVALUATION OF THE IMPORTANCE OF THE FACTORS, ON WHICH DEPENDS THE RESEARCHERS CAREER DEVELOPMENT**

It is necessary for the survey to analyze the opinion of the surveyed researchers on the importance of the different factors, which determine their professional development. The different factors have been ordered by the respondents in the following way: in the first positions by importance are the factors "competence and ambition of the researchers", "understanding and support on the part of the direct chief", "appropriate system for stimulation" and with a negative sign the factor "Bureaucratic and highly centralized procedure for attaining an academic rank".

Table 10 **Ordering the factors according to their importance<sup>4</sup> for the researchers career development**

	Very important (%)	Important to a great extent (%)	RATHER UNIMPOR TANT (%)	TOTALLY UNIMPOR TANT (%)	TOTAL (%)
1. Competence and ambition of the researcher	<b>82.6</b>	<b>15.1</b>	0.5	1,8	100.0
2. Understanding and support from the direct chief	<b>51.7</b>	<b>44.5</b>	23.8	-	100.0
3. Bureaucratic and highly centralized procedure while attaining the academic rank*	<b>44.6</b>	<b>25.2</b>	27.2	3.0	100.0
4. Suitable system for stimulation	<b>37.7</b>	<b>45.1</b>	16.7	0.5	100.0
5. Competent and influential director of studies (for postgraduate students)	<b>40.7</b>	<b>49.6</b>	5.2	0.5	100.0
6. Stimulating psychological climate in the team	27.8	60.6	11.6	-	100.0
7.other factors:	72.2	15.1	4.8	7.9	100.0

Different factors are included in the group "other factors", but a the most often mentioned factors are: *the possibility to take part in academic forums outside the country and the possibility to contact foreign researchers, the availability of a well developed infrastructure - technological parks and small production units at the institutes, as well as the availability of adequate scientific literature, including foreign periodicals.*

The generalized survey data on the researchers opinion about the necessary measures and activities the state and the state institutions should implement in order to encourage the young people to start an academic career and to make the profession "researchers" more attractive show that most often the proposals are related to: increasing the payment for scientific work, investment of more funds for research, amendment of the Act for academic ranks and degrees in the direction of decreasing the centralization and bureaucracy and at the fourth position - improving the technical and scientific infrastructure (See Table 11).

<sup>4</sup> The factor's importance is evaluated regardless of the direction of its impact - positive or negative - negative in this case

**Table 11 Proposed measures and activities for attracting high quality and highly motivated young people to the research career<sup>5</sup>**

Proposals for measures and activities	Ratio (%) - total for the whole sample	Ordering by importance - researchers aged 35 and less	Ordering by importance - researchers aged over 35
<b>Increase significantly the researchers' salaries</b>	<b>49.0</b>	<b>1</b>	<b>2</b>
<b>Decrease the bureaucracy and alleviating the procedure for awarding academic ranks and degrees</b>	<b>40.6</b>	<b>2</b>	<b>1</b>
<b>The state should finance a great number of research projects - both fundamental and applied and should stimulate researchers</b>	<b>35.0</b>	<b>4</b>	<b>3</b>
<b>Improve the technical and scientific infrastructure</b>	<b>40.6</b>	<b>3</b>	<b>4</b>
Decrease the norms for lecturers work load and require more research and development work in their general activity	12.6	6	5
Set up a special fund for encouraging and bestowing prizes on young researchers - of the age below 35	11.2	5	6
Introduce the possibility for hourly employment for women as in most countries members of EU.	4.2	8	8
Other measures: amend the Act of the academic ranks and degrees in the spirit of the similar act of the English speaking countries	4.0	9	9
Introduce tax concessions for the young mothers - researchers	2.8	9	9

The data of the table show that there are not significant differences in the opinions of young researchers aged below 35 and more senior researchers regarding the ordering by importance of the necessary measures and activities to improve the condition and status of the profession "researcher ". The data show also that there are not significant statistical differences in the opinions of researchers of different sex. In respect of the measures and activities, which have to be implemented by the state and the legislative body there is a significant consensus on the part of researchers in Bulgaria regardless of their age, sex and the kind of research institution (they are working in).

<sup>5</sup> The sum of percentages exceeds 100%, as the respondents had the right to fill in more than 1 answer



The questionnaire included a question about the part the Bulgarian school is playing in building respect for science and Bulgarian researchers among children and young people. The generalized data show that only 5.6% of the respondents are convinced that the Bulgarian school plays an important role in this respect. Nearly 50% of the survey respondents think that only some schools form a serious attitude and respect for the science and scientific work, 36.4% of researchers state that this is a very rare event, and 9.8% of the respondents are firm in their opinion that the Bulgarian school does not perform this function.

In order to meet the survey objectives, a question on the attitude of the society towards researchers was included in the questionnaire. The fact that none of the respondents has filled in the answer "the researchers enjoy the respect of the society" and that more than 1/3 of the respondents think that the profession "researcher" does not meet an adequate recognition in the Bulgarian society is worrying. At the same time another third of the researchers assert that researchers do not enjoy neither moral, nor material recognition and the last third state that the researchers enjoy only moral recognition, but not a material one (see Table 12). Therefore, we can deduce that according to a significant part of the respondents the phenomenon called "status inconsistency" in the sociological theory, exists in Bulgaria, i.e. a significantly high status and moral recognition in the society, but relatively low and inadequate payment.

**Table 12 Opinion on the society attitude towards the researchers**

	Ratio (%)
I think that researchers are highly respect in the society	-
The researcher's profession is not sufficiently recognized in our society	35.7
The researchers enjoy moral recognition, but their payment is not sufficient	30.1
No, the researchers do not enjoy the due recognition - neither moral, nor material	32.2
Didn't answer	2.0
Total	100.0

The fact that despite the dissatisfaction from the state policy in respect of researchers as well as despite the insufficient recognition level on the part of the society ***over 80% of the respondents have indicated with certainty or with a great probability that they will remain on the research field and in the same institution is positive. It shows that the Bulgarian researcher is highly motivated and highly responsible towards his work and attaches great importance to his internal satisfaction from the essence and importance of his work (see Table 13). Less than 1/3 of researchers, the greatest part of which are in the age group below 35 have nevertheless indicated that there is a high probability that they will leave the country.*** This should indicate to the state institutions that measures and activities have to be undertaken to improve the status and the possibilities for faster development of researchers. There is also a small part - a little over 1/5 of researchers

who are inclined to transfer to the business sector if the payment for their work is not increased significantly.

Table 13 The researchers' own expectations about their career development

<i>Degree of possibility</i> <i>Alternatives</i>	<i>Absolutely certain</i> (%)	<i>Highly probable</i> (%)	<i>Not probable</i> (%)	<i>Total</i> (%)
<b>Change of the research organization</b>	7.6	17.8	74.6	<b>100.0</b>
<b>If the salaries are not significantly increased will transfer to the business sector</b>	2.6	22.7	74.7	<b>100.0</b>
<b>Will transfer to the state administration</b>	5.2	5.9	88.9	<b>100.0</b>
<b>Will leave the country to work abroad</b>	4.4	29.6	66.0.	<b>100.0</b>
<b>Will stay on the same job in the future</b>	<b>48.1</b>	<b>44.9</b>	<b>7.0</b>	<b>100.0</b>

### REASONS FOR THE PROFESSION "RESEARCHER" STATUS

The survey's generalized results show that the most often expressed opinions on the reasons for the profession "researcher" status are the following:

- Insufficient interest of the state institutions and insufficient financing of the research activity in Bulgaria;
- Insufficient cooperation between the state and the research institutions when forming the national policy;
- Low payment for the research labour;
- The education in the Higher Institutes is not related to research;
- Outdated Act for academic ranks and degrees, which requires too high centralization of the procedures and delays the researcher professional development and research career;
- Insufficient scientific infrastructure (research institutes and centers, technological parks, production units); which makes it difficult for the young researchers, who have finished their post-graduate education, to find a suitable job;
- Lack of interest on the part of the business representatives in Bulgaria to conduct research;

- Insufficient role of the Bulgarian school to form respect and affinity in the young people towards science and research;
- Contradictory role of the media when reflecting events and activities related to the science and the higher education, i.e. they put the accent most on the "yellow" moments of the research institutions day-to-day life and not on the essential part of their work; some researchers think that the media are not doing anything to propagate the achievements of the Bulgarian science;
- Small number of scientific broadcasts on the television, which should form a positive attitude and respect towards the scientific life and the research institutions.

## **CONCLUSIONS AND NECESSARY CHANGES, RESULTING FROM THE SOCIOLOGICAL SURVEY**

*1. Comparatively low satisfaction level from the conditions the state provides for the development of science, research and researchers;*

1.1. It is necessary to significantly increase the state expenditures for scientific research and development activities (RDA) - at least twice against the present with a view to get closer to the level of the developed countries from the EU;

1.2. Restructuring of the research system and improvement of the infrastructure for RDA;

1.3. Amendment of the Academic ranks and degrees Act. In its present state it presumes too high centralization of the procedures for attaining an academic rank and thus slows the academic development of the researchers and their career;

1.4. Introduction of adequate payment for the scientific work and a system for stimulating the achievements of outstanding young researchers - below the age of 35 with the view to attract more motivated young people to the research work;

1.5. More active participation of the scientific community when planning the state research policy;

1.6. Introduction of a greater number and more interesting broadcasts for science and research achievements in the state television program;

*2. Necessity to increase many times the expenditures for research activity, set apart by the business sector with the view to get closer to the ratio 1/3 of state funds and 2/3 of companies financing of the research sector, the way it is in the EU. At the same time it is necessary to build lasting relationships between the research institutions - state and non-state and the business organizations;*

*3. It is necessary to change the attitude of the media towards science and the Bulgarian research potential and to accentuate on the country research achievements and on the international recognition of a significant part of the Bulgarian researchers;*

**In conclusion we should underline the positive fact that a great part of the mentioned necessary changes, which are an obligation of the state, are included in the project for *National strategy for research in the Republic of Bulgaria*.** If they are implemented, the migration flow of Bulgarian researchers to the United States and Western Europe will decrease on the one hand and on the other hand Bulgaria will catch faster the developed west-European countries in successfully building knowledge-based economy. This will be possible as the sociological survey shows that the Bulgarian researchers have strong motivation and moral responsibility regardless of the problems and difficulties they are meeting with at this stage.