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Project: SME Innovation Capacity Boost | Проект: Поттик на МСП иновативни капацитети

Regional Business Center Skopje

FOUNDATION FOR DEVELOPMENT OF SMALL AND MEDIUM ENTERPRISES

# BENCHMARK REPORT

## On

## SMEs innovation activity

## In

## the Republic of North Macedonia

Prepared by external expert

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*Disclaimer:* The information and views set out in this report are those of the authors and do not necessarily reflect the official opinion of the European Commission or the Member States

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# ABOUT THE REPORT

The Benchmark report on innovation activities of SMEs in the Republic of North Macedonia, Bulgaria, Albania and Greece is carried out in connection with the implementation of a contract, dated 25.02.2019, for the provision of consultancy services within the framework of the project "Increasing the innovation capacity of small and medium-sized enterprises"- SMEINNOBOOST, funded under the - BALKAN MEDITERRANEAN PROGRAM (BMP) 2014-2020. Preparation of the report received financial assistance from the budget of project SMEINNOBOOST, funded under the BMP 2014-20.

This report is issued on the responsibility of Foundation for development of small and medium enterprises – Skopje in the Republic of North Macedonia.

The aim and objectives of the general methodology of the benchmark report:

To analyze the innovation activities of SMEs in the Republic of North Macedonia, Bulgaria, Albania and Greece in the context of SMEInnoBoost project objectives, activities and results with a special focus on the statistical surveys conducted by the national statistic offices of the three countries.

To achieve the objectives of the study, the following main tasks are planned:

1) Review and systematize information on the topic available in the public domain;
2) Conduct the study for the three countries;
3) Presenting/comparing the main results of the statistical surveys in North Macedonia, Albania and North Macedonia;

Research hypothesis: The benchmark analysis of innovation activities of SMEs in the Republic of North Macedonia, Bulgaria, Albania and Greece is important for interested parties stakeholders in generating and implementing successful policies for the development of competitive SMEs - the conditions of a knowledge-based economy and the creation and follow-up of successful innovation strategies for SMEs. This in turn directly affects the overall performance of the sector as part of the economies of North Macedonia, Republic of North Macedonia and Albania, given that SMEs account for over 98% of non-financial enterprises in all three countries.

Organization of the study: The study was organized, involving the following stages:

- Cabinet collecting information on needs, key factors, and the development of a set of indicators for key enabling factors for innovation and relevance;
- Information processing;
- Development of tables and graphics;
- Results analysis;

Form for submission of results

The chosen research strategy is a combination of collecting, processing and analysing primary data (facts, trends, statistic data, etc.) and information on the subject of the research available in the public domain, as well as the views and opinions of experts, representatives of decision makers, SME policy makers and developers.

Author of this study is Risto Ivanov PhD, CMC, PMP, external expert engaged for analyses od collected data, drawing conclusions and writing of the Report.

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# PREFACE

The SMEInnoBoost project, short for the SME Innovation Capacity Boost project, was initiated to accelerate Balkan Mediterranean /BM/competitiveness through innovation. Because Micro, Small and Medium Enterprises (SMEs) in the BM Region experience hardships in realizing their innovative potential - markets are fragmented, transfer of know-how is under optimal levels and understanding within SMEs regarding innovations needs to be raised. According to the Global Innovation Index for 2015, covering a period of 3 years 2012-2014, Bulgaria ranks in 39th place, Greece on 45th, the Republic of North Macedonia on 56th, Albania on 87th, and Cyprus on 34th place out of 141 countries. This information shows that the innovation capacity and potential need to be strengthened in the BM region and that there is a gap between the countries involved in the project - EU Members possess higher innovation capacity than IPA countries.

In 2018 the situation is The Bulgaria ranks in 37th place, Greece on 42th, the Republic of North Macedonia on 84th, Albania on 83th, and Cyprus on 29th place out of 141 countries. As it is seen from the data – there is an improvement but still the region is far behind the innovation leaders. In addition, since SMEs are the backbone of the European economy, the target of SMEInnoBoost project is narrowed to innovations in this size class, including micro, small and medium enterprises with employees up to 249 people. The insights generated from this project are the result of deep analyses and innovation capacity surveys and testing of this state-of-the-art SMEInnoBoost approach. The results are documented at the SMEInnoBoost website, www.smeinnoboost.org .

SMEInnoBoost's success is the result of a consolidated partnership effort. Our thanks to all of the team members of SMEInnoBoost Consortium, including:

- LP/PP1 National Association of Small and Medium Business, Bulgaria
- PP2 National Statistical Institute, Bulgaria
- PP3 State Statistical Office of the Republic of North Macedonia
- PP4 Albanian Institute of Statistics, Albania
- PP5 Foundation for development of small and medium enterprises – Skopje, the Republic of North Macedonia
- PP6 Regional Development Agency (S.M.E.) of Korçë, Albania
- PP7 Institute of Information and Communication Technologies, Bulgarian Academy of Science, Bulgaria
- PP8 Foundation for Research & Technology Hellas (FORTH), Science & Technology Park of Crete (STEP-C), Greece





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We are also grateful to the network partners that contributed to the success of SMEInnoBoostby testing its approach with SMEs across Europe.

The project benefited from the innovative spirit of more than 15,000 SMEs that were involved in this action. It was a win-win situation; the companies gained valuable insights into their Innovation performance while SMEInnoBoost received valuable new information for its platform and database /see https://nasmb-bg.org/sat/ /.

We extend our deepest appreciation to the members and partners of the National Association of Small and Medium Business – Lead partner of SMEInnoBoost project. They proved to be enthusiastic champions for action, supporting the project with their belief in innovation to change for a better life in our BM countries.

Skopje, March 2020 SMEInnoBoost
Partner Team:

Svetlana Kirevska – Project Manager





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# I. WHAT IS INNOVATION

Innovation goes far beyond research and development (R&D). It goes far beyond the confines of research labs to users, suppliers and consumers everywhere – in government, business and non-profit organisations, across borders, across sectors, and across institutions.

The first distinguish considered among business practice is invention and innovation. Invention is mainly linked with R&D or activities with output related to some new way of doing things or meet the people needs. Innovation is continuation of invention to have market application or replication. The inventions as new discoveries could be find out in universities and researching institutes while innovations in companies.[1]

Innovation in its modern meaning is "a new idea, creative thoughts, new imaginations in form of device or method". Innovation is often also viewed as the application of better solutions that meet new requirements, unarticulated needs, or existing market needs. Such innovation takes place through the provision of more-effective products, processes, services, technologies, or business models that are made available to markets, governments and society. An innovation is something original and more effective and, as a consequence, new, that "breaks into" the market or society. Innovation is related to, but not the same as, invention, as innovation is more apt to involve the practical implementation of an invention (i.e. new / improved ability) to make a meaningful impact in the market or society, and not all innovations require an invention.[2]

The purpose of innovation in economy and society is to boost growth and to enhance productivity.

## DEFINING INNOVATION

The word innovation is defined as " new idea, method or devise" and " the introduction something new"[3]. The synonym word is "disambiguation" to discover something or giving a new form.

In the Innovation Strategy of The Republic of North Macedonia, the innovation is defined as "implementation of new or significantly improved product, new marketing method or new organizational method in the business practice, in jobs organization or external relations[4] (taken over OECD Oslo manual).

EUROSTAT definition for Innovation is the use of new ideas, products or methods where they have not been used before. For the Community Innovation Survey (CIS), an innovation is defined as a new or significantly improved product (good or service)





[1] MIR foundation (2018), Innovations Guide for SME, www.mir.org.mk , page 8
[2] https://en.wikipedia.org/wiki/Innovation accessed on 17.03.2020
[3] Merriam Webster dictionary, https://www.merriam-webster.com/dictionary/innovation
[4] Government of the Republic of North Macedonia, Innovation Strategy of Republic of North Macedonia 2012-2020, page 4.

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introduced to the market, or the introduction within an enterprise of a new or significantly improved process.

Innovations are based on the results of new technological developments, new technology combinations, or the use of other knowledge, acquired by the enterprise. The innovations may be developed by the innovating enterprise or by another enterprise. However, purely selling innovations wholly produced and developed by other enterprises is not included as an innovation activity, nor is introducing products with purely aesthetic changes.

Innovations should be new to the enterprise concerned: for product innovations, they do not necessarily have to be new to the market and, for process innovations, the enterprise does not necessarily have to be the first one to have introduced the process.

Enterprises carrying out innovation activities cover all types of innovators including product and process innovators, as well as those enterprises with only ongoing and/or abandoned innovation activities. The proportion of enterprises undertaking innovation activities is also called the propensity (tendency) to innovate.

A product innovation is the market introduction of a new or a significantly improved good or service.

A process innovation is the implementation of a new or significantly improved production process, distribution method or support activity for goods or services[5].

For the purposes of HORISON 2020, the Technological Readiness Level (TRL) of innovation is defined. There are a total of nine levels: TRL 1 – basic principles observed; TRL 2 – technology concept formulated; TRL 3 – experimental proof of concept; TRL 4 – technology validated in lab; TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies); TRL 6 – technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies); TRL 7 – system prototype demonstration in operational environment; TRL 8 – system complete and qualified; TRL 9 – actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space).

The literature review and desk research shows that all strategic documents regarding definition of innovation refers to Oslo Manual and the definition in 3rd edition 2005. Therefore, the focus is given to the definition according to that manual.

## THE OSLO MANUAL (OECD 3RD EDITION, 2005)

The Oslo Manual aims at measuring of scientific and technological activities and proposed Guidelines for collecting and interpreting technological and innovation data. It is now accepted that development and diffusion of new technologies are central to the growth and productivity. However, the world economy being reshaped by new information technology and by fundamental changes in biotechnology and materials yet these radical technological shifts are not being reflected in improvements in



[5] https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Innovation

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productivity and in outputs growth rates. It is reason for the need to measure innovation activities.

Therefore, the manual is focused on TPP (technological product and process) innovations at the level of the individual firm and those implications to the innovation policy for economic progress.

### (a) TECHNOLOGICAL PRODUCT AND PROCESS INNOVATION

PPT innovation activities are all those scientific, technological, organizational, financial and commercial steps which actually, or are intended to, lead to the implementation of technologically new or improved products or processes. Some may be innovative in their own right; others are not novel but are necessary for implementation.

- A *technological product innovation* is the implementation/commercialization of a product with improved performance characteristics such as to deliver objectively new or improved services to the consumer.
- A *technological process innovation* is the implementation/adoption of new or significantly improved production or delivery methods. It may involve changes in equipment, human resources, working methods or a combination of these.

"***Technological***" means new or improved products and processes.

A. The term "***product***" is used to cover both goods and services.

- ***A technologically new product*** is a product whose technological characteristics or intended uses differ significantly from those of previously produced products. Such innovations can involve radically new technologies, can be based on combining existing technologies in new uses, or can be derived from the use of new knowledge.

  *The first microprocessors and video cassette recorders were examples of technologically new products of the first kind, using radically new technologies.*

- **A technologically improved product** is an existing product whose performance has been significantly enhanced or upgraded. A simple product may be improved (in terms of better performance or lower cost) through use of higher-performance components or materials, or a complex product which consists of a number of integrated technical sub-systems may be mproved by partial changes to one of the sub-systems.

  *The substitution of plastics for metals in kitchen equipment or furniture is an example of the use of higherperformance components.*

- **Technological process innovation** is the adoption of technologically new or significantly improved production methods, including methods of product delivery. These methods may involve changes in equipment, or production organisation, or a combination of these changes, and may be derived from the use of new knowledge. The methods may be intended to produce or deliver technologically new or improved products, which cannot be produced or delivered using conventional production methods, or essentially to increase the production or delivery efficiency of existing products.





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*The development of a whole range of different customer packages in which clients are offered varying degrees of assistance/support.*

*The introduction of new multimedia software applications that can be used for educational purposes and thus eliminate the need for a real life human instructor.*

*Making use of object-oriented programming techniques in automatic data processing systems development.*

### (b) ECONOMICS IN INNOVATION

Innovation is at the heart of economic change. Manual listed various types of innovations:

- introduction of a new product or a qualitative change in an existing product;
- process innovation new to an industry;
- the opening of a new market;
- development of new sources of supply for raw materials or other inputs;
- changes in industrial organisation.

The reasons of individual firm for technological changes and innovation are grouped as follows:

i. ***Firms are seeking rents***. A new technological device is a source of some advantage for the innovator. In the case of productivity-enhancing process innovation, the firm gets a cost advantage over its competitors, which allows it to gain a higher mark-up at the prevailing market price or, depending on the elasticity of demand, to use a combination of lower price and higher mark-up than its competitors to gain market share and seek further rents. In the case of product innovation, the firm gets a monopoly position due either to a patent (legal monopoly) or to the delay before competitors can imitate it. This monopoly position allows the firm to set a higher price than would be possible in a competitive market, thereby gaining a rent.

ii. ***The significance of competitive positioning***. Firms innovate to defend their competitive position as well as to seek competitive advantage. A firm may take a reactive approach and innovate to prevent losing market share to an innovative competitor. Or it may take a proactive approach to gain a strategic market position relative to its competitors, for example by developing and then trying to enforce higher technical standards for the products it produces.

iii. Technical change ***generates a reallocation of resources***, including labour, between sectors and between firms. It may also involve mutual advantage and support among competitors or among suppliers, producers and customers.

Manual recommends system approaches to innovation as it shifts the focus of policy towards an emphasis on the interplay between institutions, looking at interactive processes in the creation of knowledge and in the diffusion and application of knowledge. It has led to a better appreciation of the importance of the conditions, regulations and policies within which markets operate – and hence the inescapable role of governments in monitoring and seeking to fine-tune this overall framework. There is for example a recognition that issues of system failure should be considered along with issues of market failure. A major OECD study concludes*: "The many factors*





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*that influence individual firms' behaviour include the variety of government policies that affect each of them*.

### (c) CONCEPTUAL FRAMEWORK

Collecting quantitative data requires a framework, explicit or not, which makes it possible to organise and understand this data. It presupposes ideas about the nature of the subject, its essential features, and what is important and what is not.

There are three major categories of factors primarily relating to innovation. These concern business enterprises ("firms"), science and technology institutions, and issues of transfer and absorption oftechnology, knowledge and skills. In addition, the range of opportunities for innovation is influenced by a fourth set of factors – the surrounding environment of institutions, legal arrangements, macroeconomic settings, and other conditions that exist regardless of any considerations of innovation.

These four broad categories or domains of factors relating to innovation can be presented as a map that points to areas where policy leverage might be applied to business innovation, or to areas that need to be taken into account when policy initiatives are shaped. This is a way of presenting the policy terrain for a generalised national system of innovation. While the emphasis in the literature is on national systems, it is also clear that in many instances similar considerations apply at the local and transnational levels.

The manual outlines ***map*** for four general domains of the ***innovation policy terrain*** as follows:

- the broader *framework conditions* of national institutional and structural factors (*e.g.* legal, economic, financial, and educational) setting the rules and range of opportunities for innovation;
- the *science and engineering base* – the accumulated knowledge and the science and technology institutions that underpin business innovation by providing technological training and scientific knowledge, for example;
- *transfer factors* are those which strongly influence the effectiveness of the linkages, flows of information and skills, and absorption of learning which are essential to business innovation – theseare factors or human agents whose nature is significantly determined by the social and cultural characteristics of the population;
- the *innovation dynamo* is the domain most central to business innovation – it covers dynamic factors within or immediately external to the firm and very directly impinging on its innovativeness.

### (d) SKILLS OF INNOVATIVE FIRMS

According to Oslo manual the innovative firm thus has a number of characteristic features which can be grouped into twomajor categories of skills:

- **strategic skills:** long-term view; ability to identify and even anticipate market trends; willingness and ability to collect, process, and assimilate technological and economic information;





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- **organisational skills:** taste for and mastery of risk; internal co-operation between the various operational departments, and external co-operation with public research, consultancies, customers and supplier; involvement of the whole of the firm in the process of change, and investment in human resources."

Strategic skills interplay with Innovation culture of the firm while Innovation Capacity with organizational skills.

### CONCLUSIONS

Oslo Manual is guidelines for collection and interpreting Technological and innovation data. Between two approaches

(1) the "subject approach" which starts from the innovative behaviour and activities of the enterprise as a whole; and

(2) the "object approach" which concentrates on the number and characteristics of individual innovations.

The Manual proposed first one, "subject approach", as more amendable to international standards and appropriate for benchmarking among national economy and/or sectors.

Therefore, this approach is used with adjusted methodology and statistical questionnaire in order to meet project objectives. The collected data are presented in statistical survey of innovation activities in Macedonian SMEs.

## INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) SECTOR – INNOVATION IN ACTION!

Innovation activities of ICT sector in RNM are supported by FITR and Horizon 2020. Fund for innovation and technical development announces call for SMEs. As of 2015 11 calls are implemented in total amount of 15,2 mil euro and 188 awarded SMEs project out of them 82 ICT SMEs or share of 43,6% (table 1).

***Table 1 FITR calls for innovative projects, awarded projects and share of ICT sector***

| Call description | Year | Total budget in Euro | Number of awarded SMEs | Number of ICT sector SMEs |
|---|---|---|---|---|
| Startups and spin-off companies-innovation | 2015 | 600.000,00 | 16 | 10 |
| Technology transfer | 2015 | 400.000,00 | N/A | |
| Commercialization of Innovation | 2015 | 600.000,00 | 6 | 2 |
| Startups and spin-off companies-innovation | 2016 | 300.000,00 | 10 | 10 |
| Startups and spin-off companies-innovation | 2016 | 450.000,00 | 4 | 4 |
| Commercialization of Innovation | 2017 | 1.000.000,00 | 7 | 5 |
| Startups and spin-off companies-innovation | 2017 | 450.000,00 | 8 | 6 |
| Economic growth- Government program-I | 2018 | 3.000.000,00 | 66 | 20 |
| Technology Extension | 2018 | 1.700.000,00 | 3 | / |
| Technological Accelerator | 2018 | 1.700.000,00 | 3 | / |
| Commercialization of Innovation | 2019 | 5.000.000,00 | 65 | 25 |
| TOTAL | | 15.200.000,00 | 188 | 82 |

*Source*: Expert search of FITR web site www.fitr.mk , awarded project by calls.



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# II. STATISTICAL SURVEY OF INNOVATION ACTIVITIES OF SMEs IN THE REPUBLIC OF NORTH MACEDONIA

In RN Macedonia, SMEs play an important role in the 'nonfinancial business economy'. In 2017, they generated roughly three out of every four jobs (74.2 %) and nearly two-thirds (63.4 %) of total value added. In comparison, the average shares for EU SMEs were noticeably lower, at only 66.5 % of total employment and 56.3 % of total value added. Most SMEs of RN Macedonia (40.7 %) operate in the wholesale and retail trade sector, accounting for 30.3 % of total SME employment and almost one-third (31.6 %) of total SME value added. In the EU, wholesale and retail trade is also the most important SME sector, accounting for an average of 22.1 % of total SME value added and 24.6 % of total SME employment. Annual SME productivity in the Republic of North Macedonia, measured as value added per person employed, is only EUR 9 360, in stark contrast to the almost five times greater average of EUR 43 604 achieved by EU SMEs. SMEs of RN Macedonia employ an average of 5.3 people, significantly more than the EU average of 3.9. In recent years, SMEs in 'non-financial business economy' of RN Macedonia have achieved consistent growth. SME value added increased by 28.0 % in 2012-2017 and SME employment grew by 12.3 % in the same period.

One of the fastest growing SME sectors in RN Macedonia in 2012-2017 was information and communication. SMEs in this sector generated striking value added growth of 64.4 %, and even higher employment growth of 65.9 %. Another fast growing SME sector was professional activities, which generated increases of 40.1 % in value added, and 41.8 % in employment in the same period. The wholesale and retail trade sector also achieved solid SME growth in 2012-2017, with SME value added rising by 26.2 % and SME employment by 7.2 %. Although the growth of wholesale and retail trade was substantially slower than that of information and communication and professional activities, SMEs in wholesale and retail trade were the main drivers of overall SME value added growth in the 'non-financial business economy'. This was due to the high share contributed by the sector to total SME value added[6].

Most recently, in 2016-2017, the rise of 3.3 % in the value added of RN Macedonia's SMEs was similar to the average increase of 3.8 % generated by EU SMEs. SME employment in RN Macedonia also grew in the same period, but at a slower rate of 1.1 %, comparable to the average EU SME employment rise of 1.7 %. Annual SME productivity in RN Macedonia increased by 2.2 % in 2016-2017, consistent with average EU SME productivity growth of 2.1 % in the same period.





[6] https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/sba-fs-2019_north-macedonia.pdf accessed on 18.03.2020

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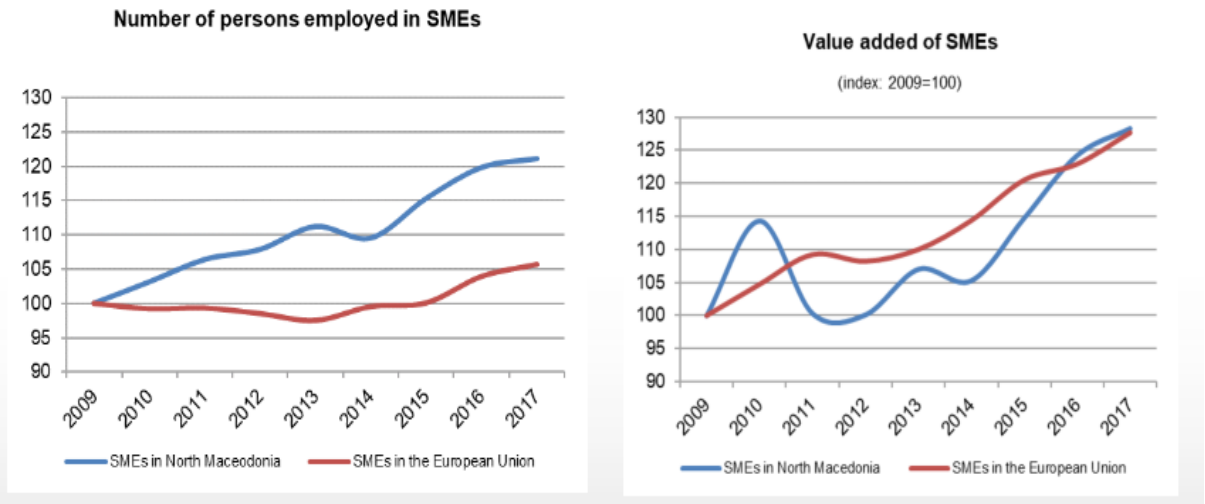


*Figure 1* - Number of SMEs and Value added of SMEs in the Republic of North Macedonia – SBA 2019

***About the SBA fact sheets:***
*The Small Business Act for Europe (SBA) is the EU's flagship policy initiative to support small and medium-sized enterprises (SMEs). It comprises a set of policy measures organised around 10 principles ranging from entrepreneurship and 'responsive administration' to internationalisation. To improve the governance of the SBA, the 2011 review of it called for better monitoring. The SBA fact sheets, published annually, aim to improve the understanding of recent trends and national policies affecting SMEs.*

## SMEs — BASIC FIGURES

| Class size | Number of enterprises | | | Number of persons employed | | | Value added | | |
|---|---|---|---|---|---|---|---|---|---|
| | North Macedonia | | *EU-28* | North Macedonia | | *EU-28* | North Macedonia | | *EU-28* |
| | Number | Share | *Share* | Number | Share | *Share* | Million € | Share | *Share* |
| Micro | 49 372 | 89.9 % | 92.9 % | 122 402 | 31.6 % | *29.4 %* | 880.0 | 20.7 % | *20.5 %* |
| Small | 4 576 | 8.3 % | 5.9 % | 87 555 | 22.6 % | *20.2 %* | 950.7 | 22.4 % | *17.6 %* |
| Medium-sized | 797 | 1.5 % | 1.0 % | 78 000 | 20.1 % | *16.9 %* | 864.4 | 20.3 % | *18.1 %* |
| **SMEs** | **54 745** | **99.7 %** | **99.8 %** | **287 957** | **74.2 %** | ***66.5 %*** | **2 695.2** | **63.4 %** | ***56.3 %*** |
| Large | 151 | 0.3 % | 0.2 % | 99 950 | 25.8 % | *33.5 %* | 1 555.5 | 36.6 % | *43.8 %* |
| Total | **54 896** | **100.0 %** | **100.0 %** | **387 907** | **100.0 %** | ***100.0 %*** | **4 250.7** | **100.0 %** | ***100.0 %*** |

*These are data for 2017 provided by the State Statistical Office North Macedonia and Eurostat (Structural Business Statistics Database) and were processed by DIW Econ. The data cover the 'non-financial business economy', which includes industry, construction, trade, and services (NACE REV. 2 Sections B to J, L, M and N), but not enterprises in agriculture, forestry and fisheries and the largely non-market service sectors such as education and health. The advantage of using Eurostat data is that the statistics are harmonised and comparable across countries. The disadvantage is that for some countries the data may be different from those published by national authorities.*

*Figure 2* SMEs basic figures for RN Macedonia – SBA 2019



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## SBA PERFORMANCE OF RN MACEDONIA: STATE OF PLAY AND DEVELOPMENT FROM 2008 TO 2019

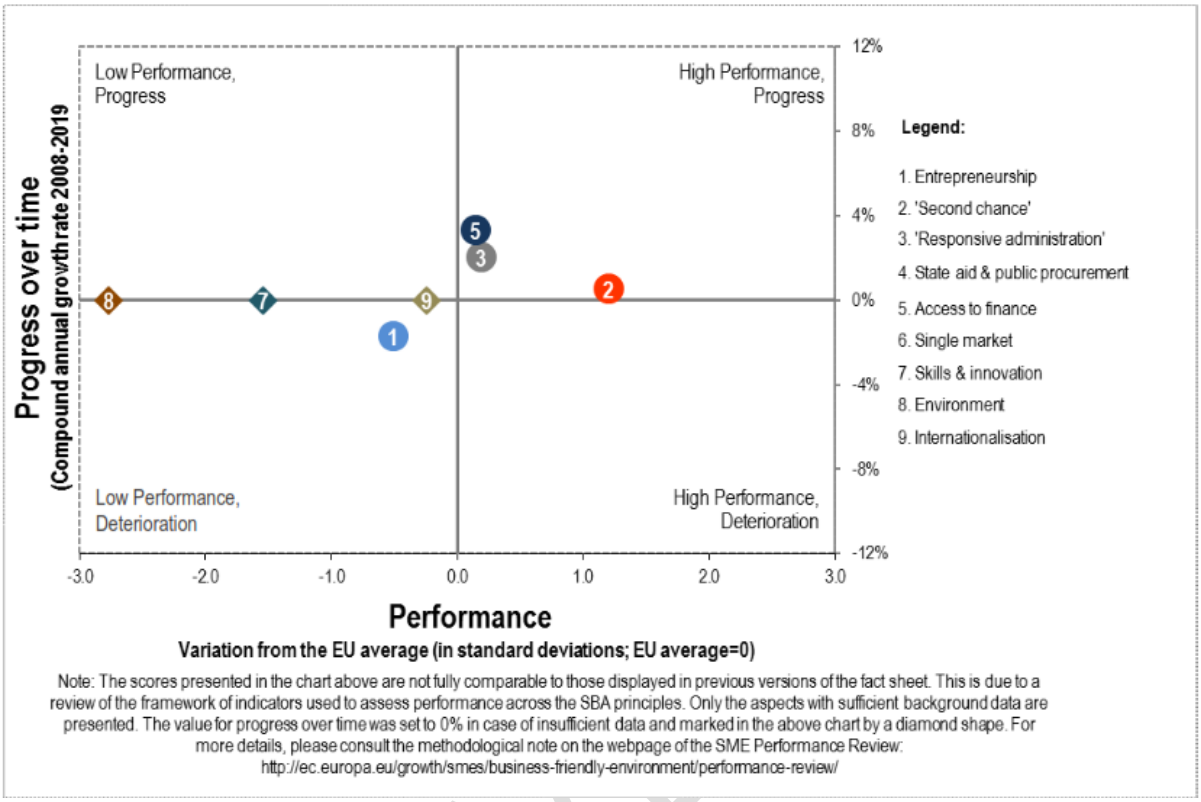


*Figure 3* of SBA performance of RN Macedonia: state of play and development from 2008 to 2019

The Republic of North Macedonia presents a mixed picture in terms of its SBA ( Small Business act) performance. Entrepreneurship, skills & innovation and environment are below the EU average. 'Responsive administration', access to finance and internationalisation are in line with the EU average. 'Second chance' continues to be the strongest policy area for the country and this year is the only SBA area above the EU average. The policy areas entrepreneurship, 'responsive administration' and access to finance have deteriorated compared to the previous reference period (2018). However, the constraints in data availability need to be kept in mind when interpreting the overall results of the performance of the country.

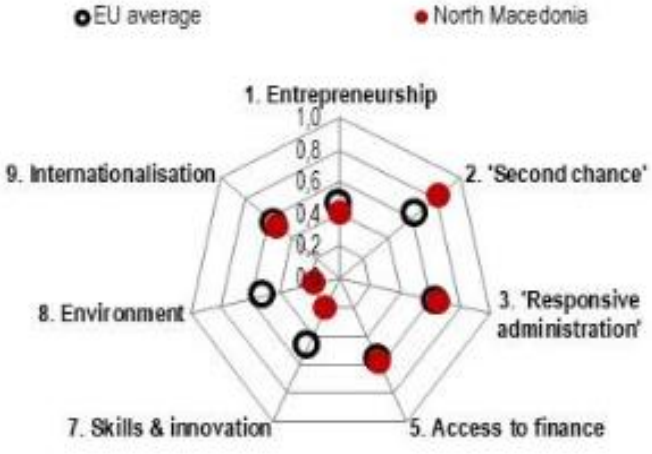


*Figure 4* of SBA profile of The Republic of North Macedonia



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RN Macedonia's performance is below the EU average in skills & innovation. Indeed, not one indicator is better than the EU average. Sales of new to market and new to firm innovations as a percentage of turnover are significantly below the EU average. In addition, RN Macedonia has one of the lowest shares of SMEs selling and purchasing online of all countries. Only 3% of SMEs sell on line, that is lowest percentage in the region andwell below the EU average of 18%. The share of SMEs introducing product or process innovation has dropped by 13 percentage points against the previous reference period (2018).

The newly introduced indicator on the innovation rate, an indicator that measures the degree to which products or services are new to at least some customers and that few/no businesses offer the same product, is also below the EU average. Significant public resources were allocated for boost innovation in SMEs in 2018. The results of subsidy schemes remain to be assessed in 2019. The skills indicators also exhibit poor performance.

The target of 3% GDP investment in R&D for the EU was included in the Lisbon strategy in 2002. This target is an overall target for the entire R&D sector in Europe, but R&D policies are often sector specific and closely linked to innovation systems. For every member state this investment is influenced by traditional local markets, innovation capacity of university network and R&D centers. Where is the Republic of North Macedonia, how can the country follow EU technological policy, and could RNM shorten or increase the distance?

The report focuses on a specific industry –SMEInnoBoost project focuses on the ICT sector as innovation processes differ greatly from industry to industry in terms of development, rate of technological change, connections with and access to knowledge, as well as organizational structure and institutional factors. (Malerba 2005; OECD 2005). Even so, the Company Innovative Leadership Model analyzes common characteristics, features, processes and results of companies and it is applicable to any industry (Yordanova & Blagoev, 2015). The organization's innovativeness measurement model was first introduced by Yordanova and Blagoev in 2015 and claims to be a universal tool for measuring company performance with regard to their abilities, efforts and capabilities to implement systematic innovations. The model for measuring innovativeness of the SMEs in RN Macedonia is not yet deployed and implemented in the country.

The IT sector in RN Macedonia is among the most stable industries and it is allegedly the most promising and most dynamically developing, as many researchers and practitioners argue. It accounts for the solid 4,7% -percent share in the country's GDP (NSI, 2018). According to the IT Industry competitiveness index, a country that seeks to develop and rely on the IT industry must have a healthy business environment plus a first-rate IT infrastructure, dynamic human capital, robust research and development, a strong legal environment and adequate public support for industry development (Business software alliance, 2011). The first main objective of this study is to determine the innovativeness of the IT sector in RN Macedonia and to create an industry benchmark as well as a tool for comparing companies' innovative abilities. The second main objective is to go deeper into good practices of companies within the main measurement categories of the Company Innovative Leadership Model. This is how





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the study's potential readership will get informed of the levels of innovation penetration of North Macedonian IT companies, and with some tools by which the companies develop their innovation performance.

Information and communication technologies (ICTs) offer many opportunities for innovation. Moreover, since the dissemination of knowledge plays a pivotal role for innovation, ICTs could among other contributions make a substantial difference to companies' technology uptake and innovation performance. In fact, ICTs could be a powerful means for helping lower- and middle-income groups and their respective businesses overcome barriers to technology uptake and innovation performance by broadening the scope of potential innovators (OECD, 2012).

One important question is how to assess innovativeness ability of a company. Currently, most of the assessing models calculate only the successful results from innovation efforts and activities. Innovations, however, are not tangible, as they are highly dependent on employees' abilities and the company's environment (Daduraa & JiunShen, 2011). Therefore, this report is based on applied suitable measurement methodology developed by National Statistics Institute of RN Macedonia, Project Partner of SMEInnoBoost Project and accepted by other two Project Partners – National Statistics Offices of Bulgaria and of Albania. It was used for assessing the companies' innovation activities: efforts, results, performance and prospects in RN Macedonia, Bulgaria, Albania and Greece.

One of the most important activities of SMEInnoBoost project for the Republic of North Macedonia, Bulgaria, Albania and Greece is the statistical survey on innovation activity of SMEs in ICT sector which was carried out in the field - data collection by the interviewers through computer-assisted personal interviews (CAPI) with the SMEs and online data entry in the Information System SMEINNOBOOST - (February - April 2019). The statistical survey methodology was based on a questionnaire survey data collection from 744 ICT SMEs in RN Macedonia. The survey was based on the needs analysis of SMEs which has been developed earlier in the frame of SMEInnoBoost project. The survey results are structured in the following way:

*Table 2 Content of SMEInnoBoost statistical survey – North Macedonian ICT SMEs*

| № | Name of the sheet | Tables titles: | Measurement unit |
|---|---|---|---|
| 1 | Type of innovation | Enterprises by type of innovation, NACE Rev. 2 activity and size class in 2018 | Number |
| 2 | Enterprise groups | Enterprises by administrative state of the enterprise, NACE Rev. 2 activity and size class in 2018 | Number |
| 3 | Geographic markets | Enterprises by place where goods and/or services are sold, and place of largest market in terms of turnover, by NACE Rev. 2 activity and size class in 2018 | Number |
| 4 | Enterprise strategies | Enterprises by type of business strategy applied, importance of the strategy, NACE Rev. 2 activity and size class in 2018 | Number |
| 5 | Innovation development | Innovation active enterprises by innovation developer, degree of novelty of product innovation, NACE Rev. 2 activity and size class in 2018 | Number |





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| № | Name of the sheet | Tables titles: | Measurement unit |
|---|---|---|---|
| 6 | Public financial support | Innovation active enterprises that received public financial support for innovation activities by source of founding, NACE Rev. 2 activity and size class in 2018 | Number |
| 7 | Co-operation | Innovation active enterprises engaged in co-operation by co-operation partner, NACE Rev. 2 activity and size class in 2018 | Number |
| 8 | Enabling factors | Innovation active enterprises by factor enabling innovation activities, level of importance of the enabling factor, NACE Rev. 2 activity and size class in 2018 | Number |
| 9 | No innovation active enterprises | No innovation active enterprises by barrier against innovation activities, level of importance of the barrier, NACE Rev. 2 activity and size class in 2018 | Number |
| 10 | Hampering factors | Innovation active enterprises by hampering factor for innovation activities, level of importance of the hampering factor, NACE Rev. 2 activity and size class in 2018 | Number |
| 11 | Effect of legislation | Enterprises whose innovation activities have been affected or not by legislation or regulations by type of effect, subject of the regulation/legislation, NACE Rev. 2 activity and size class in 2018 | Number |

As it was mentioned above the formulation of the questionnaire is based on SMEInnoBoost project objectives and context, considering EU legislative framework and describes detailed characteristics and elements that can form a part of each section of the model. The model described above has been deconstructed into smaller units in order to define in detail the activities that have been accomplished within the IT companies participating in the research. Added value of this survey are the data for micro companies which are collected for the first time by the National statistics offices in the three countries in a compatible form. This survey is different from the one of innovation activity which is conducted by theNational Statistics Institute of the Republic of North Macedonia every even year with an observation period of three years /it provides internationally comparable information on product and process innovations, as well as organizational and marketing innovations implemented by businesses in RN Macedonia and the data refer to the activities of non-financial and financial enterprises carried out in the country.

SMEInnoBoost statistical survey is focused on the ICT sector and the statistical population is SMEs, especially micro-companies. Statistical practices used to compile the data on innovation activity of enterprises are in compliance with Oslo Manual recommendations. In order to ensure comparability across partners' countries, NSI, in close cooperation with the Macedonian and Albanian statistical offices developed a standard core questionnaire, with an accompanying set of definitions and methodological recommendations and are fully consistent with the definitions in the methodological manual "Oslo.". Hereafter are the main results of the survey for the Republic of North Macedonia.





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## 1. ENTERPRISES BY TYPE OF INNOVATION, NACE REV. 2 ACTIVITY AND SIZE CLASS IN 2018

In the survey the statistical population is 744 enterprises from ICT sector in the Republic of North Macedonia from which 78.6% are micro companies (0-9 employees), 18.7 % are small companies (10 – 49 employees) and 2.7 % medium (50 – 249).

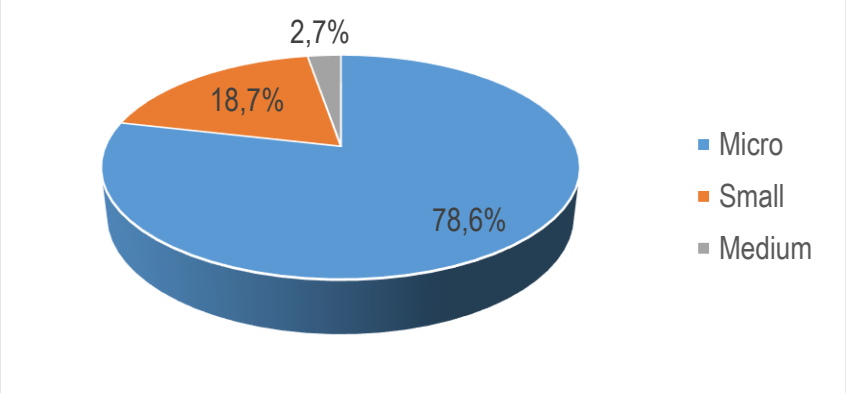


*Figure 5* of ICT enterprises by size – 744

The data clearly show that 38 % from the SMEs in ICT sector are no innovation active enterprises but 63 % are. This means that the innovative SMEs in ICT sector are with 63.25 % more than in Industries (NACE rev. 2).

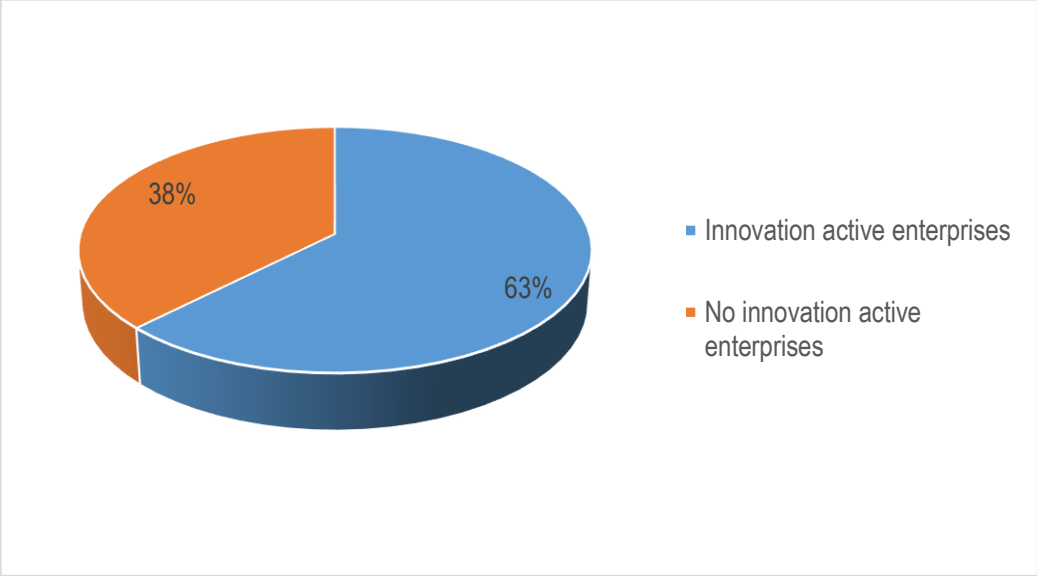


*Figure 6* of ICT enterprises innovation activities

### INNOVATION ACTIVITIES BY SUB-SECTORS

Going deeply into the micro-companies (585 enterprises) we see that the majority of 67% (391 companies) are in Computer, programming, consultancy and related services, followed by Information service activities 17%, Telecommunications 11%



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and the lowest 5% are enterprises in Manufacture of computer, electronic and optical products.

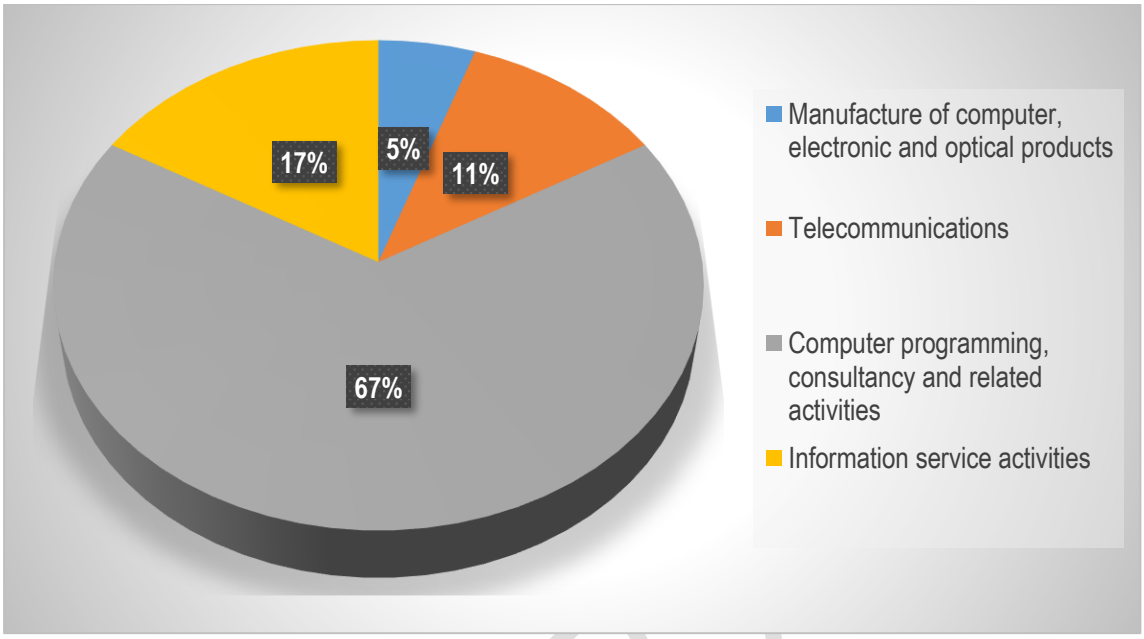


*Figure 7* of ICT micro enterprises - 585

From innovation active 343 micro-companies - 67% or are in the sub-sector of Computer, programming, consultancy and related services.

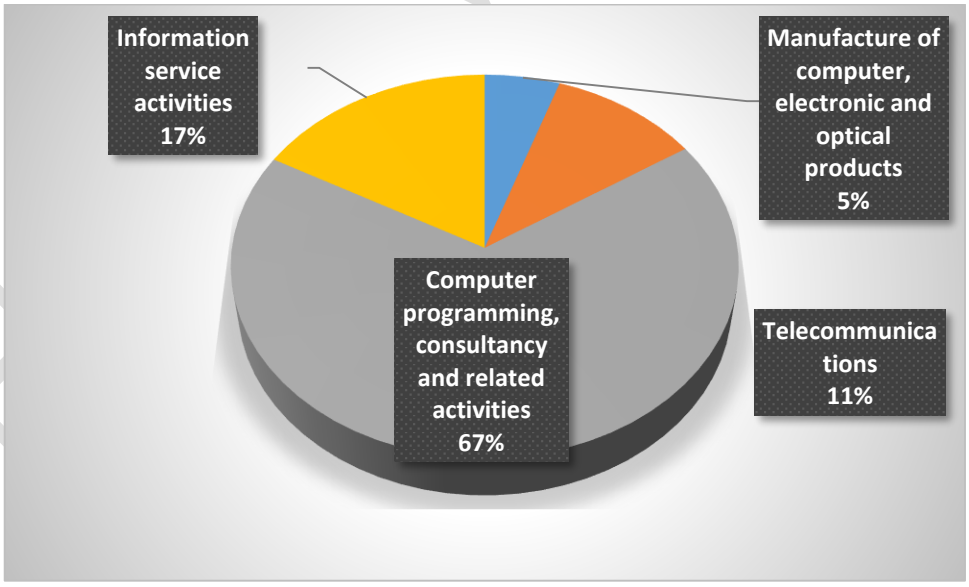


*Figure 8* of innovation active micro enterprise - 343

For the survey it was important to see in which sub-sector the majority of no innovation active micro-companies is. On the figure below we see that they are in Manufacture of computer, electronic and optical products.



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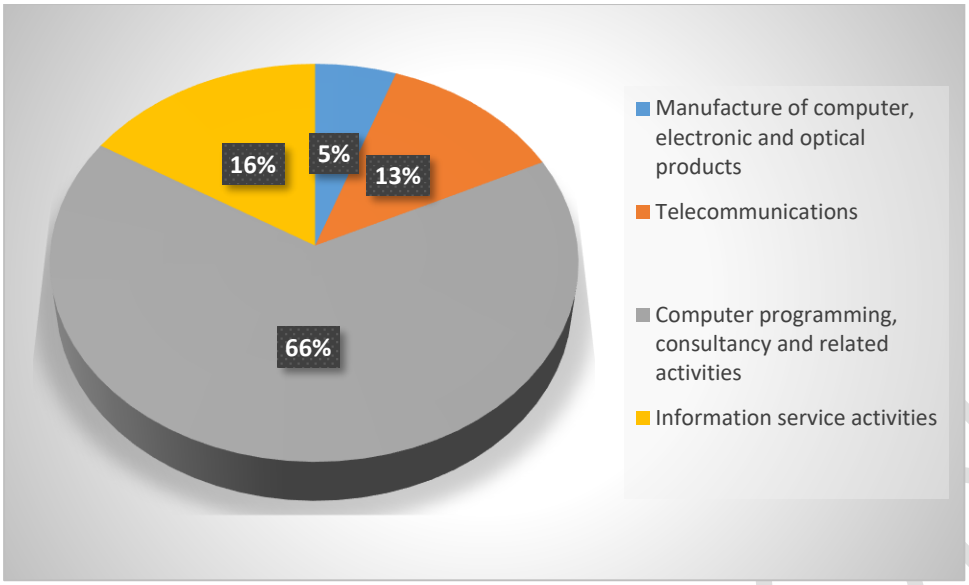


*Figure 9* of no innovation active micro enterprise -242

Very close is the picture for small companies where 70 % are in Computer, programming, consultancy and related services. Here in Manufacture of computer, electronic and optical products are 10% of small enterprises (2% for micro-companies), 11% in telecommunications (6% for micro-companies) and 13% in Information services (20% for micro-companies).

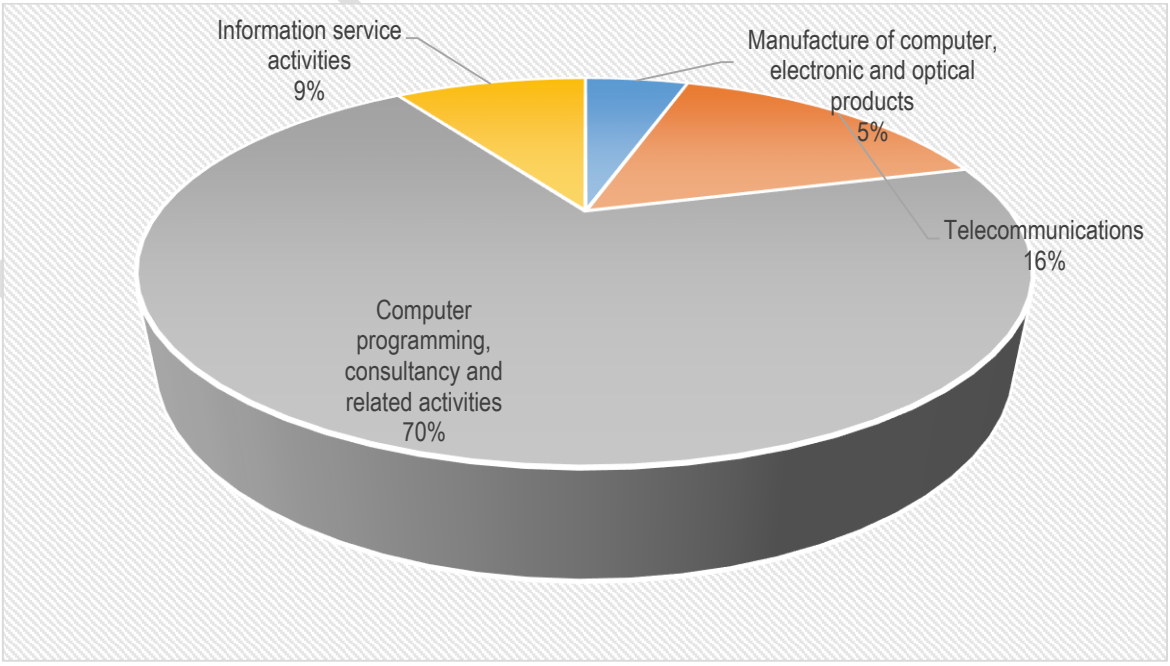


*Figure 10* of ICT small enterprise - 139



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From the 139 ICT surveyed enterprises innovation active are 104 or 74.8 % which is more than the share of innovation active micro-companies (58.6 %). Most of the innovation active small companies – 72 % are in the leading innovation sub-sector of Computer, programming, consultancy and related services. Manufacture of computer, electronic and optical products the lowest 5%, and Information services have by 8 % innovation active small businesses and Telecommunications 15%.

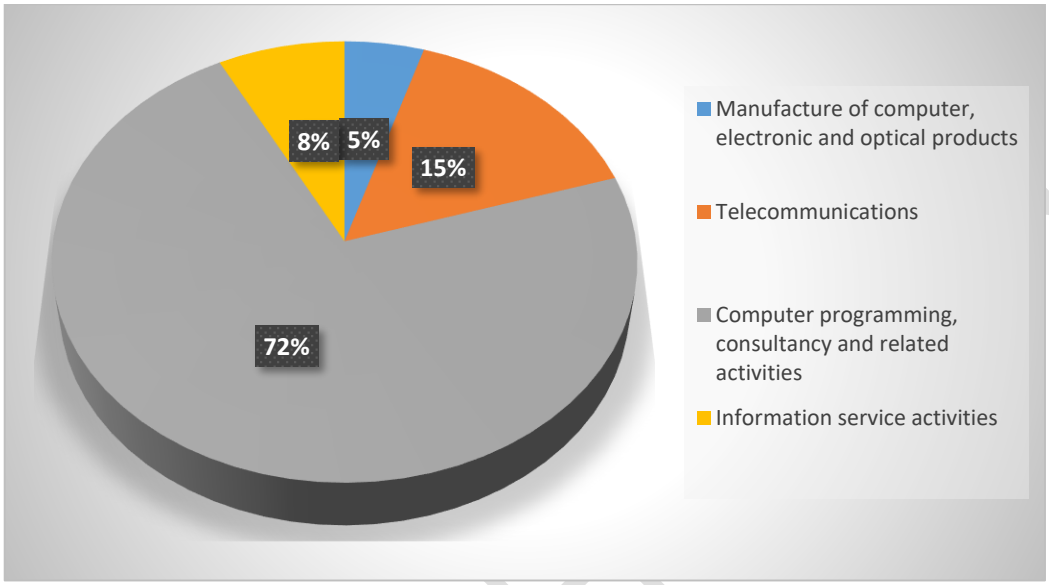


*Figure 11* of innovation active small enterprise - 104

Good news for small companies in ICT sector is that the no innovation active enterprises are 25.2 % or 35 which is less than 1/3 of the surveyed population.

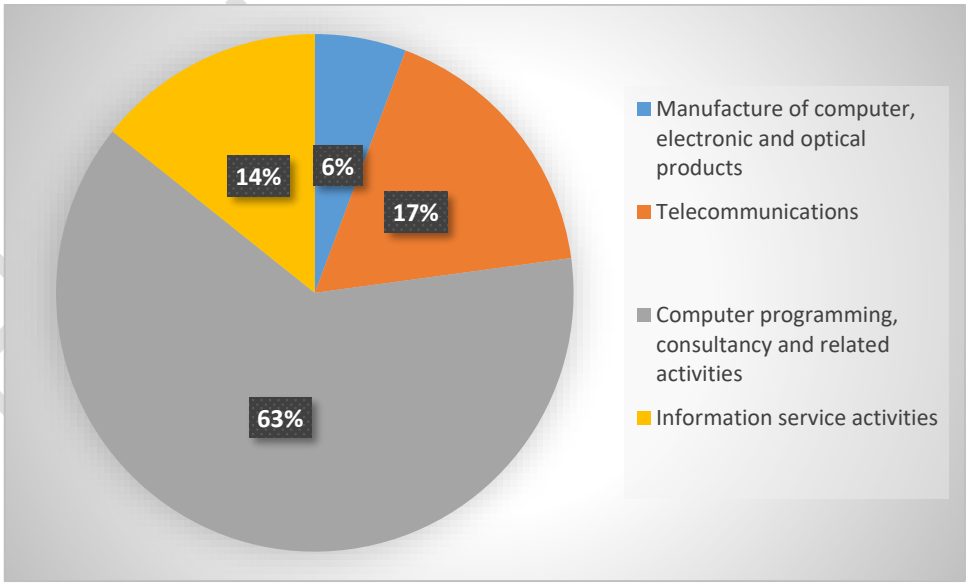


*Figure 12* of no innovation active small enterprise -35

The statistical population for Medium-sized enterprises (50 and 249) is 20 or 2.7 % of the whole statistical population of SMEInnoBoost survey. From them the distribution by sub-sectors is quite close to the one of small companies.



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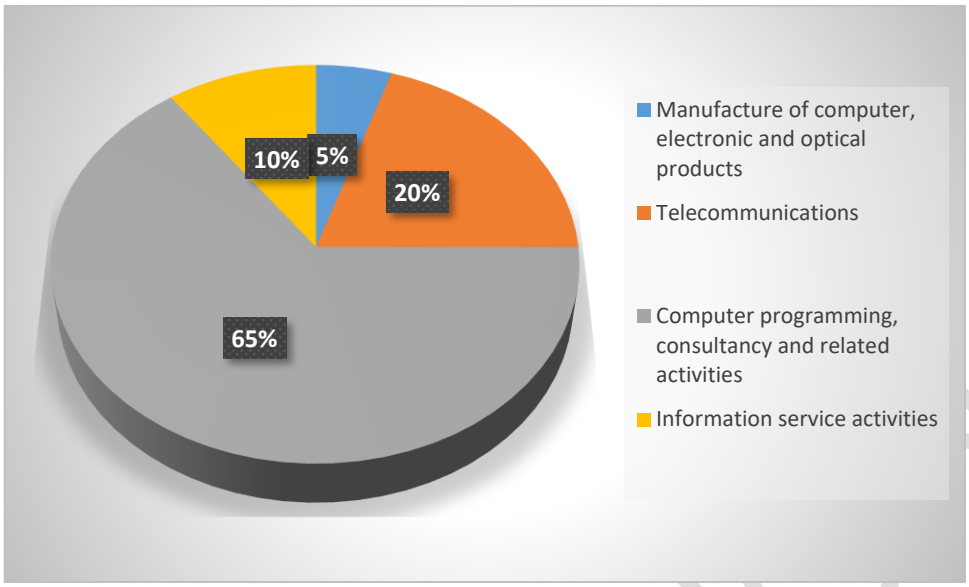


*Figure 13* of ICT medium enterprises - 20

Here the difference is that the innovation active enterprises are 90 % or 18 companies which is with 16% more than small companies and with 34 % more than for micro-companies.

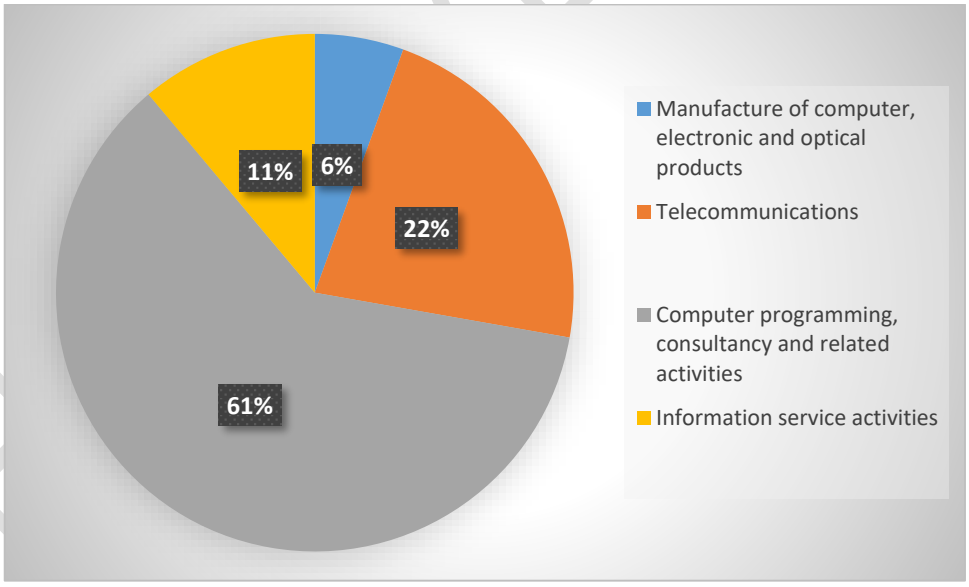


*Figure 14* of innovation active medium enterprises - 18

The distribution by ICT sub-sectors of no innovation active medium enterprises is only in the Computer, programming, consulting and relevant activities 2 (100%) while in other sub-sector none respondent.



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### INNOVATION ACTIVE ENTERPRISES BY SIZE AND BY TYPE OF INNOVATION

For this analysis it is important to see the distribution of innovation active enterprises by size and by type of innovation. From the following figure it is clear that 74 % of innovation active SMEs are micro-companies, 22 % are small and only 4% are medium-sized.

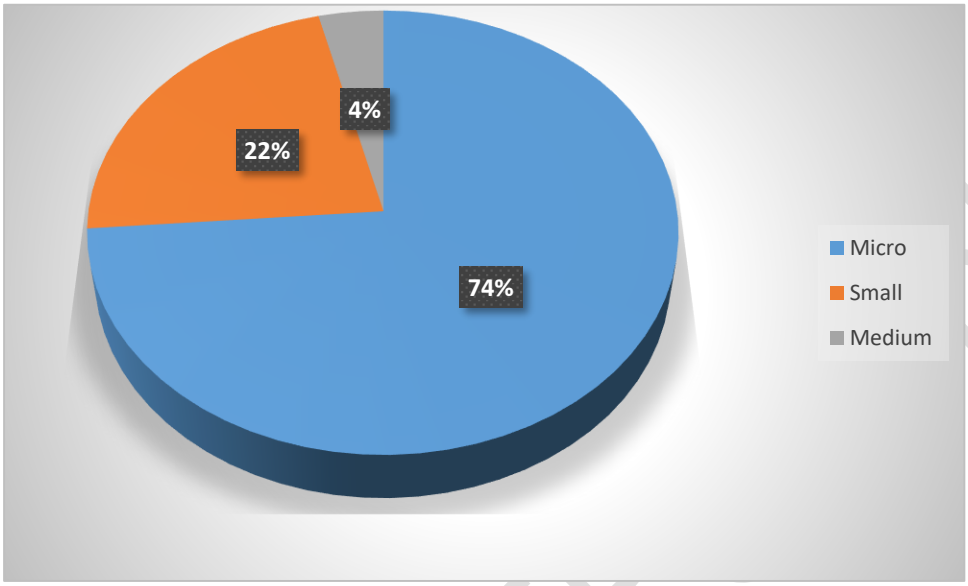
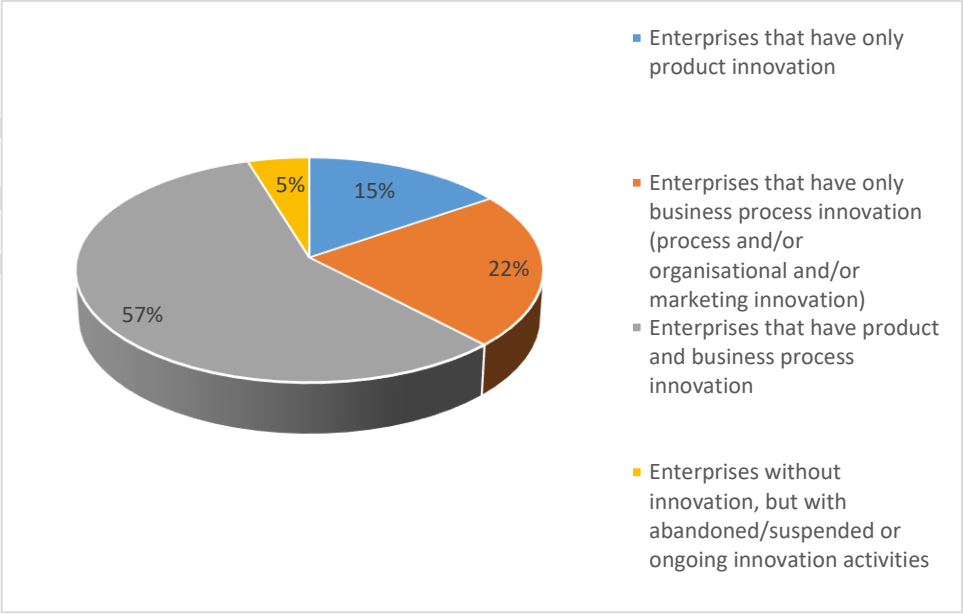



*Figure 15* of innovation active enterprises – 465 from the statistical population of this survey

From the Innovation active enterprises– 57 % (267 companies) are enterprises that have product and process innovation, 15 % (72 companies) are enterprises that have only product innovation, 22 % are enterprises that have only business process innovation and 5% are enterprises without innovation, but with abandoned/suspended or ongoing innovation activities.






*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

*Figure 16* of innovation active enterprises by type of innovation – 465 from the statistical population of this survey

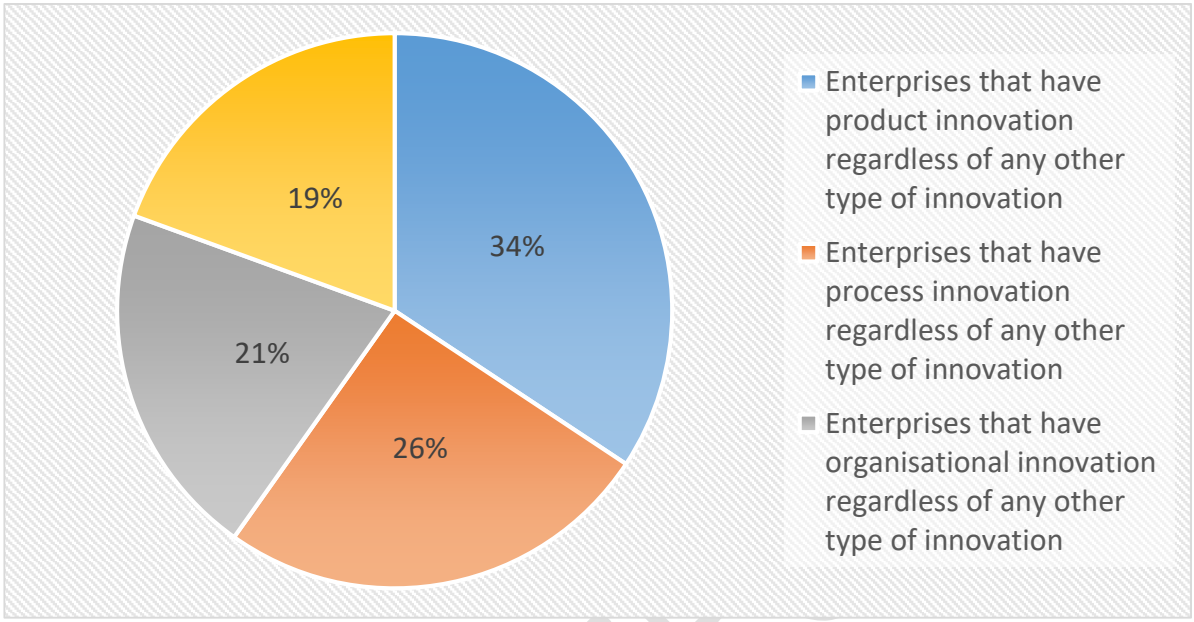



*Figure 17* of innovation active enterprises by type of innovation – 465 from the statistical population of this survey

In this analysis it is seen that 55 % from 343 ICT innovation active micro companies in the Republic of North Macedonia have product and business innovation while 17 % have only product innovation. This means that product innovation is the most frequently met in that size of business.

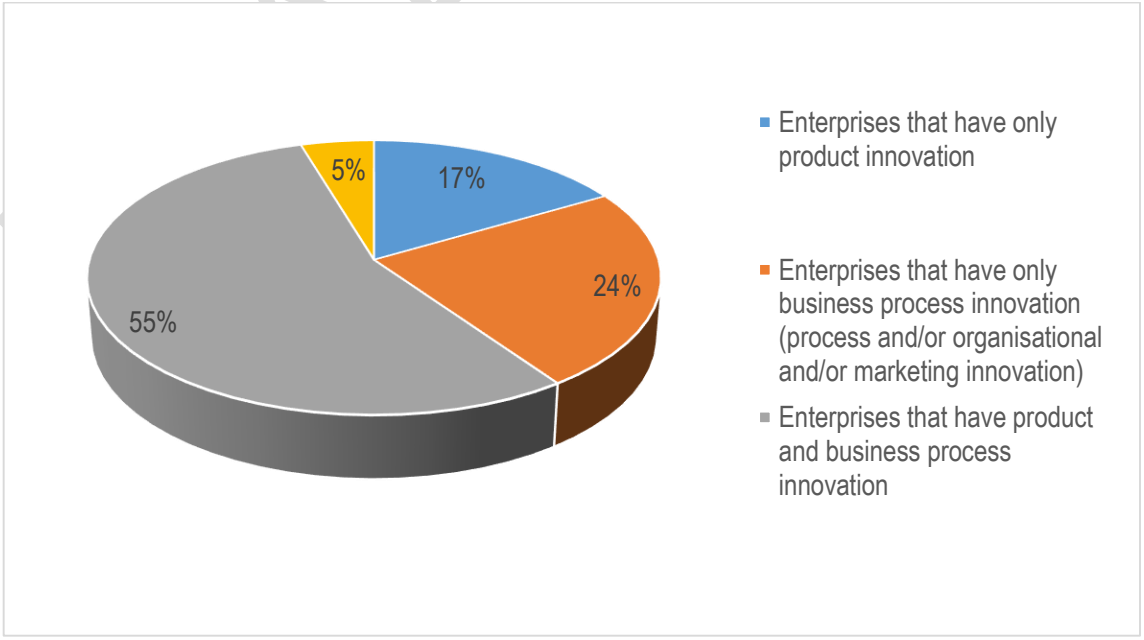



*Figure 18 of innovation active micro enterprises by type of innovation – 343*



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It is important to make even deeper data cuts and to see that micro- enterprise distribution is again in the leadership sub-sector of Computer programming, consultancy and related services with 70% of innovation active micro enterprises having only product innovation.

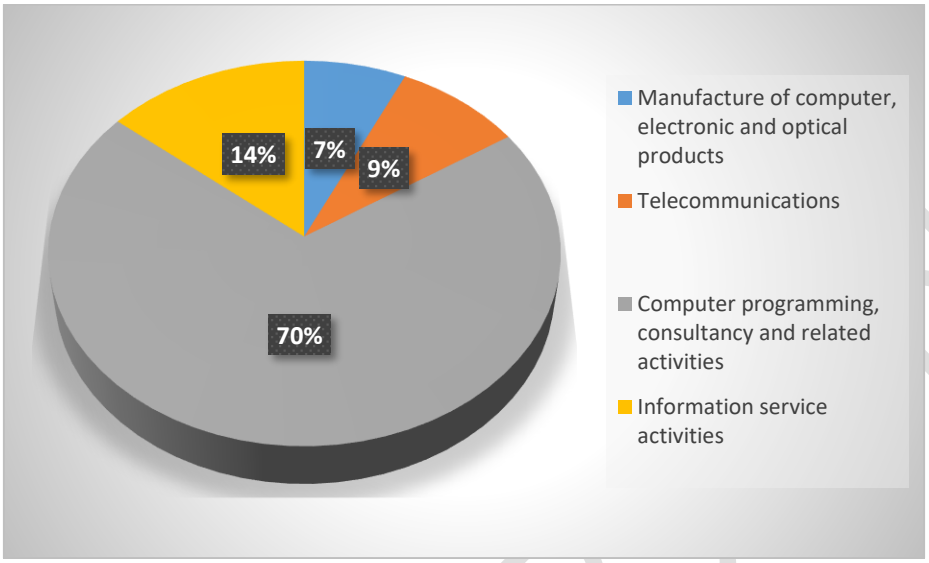


*Figure 19* of innovation active micro enterprises that have only product innovation- 57

The other type of innovation – the business process innovation is implemented by 81 enterprises that have only business process innovation (process and/or organisational and/or marketing innovation). 57 % of those micro-companies are also in Computer programming, consultancy and related services, 24 % in Information services – with 10 % more than the micro innovation active micro businesses with only product innovation.

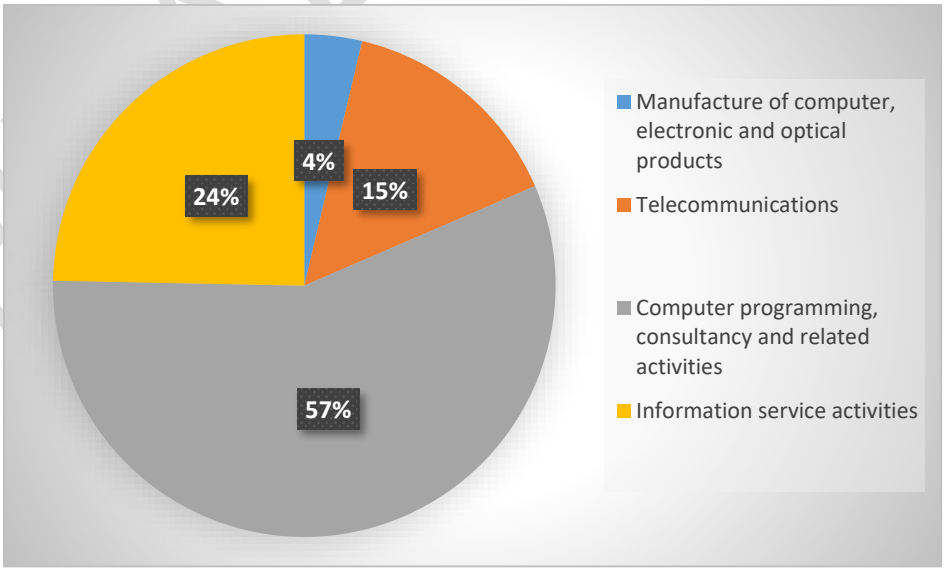


*Figure 20* of innovation active micro enterprises that have only business process innovation (process and/or organisational and/or marketing innovation) – 81



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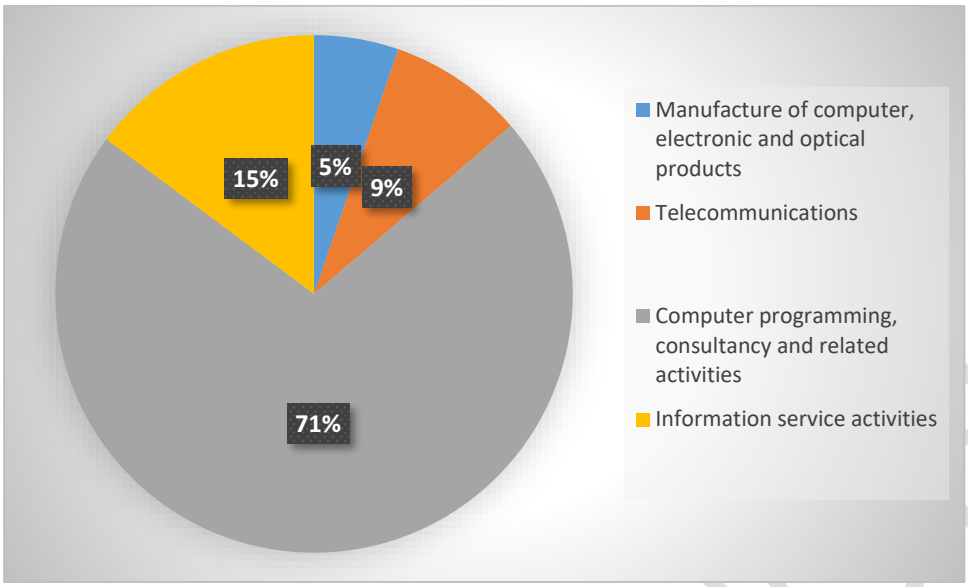


*Figure 21* of innovation active micro enterprises that have product and business process innovation - 189

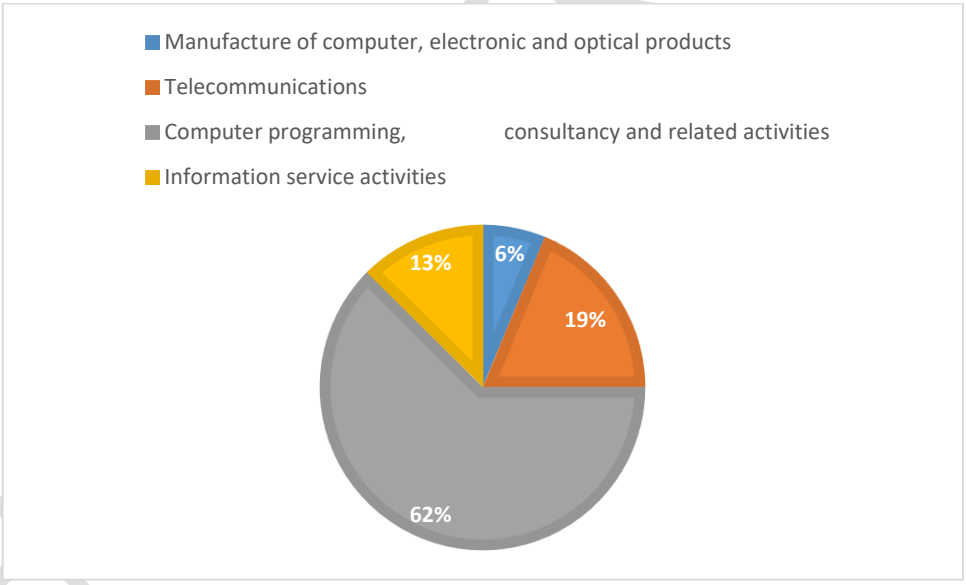


*Figure 22 of innovation active micro enterprises without innovation, but with abandoned/suspended or ongoing innovation activities -16*

The above three figures show that the leading ICT sub-sector hosts innovation active enterprises that have only business process innovation (process and/or organisational and/or marketing innovation) with 24 %, the innovation active micro enterprises that have product and business process innovation with 55% and the innovation active micro enterprises without innovation, but with abandoned/suspended or ongoing innovation activities with 5 %.



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The situation with small companies is different compared with the micro innovation active companies. Here 65 % of innovation active small enterprises have product and business innovation (55 % of innovation active micro enterprises have product and business innovation).

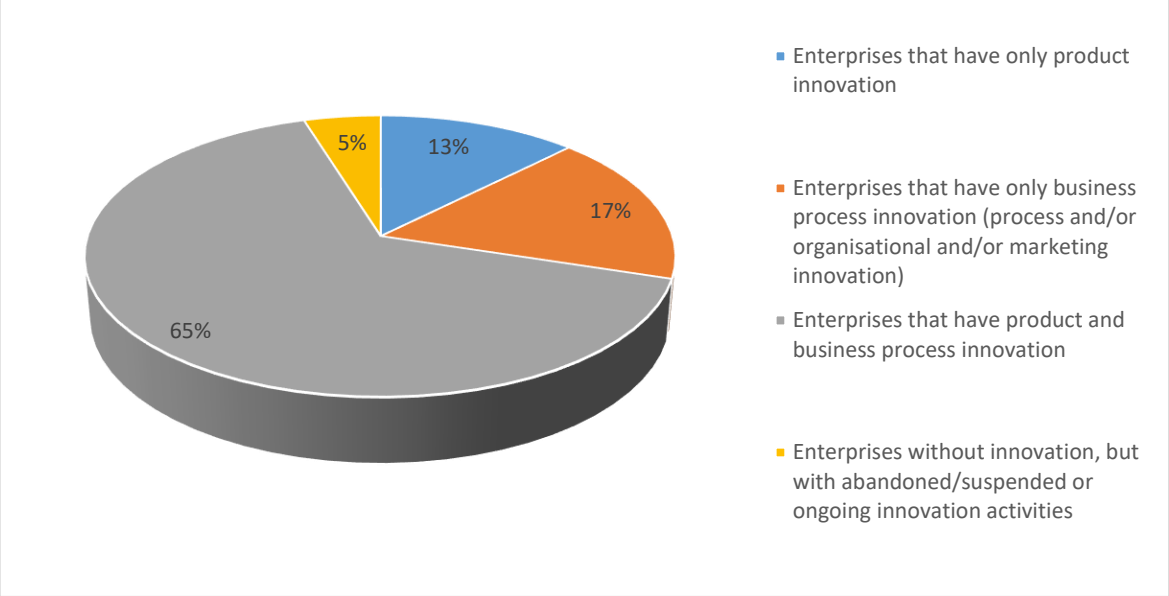


*Figure 23 of innovation active small enterprises -104*

If we compare the number of enterprises with different type of innovation we can see that the majority of small innovation active enterprises have product and business process innovation-(68), followed by those having only product innovation (13), Enterprises that have only business process innovation (process and/or organisational and/or marketing innovation-(18) and Enterprises without innovation, but with abandoned/suspended or ongoing innovation activities-(5). The distribution of small innovation active enterprises by type of innovation and by ICT sub-sectors is the same as with innovation active micro-companies. The tendency of innovation activities is the same.

The statistical survey is giving detailed aggregated data for medium-sized innovation active enterprises – (18). See hereafter:

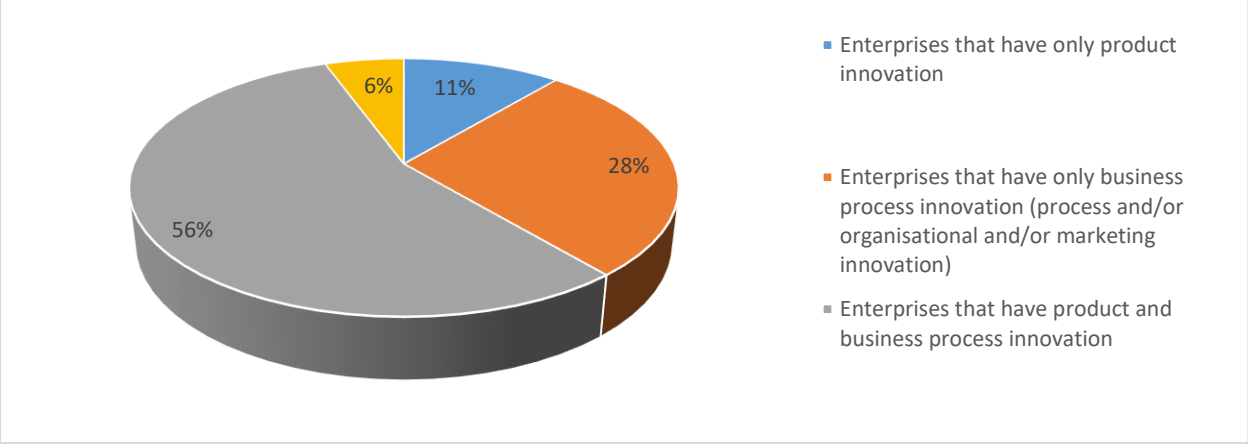


*Figure 24* of medium-sized Innovation active enterprises -18



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If we compare the number of enterprises with different type of innovation we can see that the majority of medium-sized innovation active enterprises have product and business process innovation- 65%, followed by those having only business process innovation (process and/or organisational and/or marketing innovation – 17 %, Enterprises that have only) product innovation - 13% and Enterprises without innovation, but with abandoned/suspended or ongoing innovation activities- 5%. The distribution of medium-sized innovation active enterprises by type of innovation and by ICT sub-sectors is the same as with innovation active micro-companies. The tendency of innovation activities is the same.

More detailed picture is following hereafter where the figures show the distribution of type of innovation by companies' size. Enterprises that have product and business process innovation – (10). Enterprises that have only product innovation are 2, only process innovation (5), without innovation (2)

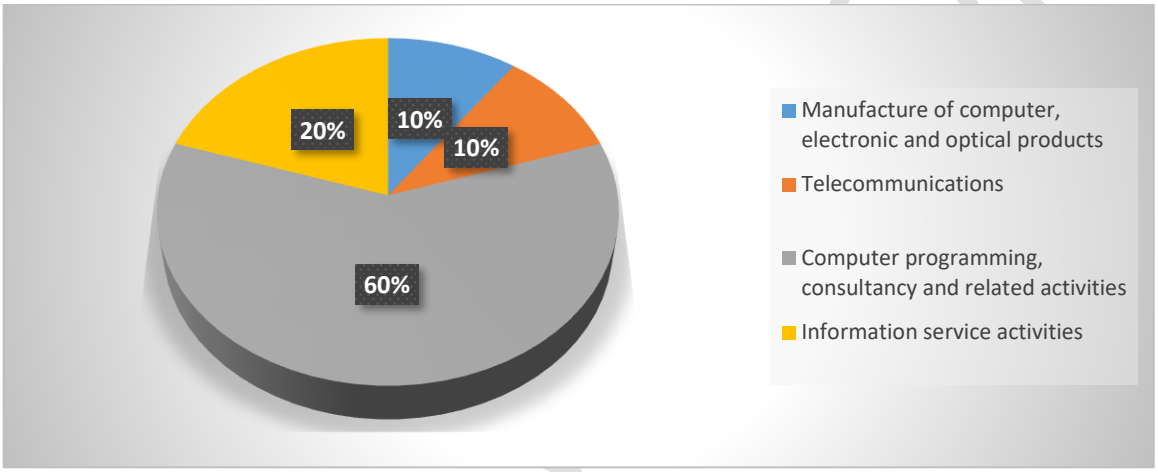


*Figure 25 of innovation active medium enterprises that have product and business process innovation -10*

Again the majority of enterprises are in the sub-sector of Computer programming, consulting and related services.

It is interesting to see the distribution of type of innovation by enterprises size. Innovative active enterprises that have only product innovation are 72, Micro 79%; small 18% and medium 3%

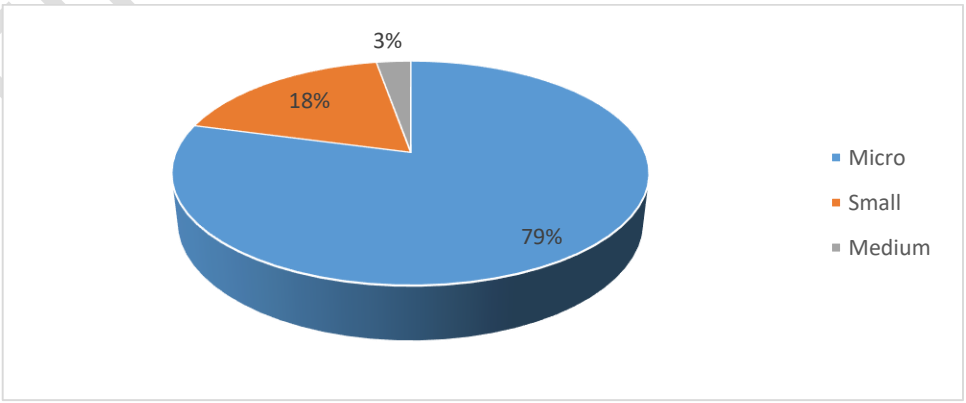


*Figure 26 of innovation active enterprises that have only product innovation*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

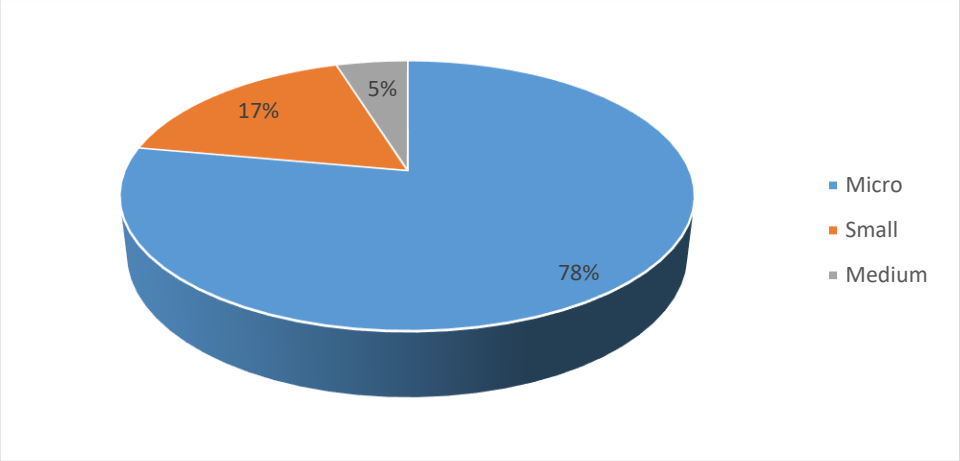


*Figure 27 of innovation active enterprises that have only only business process innovation*

It is interesting to see how is the distribution of enterprises that have product innovation regardless of any other type of innovation (339) by size of the SMEs. The figure shows that 73 % are micro-companies, 24% are small and only 4 % are medium-sized.

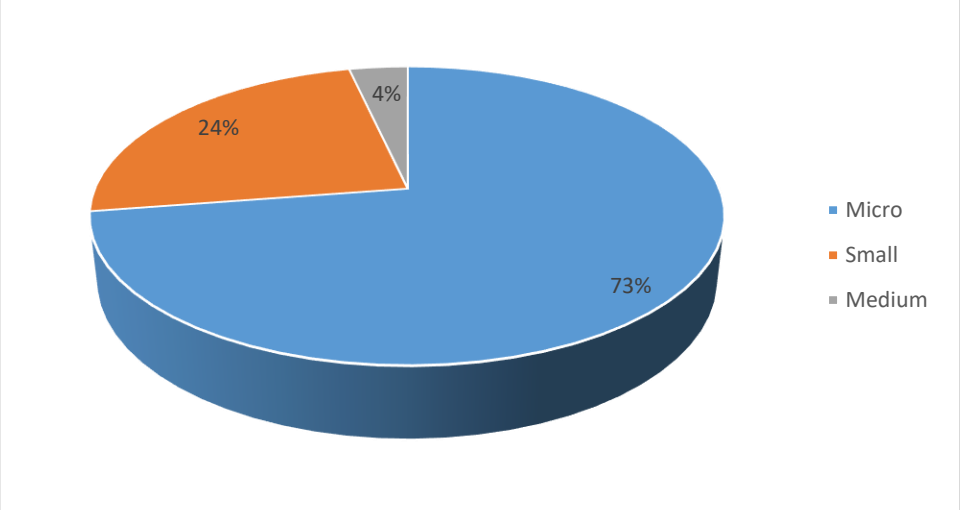


*Figure 28* of distribution by size of the enterprises that have product innovation regardless of any other type of innovation (339)

The deep cut of micro enterprises that have product innovation regardless of any other type of innovation – (246) show that majority – 71 % - are in the sub-sector of Computer programming, consultancy and related services, 15 % in Information services, followed by Telecommunications – 8% and Manufacturing of computer, electronic and optical products – 6 %.



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

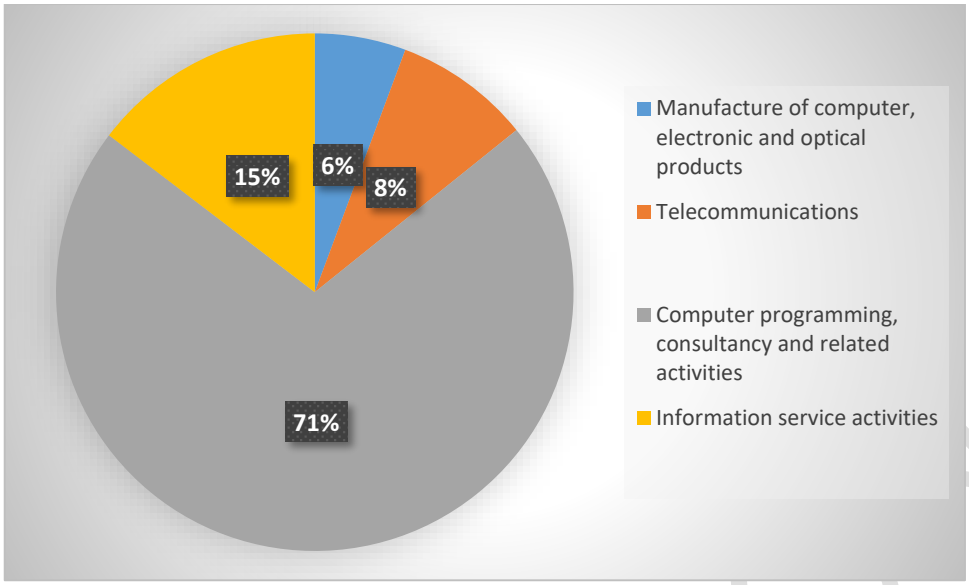


*Figure 29* of distribution of micro enterprises that have product innovation regardless of any other type of innovation (246)

The situation with the small enterprises that have product innovation regardless of any other type of innovation – (81) is as follows:

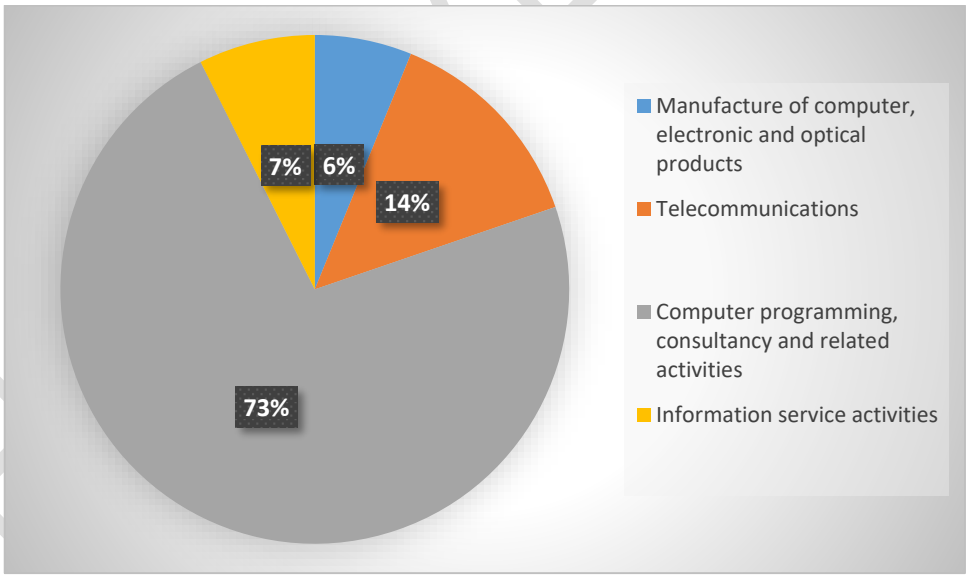


*Figure 30 of distribution of small enterprises that have product innovation regardless of any other type of innovation (81)*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

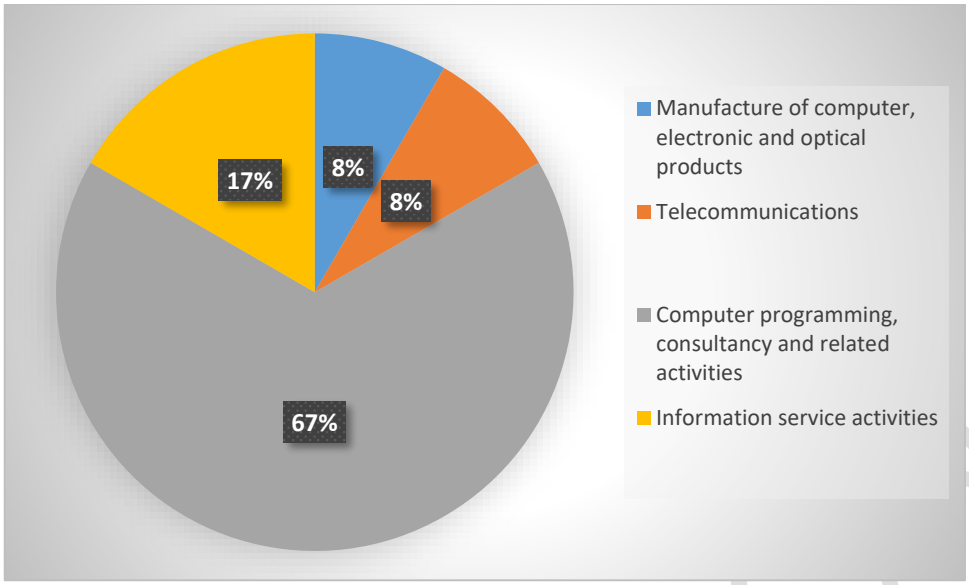


*Figure 31 of distribution of medium sized enterprises that have product innovation regardless of any other type of innovation (12)*

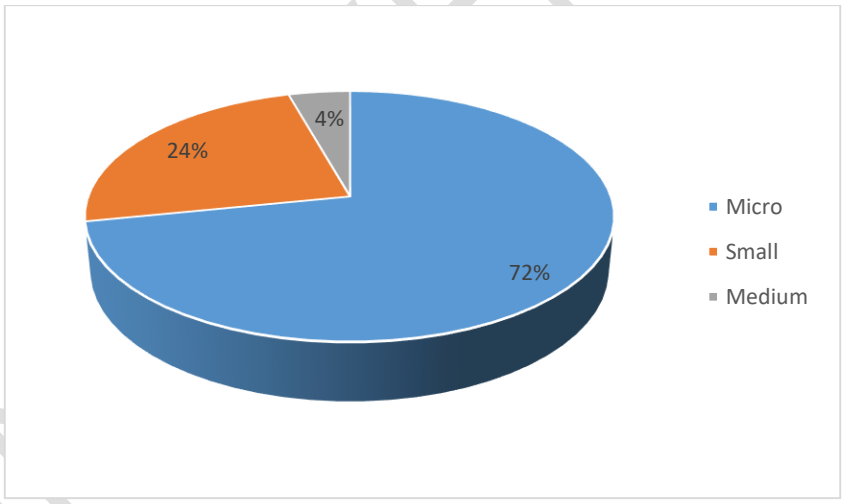


*Figure No. 34 of distribution of enterprises that have process innovation regardless of any other type of innovation 252*

Again we see that micro companies are the majority of the enterprises that have process innovation regardless of any other type of innovation – 72 % which is very high percentage. From micro enterprises that have process innovation regardless of any other type of innovation – (181) it is clear that 74 % are again in the leading ICT subsector of Computer programming, consultancy and related services.



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

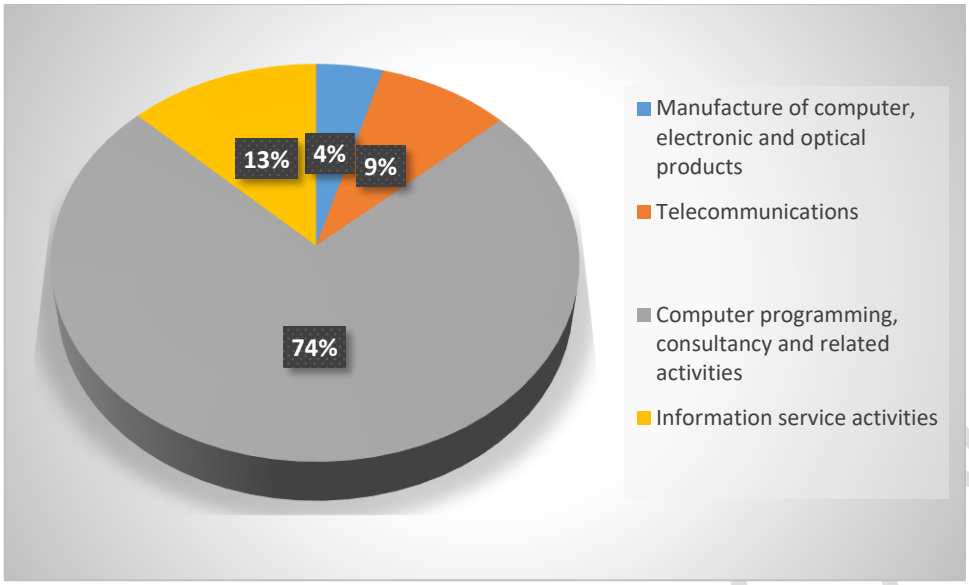


*Figure 32* of distribution of micro enterprises that have process innovation regardless of any other type of innovation -181

Regarding the performance of small companies, the next figure shows that the enterprises that have process innovation regardless of any other type of innovation – (60) are quite less in number than the micro ones but their share in ICT sub-sector of Computer programming, consultancy and related services is 80 %.

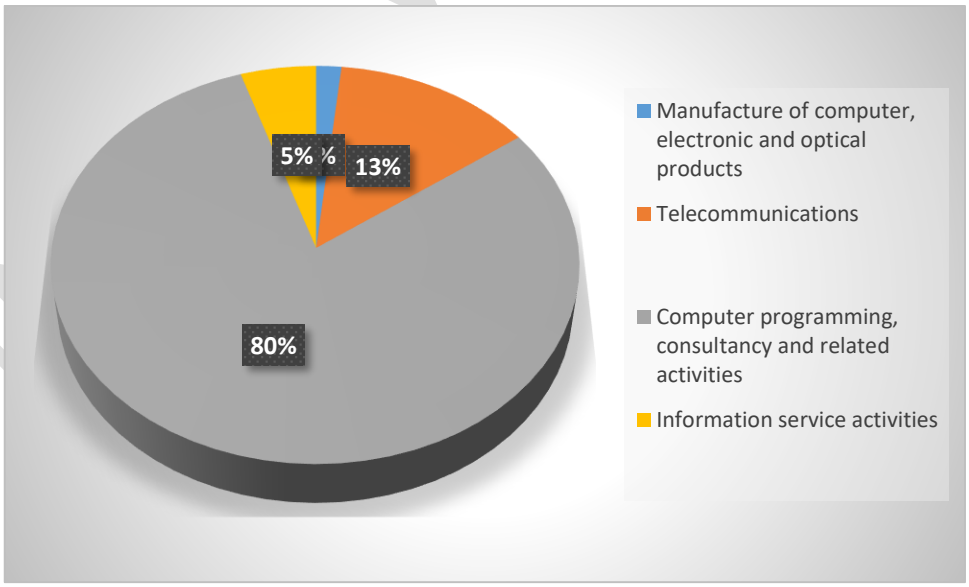


*Figure No. 36 of small enterprises that have process innovation regardless of any other type of innovation -60*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

Concerning medium sized enterprises that have process innovation regardless of any other type of innovation – (11). Their distribution by subsector in ICT is again the higher share of 64% in leading Computer programming, consultancy and related services.

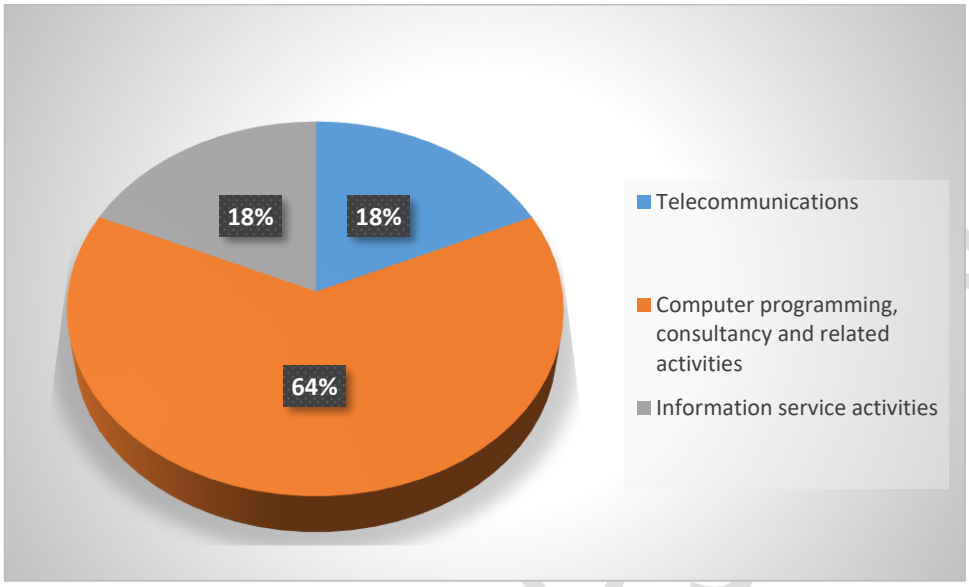


*Figure 33* of medium sized enterprises that have process innovation regardless of any other type of innovation – (11)

For more deep understanding of innovation active SMEs is important to see the situation with the enterprises that have organizational innovation regardless of any other type of innovation-(205). It is not surprising that 63 % of them are micro companies.

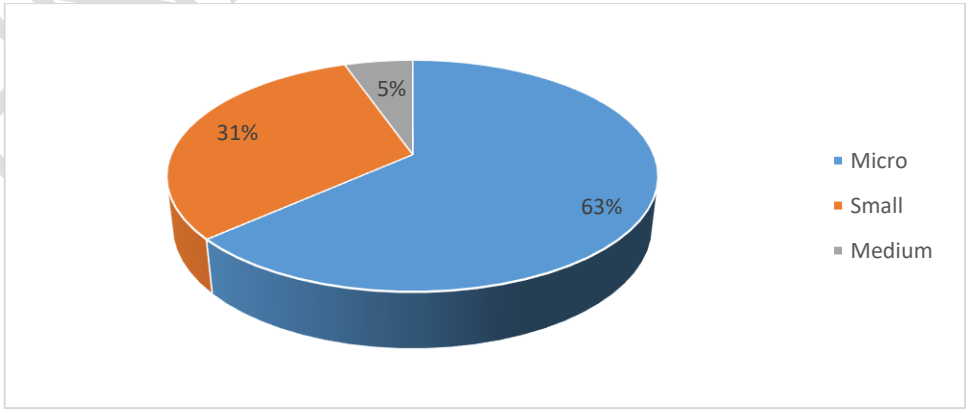


*Figure 34* of enterprises that have organizational innovation regardless of any other type of innovation-205



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

The data from the statistical survey show that micro-enterprises are again the backbone of the Computer programming, consultancy and related services sub-sector, but also that they make the largest contribution through organizational innovation regardless of any other type of innovation with 66%. The Information service activities have 10 % from micro enterprises and Telecommunications 10%. Manufacturing of computer, electronic and optical products is the sub-sector with lowest 5 % of micro enterprises having organizational innovation regardless of any other type of innovation.

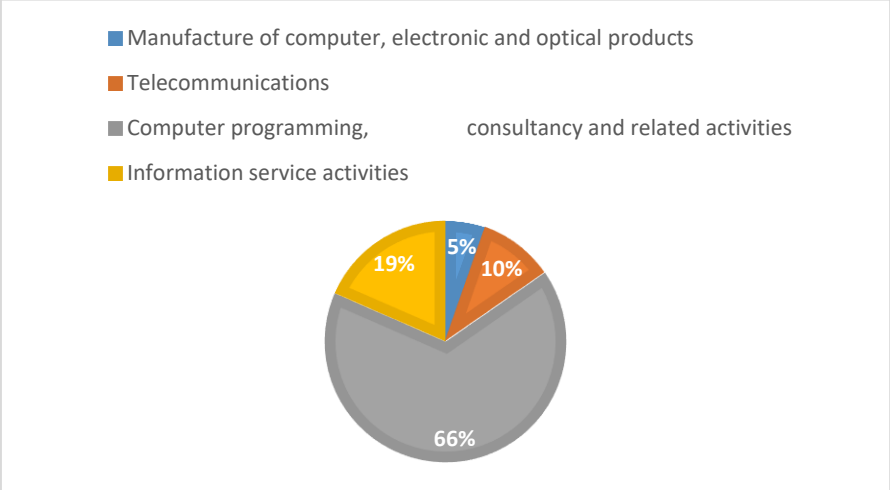


*Figure 35 of micro organizational innovation regardless of any other type of innovation*

In comparison the small enterprises that have organisational innovation regardless of any other type of innovation – (64) – they have 5 % in Manufacturing of computer, electronic and optical products and 11 % in Information service activities sub-sector.

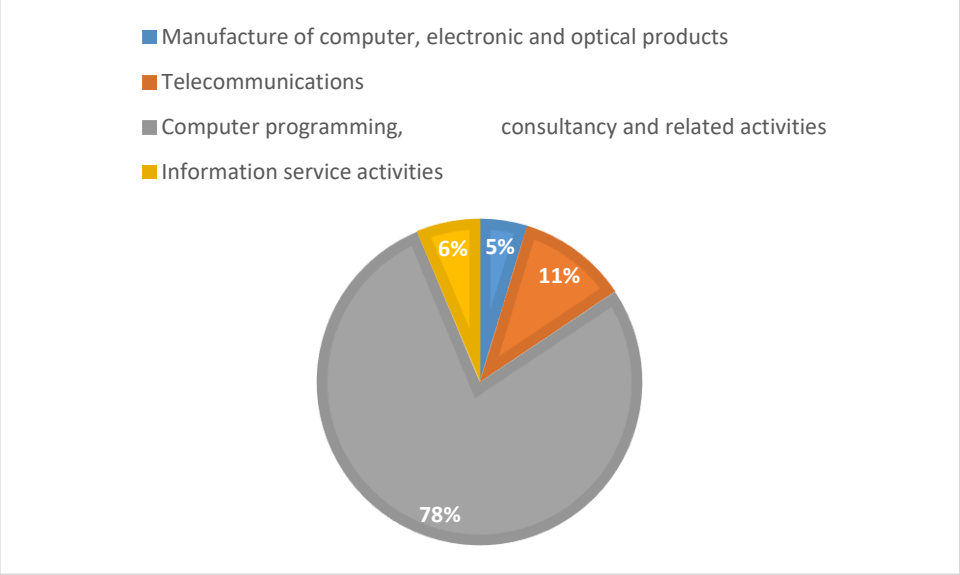


*Figure 36 of small organizational innovation regardless of any other type of innovation*



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The big difference in distribution of shares in medium enterprises that have organisational innovation regardless of any other type of innovation - (11) is that 9 % are in Telecommunication.

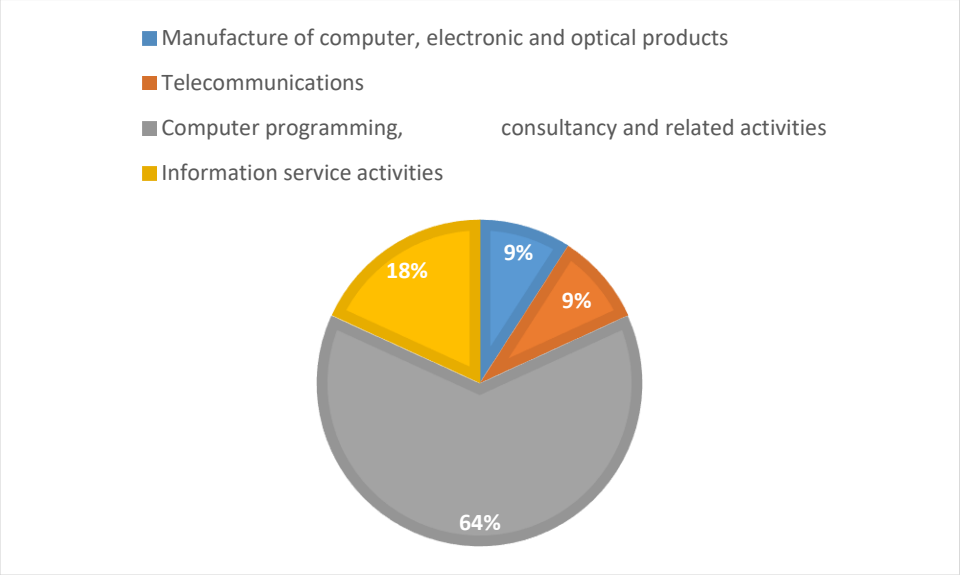


*Figure 37 of medium sized organizational innovation regardless of any other type of innovation-11*

Very interesting is the survey of the enterprises that have marketing innovation regardless of any other type of innovation – (192). The absolute leader are micro companies with 72 %, followed by 23 % of small and 5 % of medium sized enterprises.

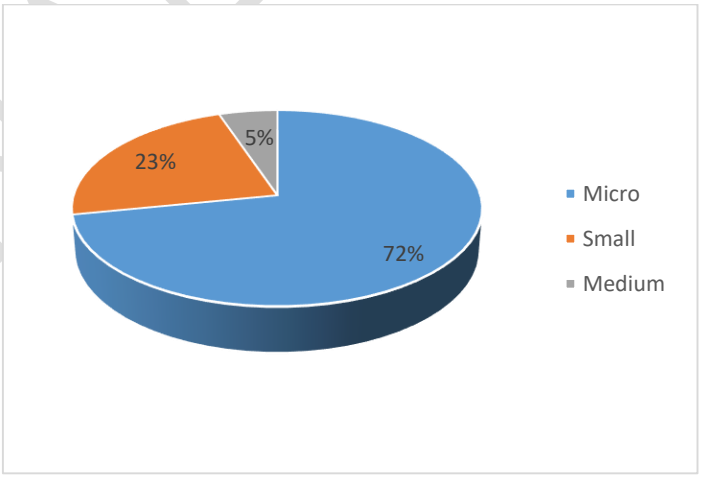


*Figure 38 of distribution of enterprises that have marketing innovation regardless of any other type of innovation – (192)*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

In this macro picture the micro enterprises that have marketing innovation regardless of any other type of innovation – (138) again have the biggest share in Computer programming, consultancy and related services sub-sector.

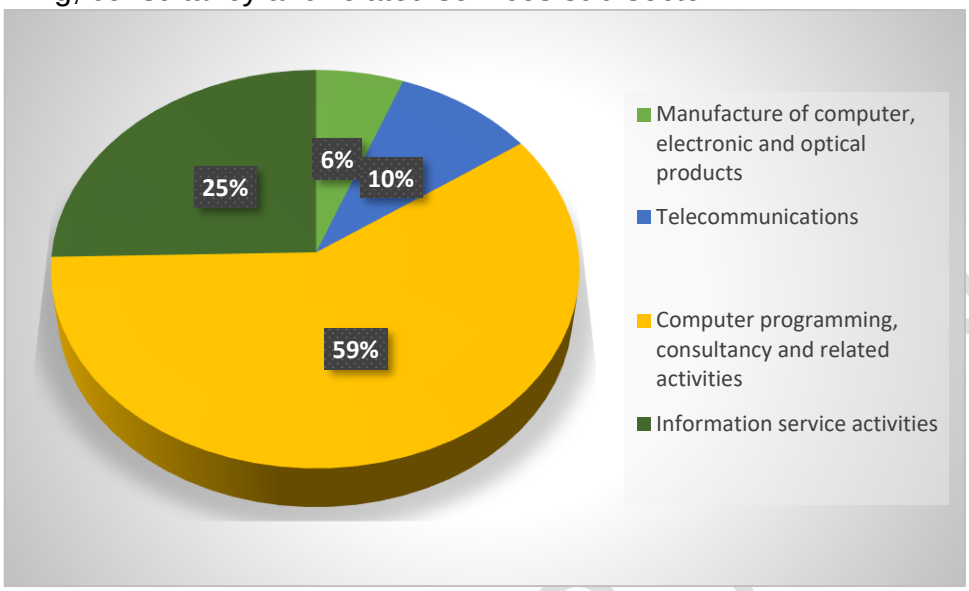


*Figure 39 of micro enterprises that have marketing innovation regardless of any other type of innovation – (138)*

Very close to this distribution is the one of small enterprises that have marketing innovation regardless of any other type of innovation – (138)

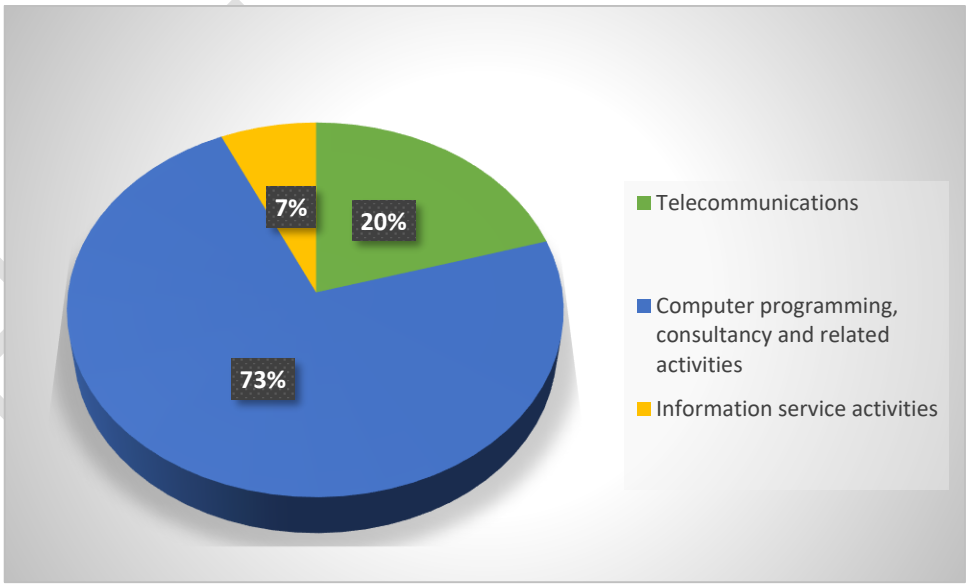


*Figure 40 of small enterprises that have marketing innovation regardless of any other type of innovation – (138)*



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The picture of medium enterprises that have marketing innovation regardless of any other type of innovation – (10) is with expressed pick of Computer programming, consultancy and related services sub-sector with 60% but the other 3 sub-sectors have relatively balanced shares.

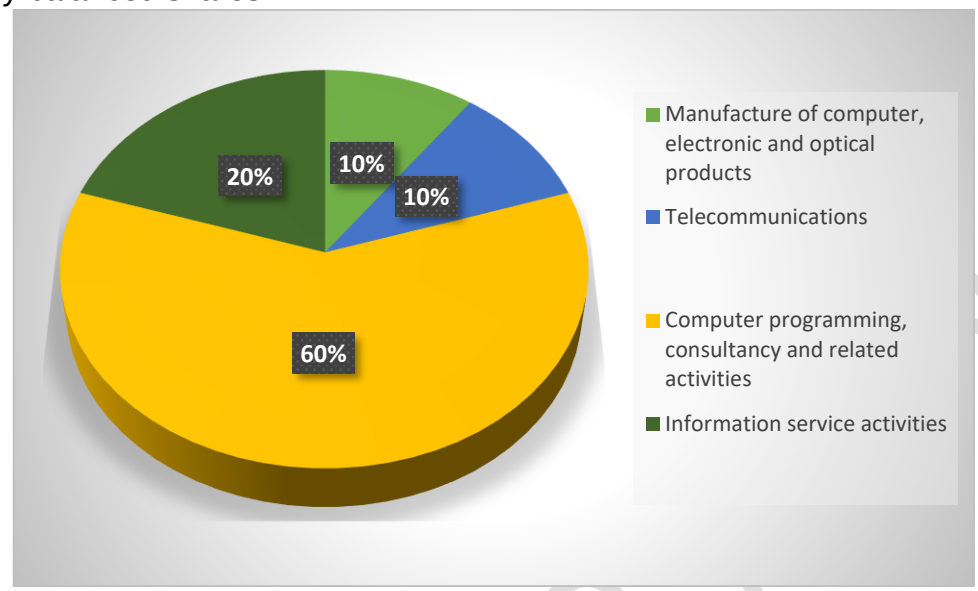


*Figure 41 of medium enterprises that have marketing innovation regardless of any other type of innovation – (10)*

**CONCLUSIONS:**

(1) SMEs in ICT sector are innovation active enterprises with 63.25 % more than the average for Industries (NACE rev. 2)

(2) Most innovation active enterprises are micro-companies in Computer, programming, consulting and relevant activities with 67%

(3) Absolute leader of innovation active enterprises is the subsector of Computer, programming, consulting and relevant activities.

(4) Product innovation – 34% is the most frequently introduced by ICT SMEs followed by process innovation – 26 %, organizational innovation - 21 % and marketing innovation - 19 %.

**(5)** The above data show that there are minimal differences in the distribution of innovative enterprises by type of innovation, but they are not such as to alter the underlying ratios. Nevertheless, it is important to do research because they show the strategies of companies in this segment of the economy**.**



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

## 2. ENTERPRISES BY ADMINISTRATIVE STATE OF THE ENTERPR- ENTERPRISE GROUP

Small share of total number of enterprises are part of enterprise group 3.76 % or 28 from 744. The structure is 54% medium. Micro 36% and small 11%.

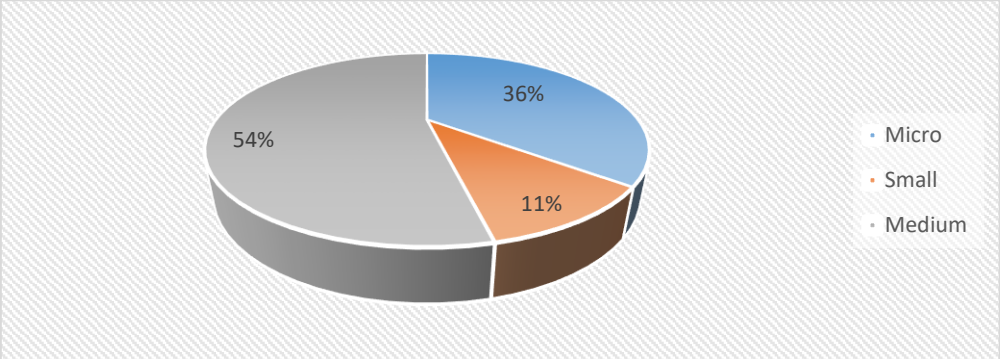


*Figure 42 of the enterprises that have part of an enterprise group-28*

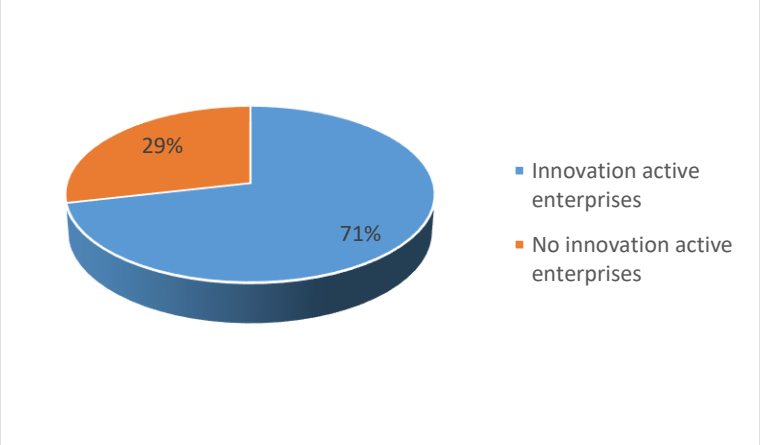


*Figure 43 of innovation activity of the enterprises that have part of an enterprise group*

72 % of innovation active enterprises were part of enterprise group with the head office located abroad and 25% in the home country

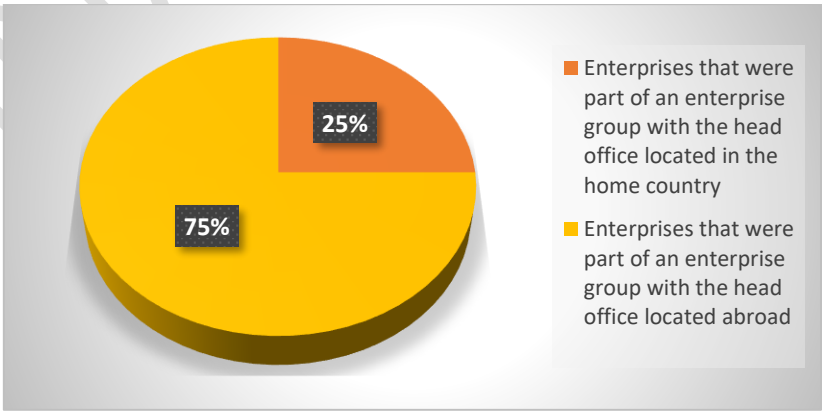


*Figure 44 Innovation active enterprises that were part of the group with the head office location -20*



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Enterprises that were part of an enterprise group with the head office located in the home country, 78% are micro, while small and medium are 11%.

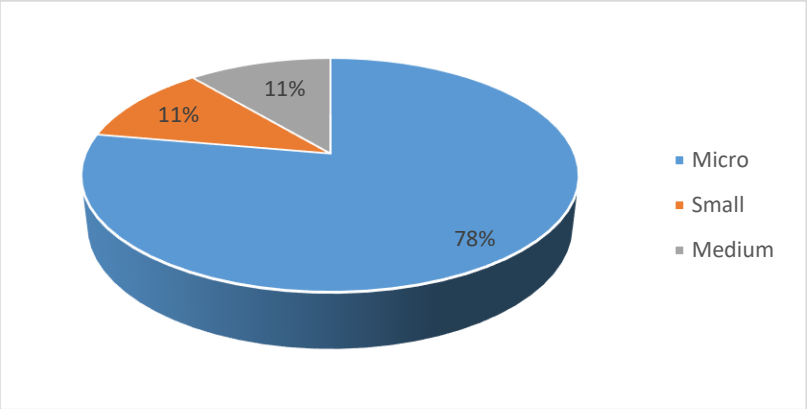


*Figure 45 of enterprises that were part of an enterprise group with the head office located in the home country*

74 % of enterprises that were part of an enterprise group with the head office located abroad are medium and 80% are from Computer programming, consultancy and related activities

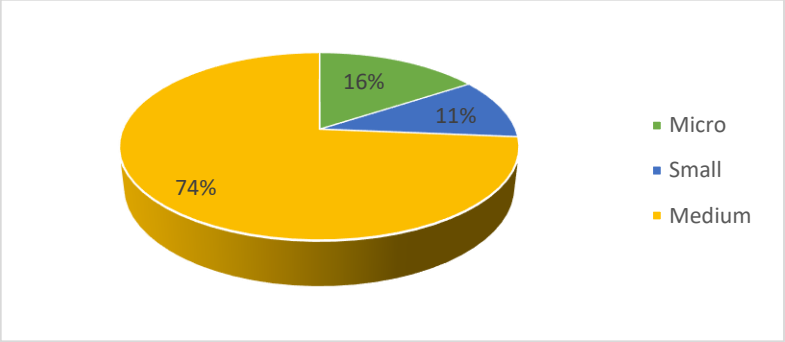


*Figure 46 of enterprises that were part of an enterprise group with the head office located abroad.*

### CONCLUSION

(1) Very small share 3,76% of ICT SMEs is part of the group and 71 % are innovation active enterprises.

(2) Over two third of the innovation active enterprises were part of enterprise group are with head office located abroad.

(3) Medium size enterprises are biggest share of innovative active enterprises that are part of the group.





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## 3. ENTERPRISS BY PLACE WHERE GOODS AND/OR SERVICES ARE SOLD, AND PLACE OF LARGEST MARKET IN TERMS OF TURNOVER

The GDP of ICT sector in RN Macedonia is 320 mil Euro or 2.9 % share. The Macedonian market accounts circa 450 mil euro.

### GEOGRAFIC MARKET

83 % from Enterprises which sell goods and/or services in national market are micro, 15% small and 2% medium.

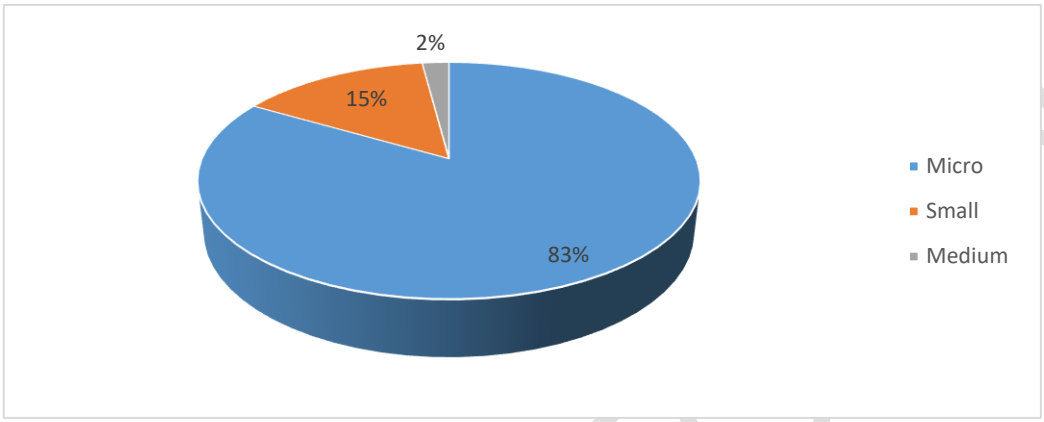


*Figure 47 of SMEs shares selling in the national markets-584*

62% of SMEs are from sub-sector Computer programing, consultancy and related activities.

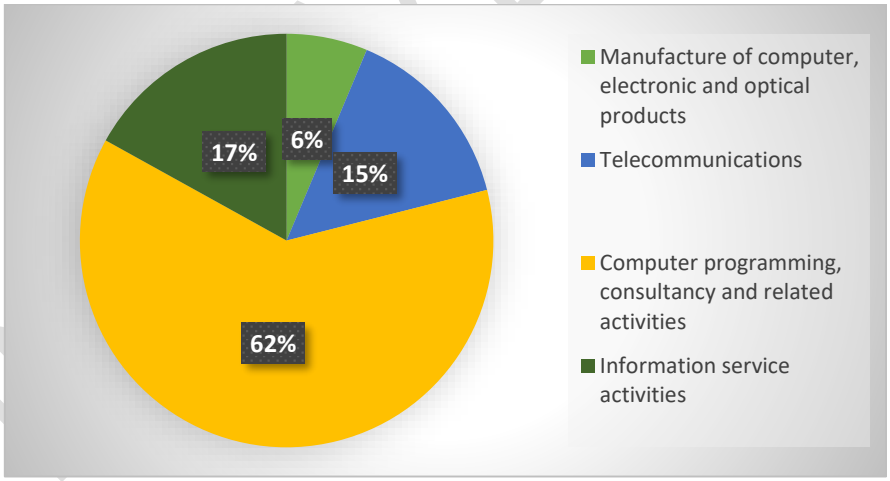


*Figure 48 of SMEs shares selling in the national markets by sub-sectors-584*

83 % of innovation active SMEs are micro, 15% small and 2% micro



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

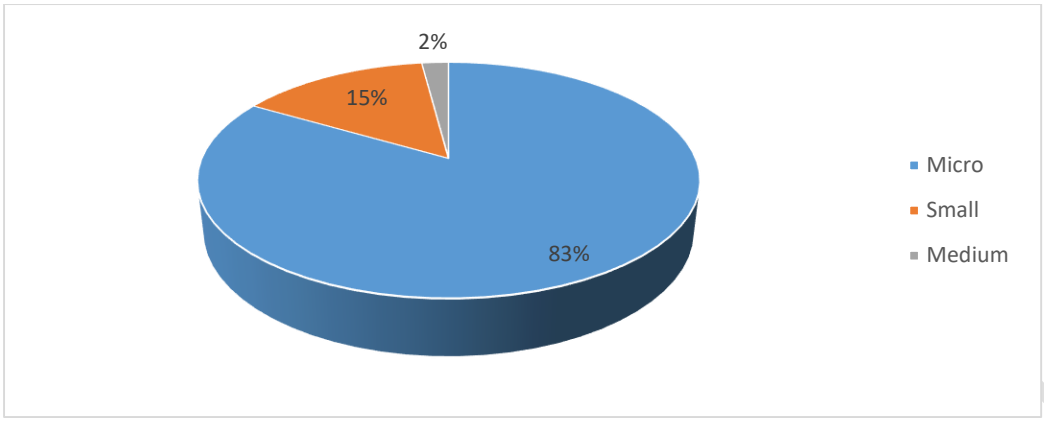


*Figure 49 of innovation active micro SMEs shares selling in the national markets-487*

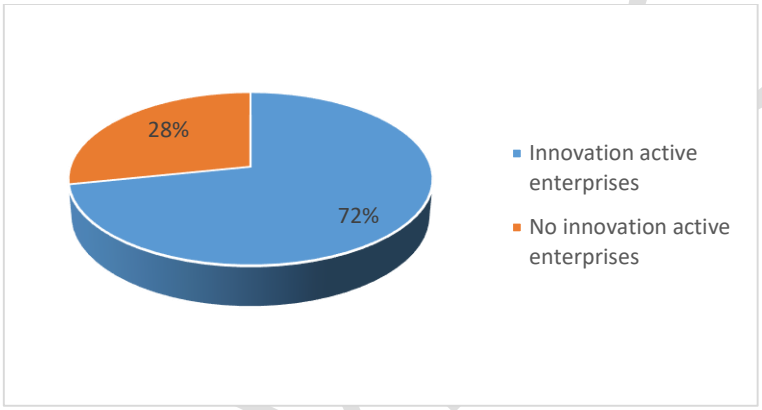


*Figure 50 of innovation active small SMEs shares selling in the national markets -85*

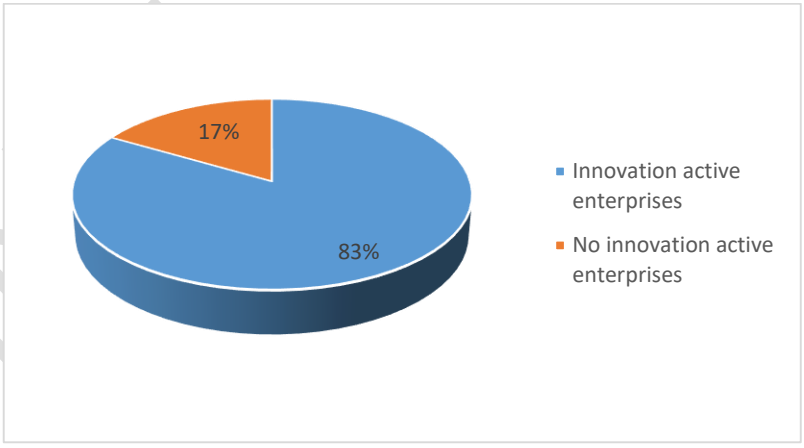


*Figure 51 of innovation active medium SMEs shares selling in the national markets-12*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

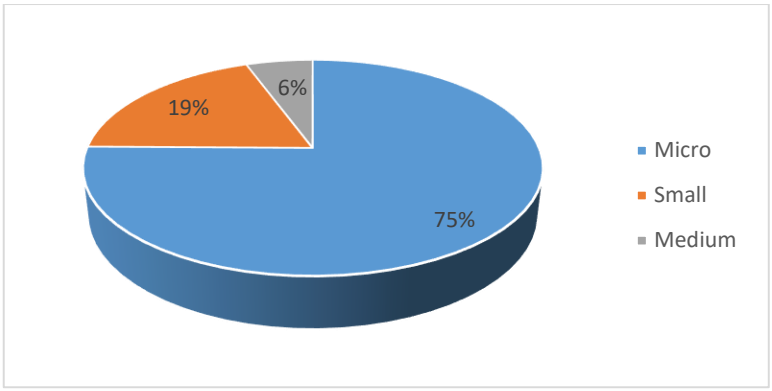


*Figure 52 of enterprises which sell goods and/or services in regional market (AL, CY, MK, GR) -125*

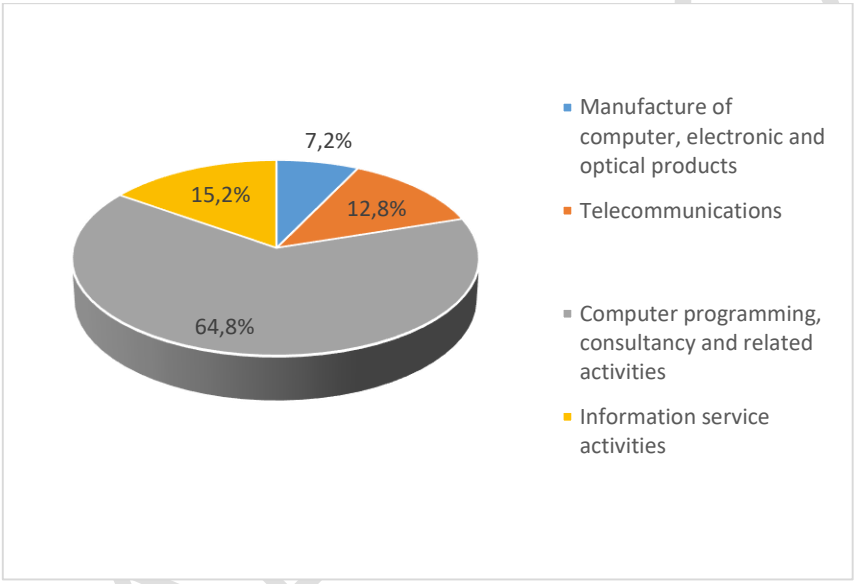


*Figure 53 of micro enterprises which sell goods and/or services in regional market (AL, CY, MK, GR) – by ICT sub-sector-125*

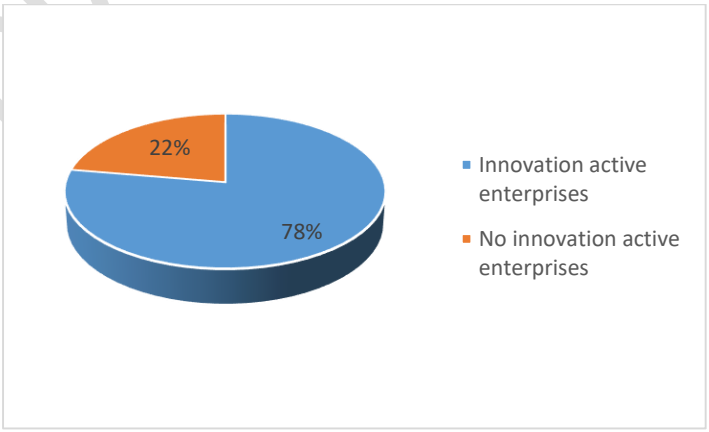


*Figure 54 of micro enterprises which sell goods and/or services in regional market (AL, CY, MK, GR) – by innovation activity* -125



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

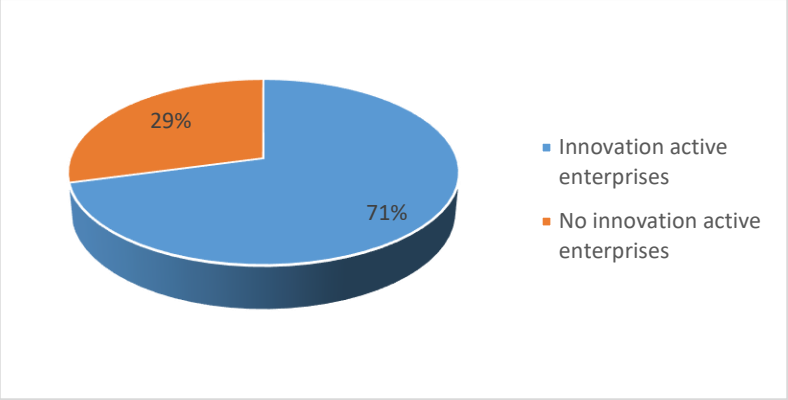


*Figure 55 of small enterprises which sell goods and/or services in regional market – by innovation activities (AL, CY, MK, GR) -24*

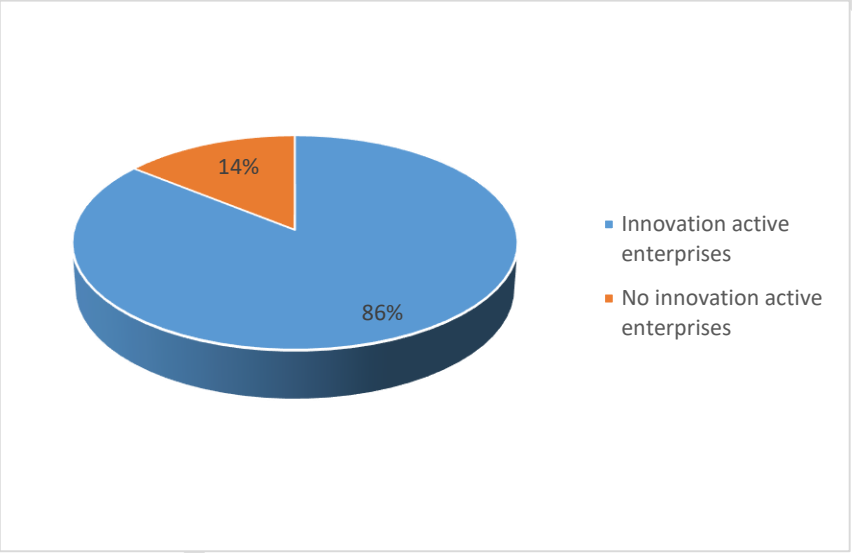


*Figure 56 of medium enterprises which sell goods and/or services in regional market (AL, CY, MK, GR) -7*

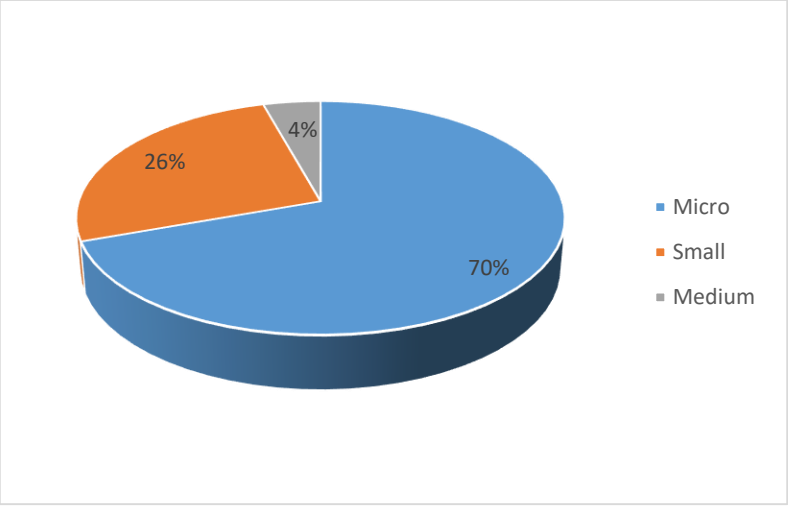


*Figure 57 of distribution by size of SMEs exporting to EU and other EFTA countries*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

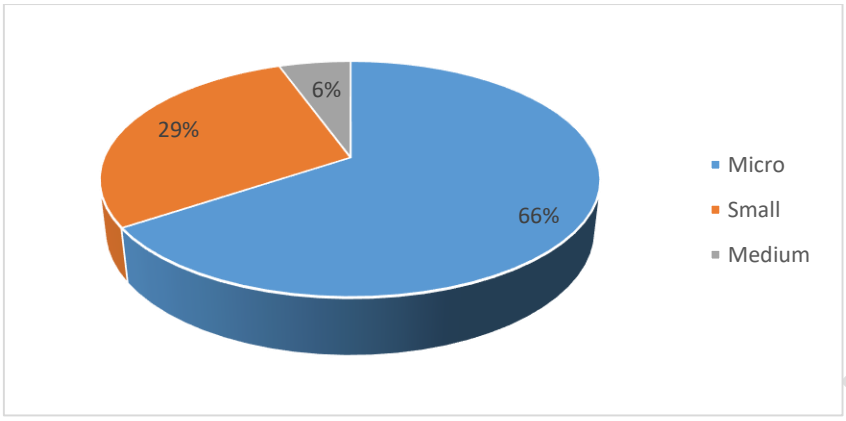


*Figure 58 of the share of innovation active SMEs exporting to EU and other EFTA countries-163*

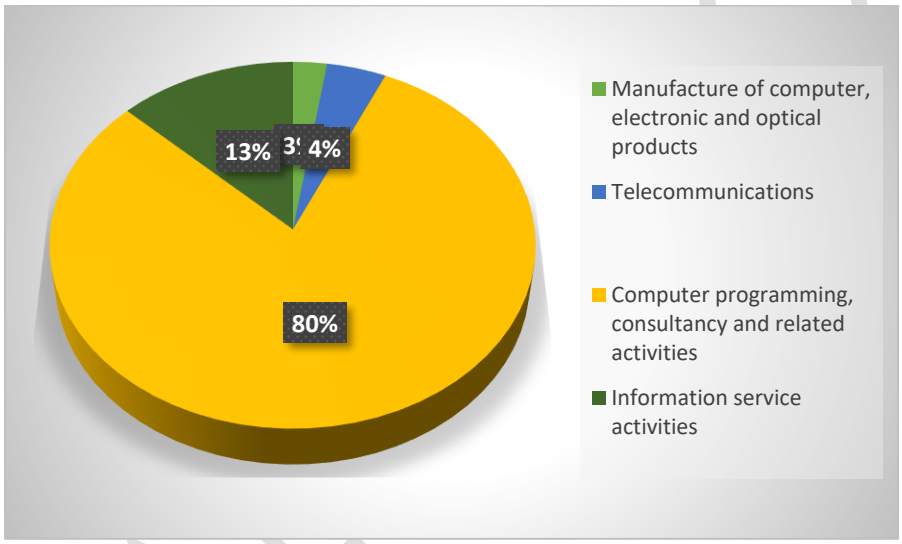


*Figure 59 of the share of innovation active SMEs exporting to EU and other EFTA countries by sub-sectors -163*

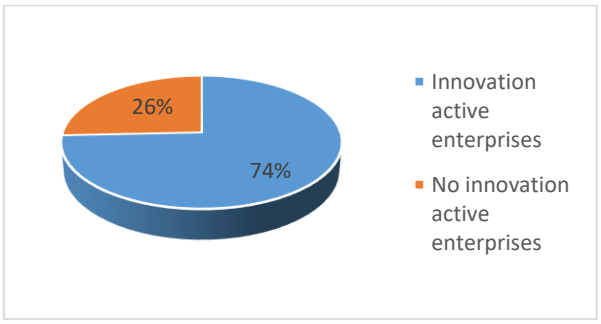


*Figure 60 of distribution by innovation active micro enterprises exporting to EU and other EFTA countries*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

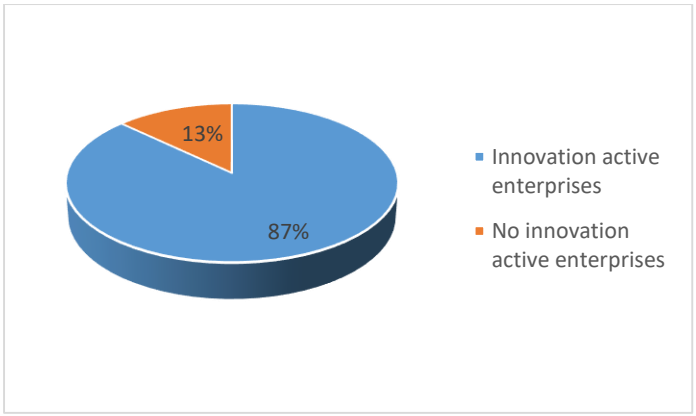


*Figure 61 of innovation active and no innovation active small enterprises exporting to EU and other EFTA countries-54*

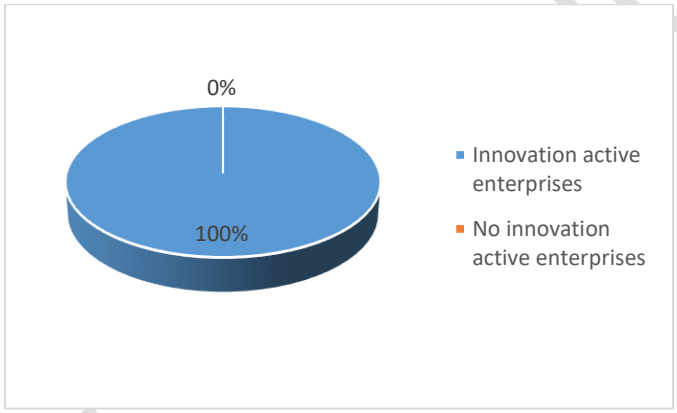


*Figure 62 of innovation active and no innovation active medium enterprises exporting to EU and other EFTA countries-9*

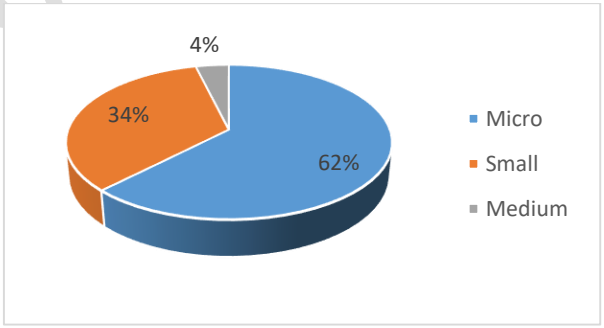


*Figure 63 of distribution by size of SMEs exporting to other countries-183*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

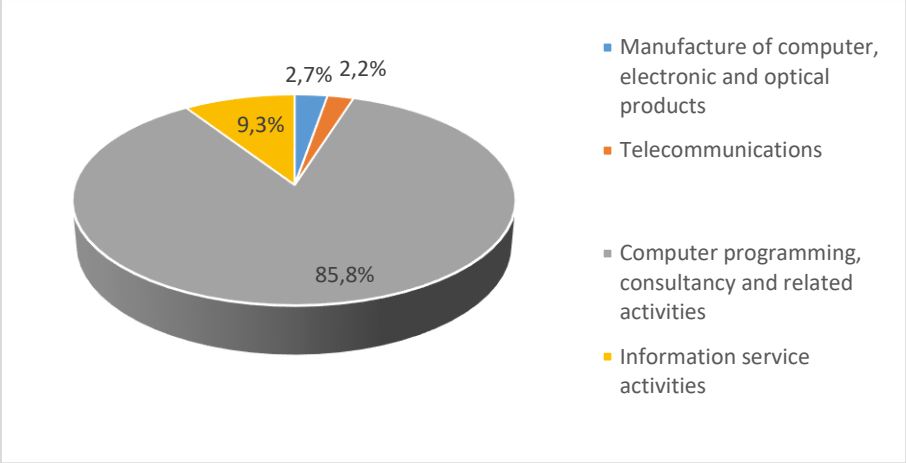


*Figure 64 of distribution by ICT sub-sectors of SMEs exporting to other countries-183*

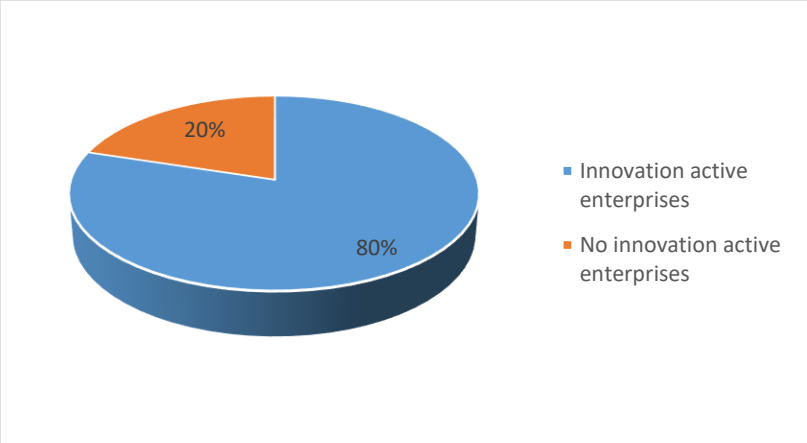


*Figure 65 of innovation active micro enterprises exporting to other countries-114*

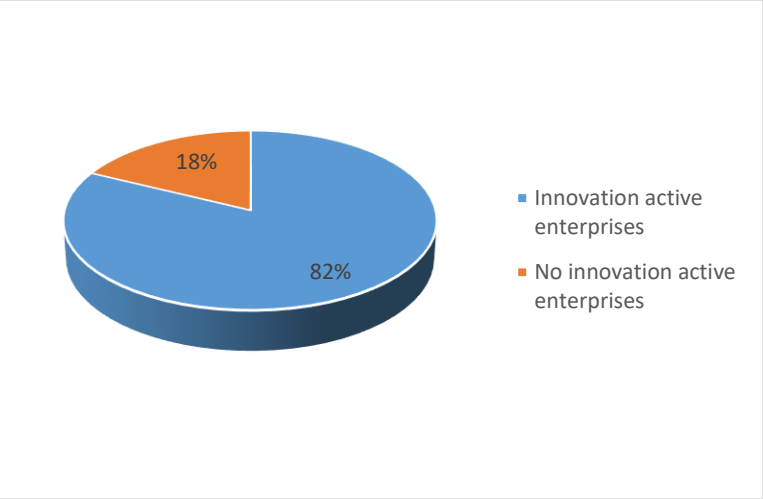


*Figure 66 of innovation active small enterprises exporting to other countries-62*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

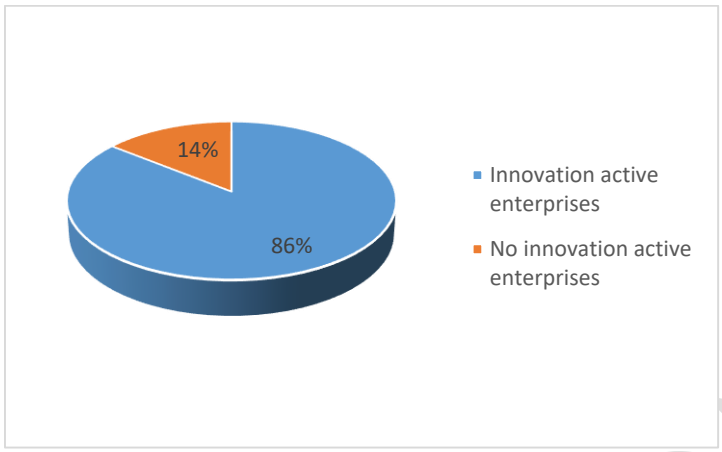


*Figure 67 of innovation active medium enterprises exporting to other countries-7*

### GEOGRAPHIC AREAS WITH THE LARGEST MARKET IN TERMS OF TURNOVER BETWEEN 2016 AND 2018

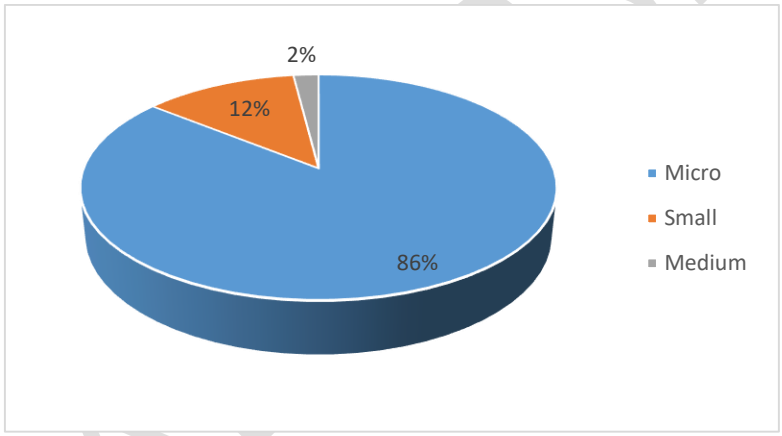


*Figure 68 for distribution of ICT SMEs by size with the largest market in terms of turnover between 2016 and 2018 - Enterprises which sell goods and/or services in national market-498*

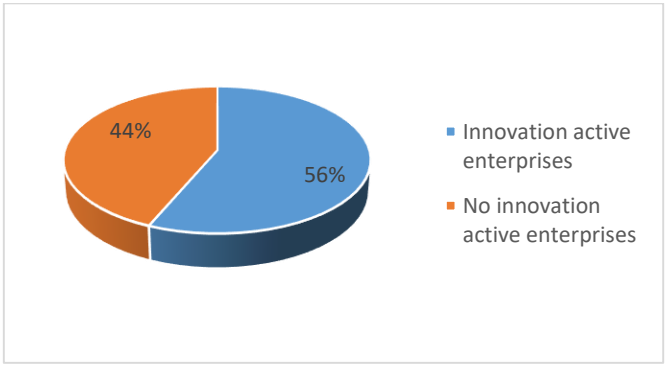


*Figure 69 for distribution of ICT SMEs by innovation activity with the largest market in terms of turnover between 2016 and 2018 - Enterprises which sell goods and/or services in national market-498*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

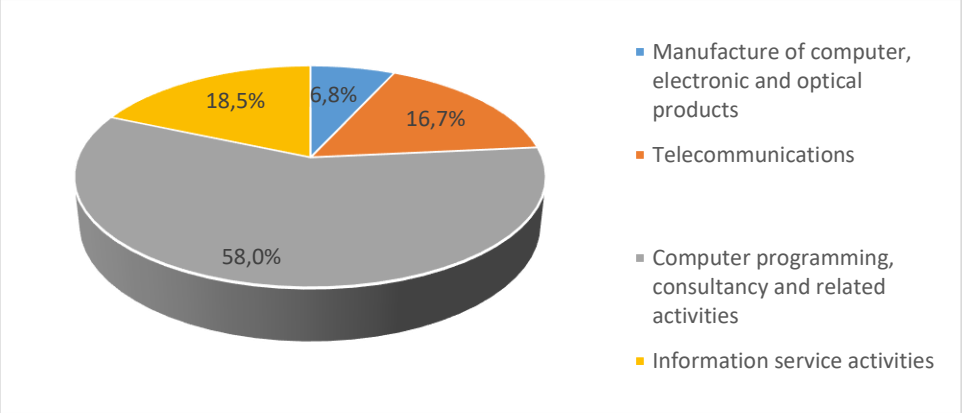


*Figure 70 for distribution of SMEs by ICT sub-sector with the largest market in terms of turnover between 2016 and 2018 - Enterprises which sell goods and/or services in national market-498*

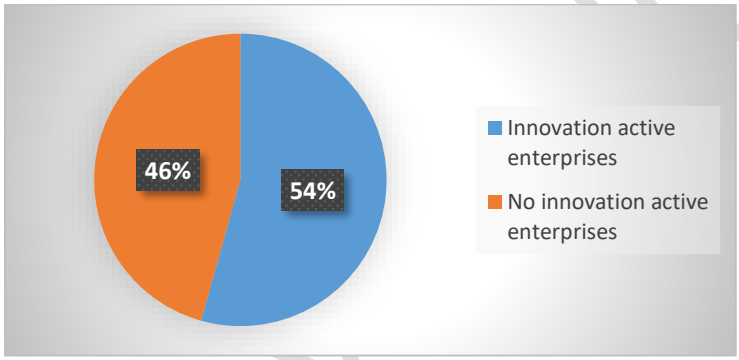


*Figure 71 for distribution of ICT micro companies by innovation activity with the largest market in terms of turnover between 2016 and 2018 - Enterprises which sell goods and/or services in national market --427*

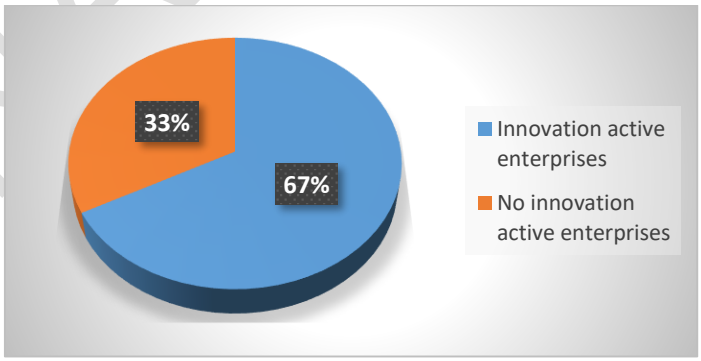


*Figure 72 for distribution of ICT small companies by innovation activity with the largest market in terms of turnover between 2016 and 2018 - Enterprises which sell goods and/or services in national market-61*





*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

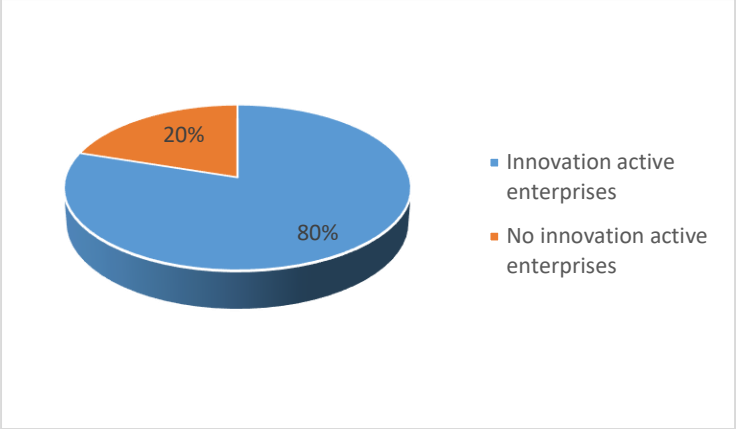


*Figure 73 for distribution of ICT medium companies by innovation activity with the largest market in terms of turnover between 2016 and 2018- Enterprises which sell goods and/or services in national market-10*

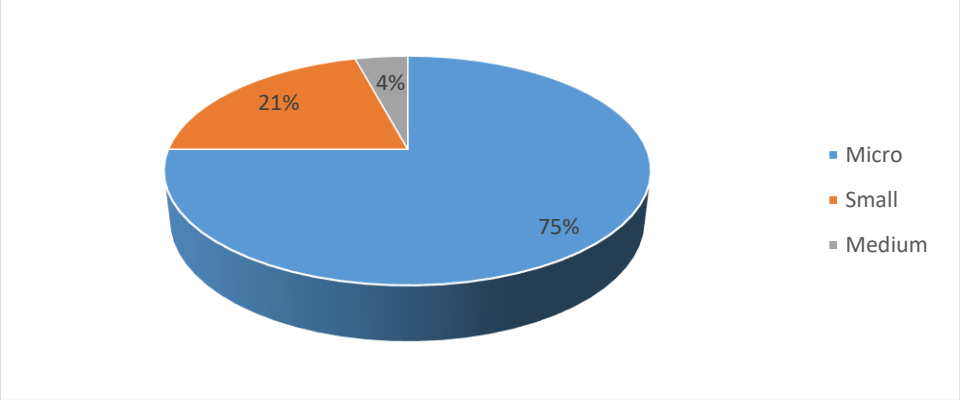


*Figure 74 for distribution of ICT SMEs by size which sell goods and/or services in regional market (AL, CY, MK, GR)-24*

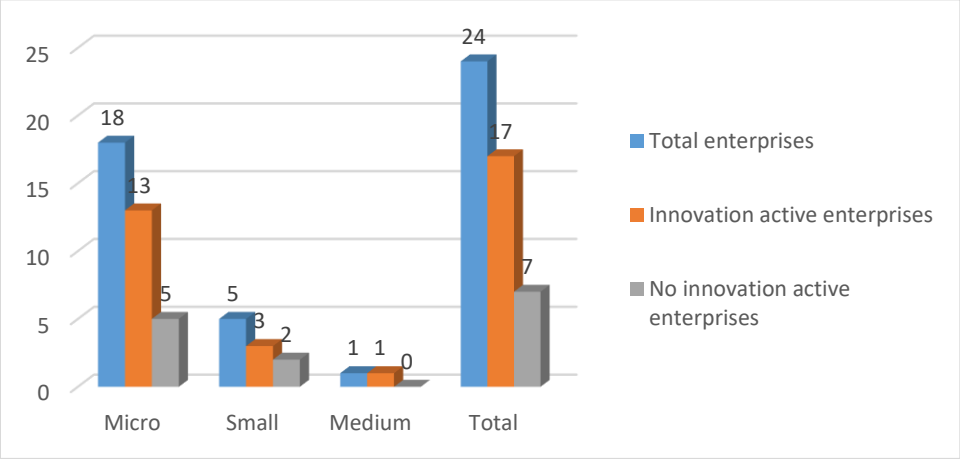


*Figure 75 for distribution by innovation activity of ICT SMEs which sell goods and/or services in regional market (AL, CY, MK, GR)-24*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

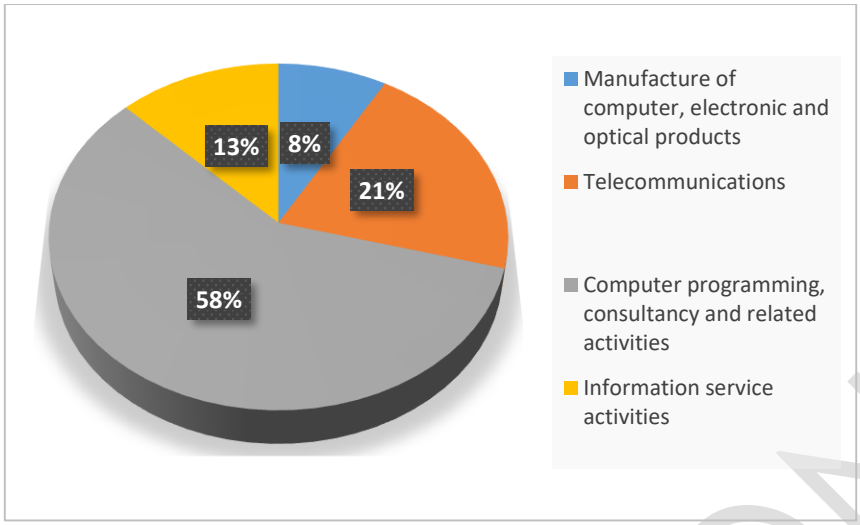


*Figure 76 for distribution by sub-sectors of ICT SMEs which sell goods and/or services in regional market (AL, CY, MK, GR)-24*

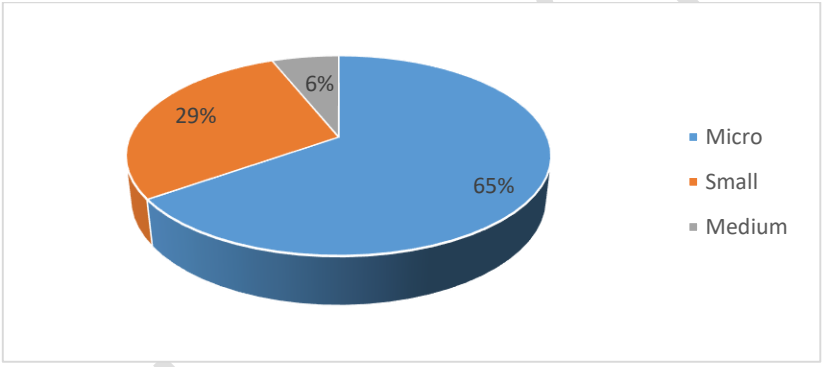


*Figure 77 for distribution by size of ICT SMEs which sell goods and/or services in other EU and EFTA countries-115*

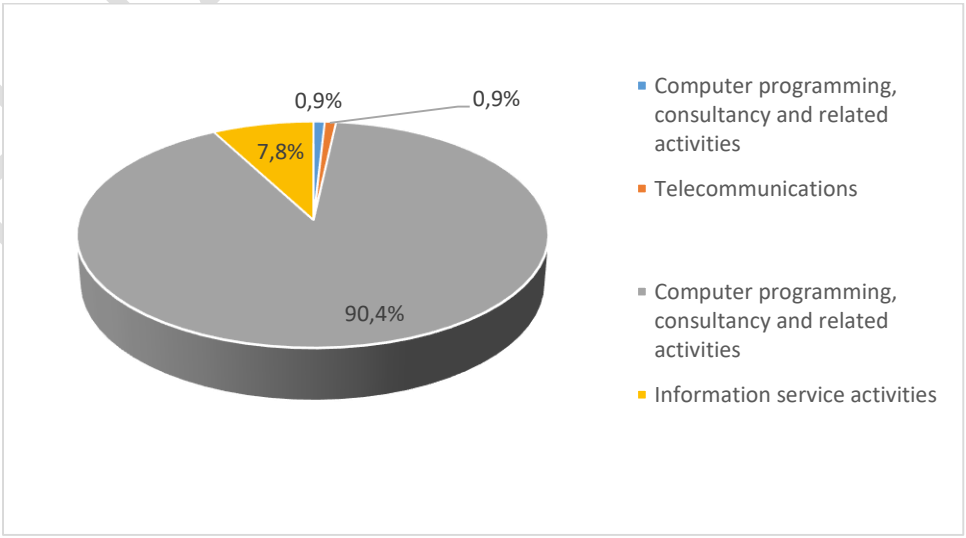


*Figure 78 for distribution by ICT sub-sector of SMEs which sell goods and/or services in other EU and EFTA countries-115*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

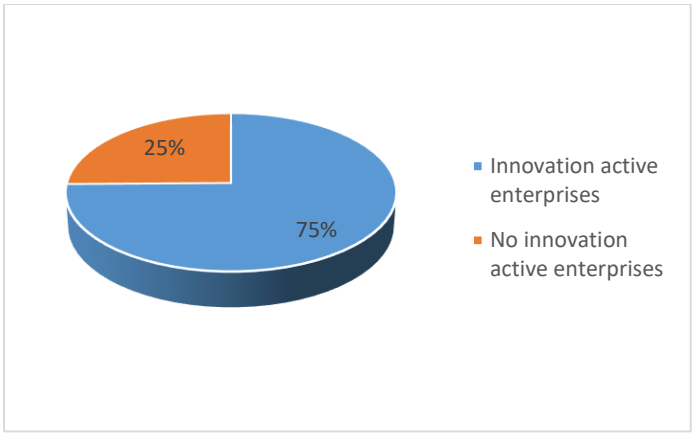


*Figure 79 for distribution by innovation activity of ICT SMEs which sell goods and/or services in other EU and EFTA countries-115*

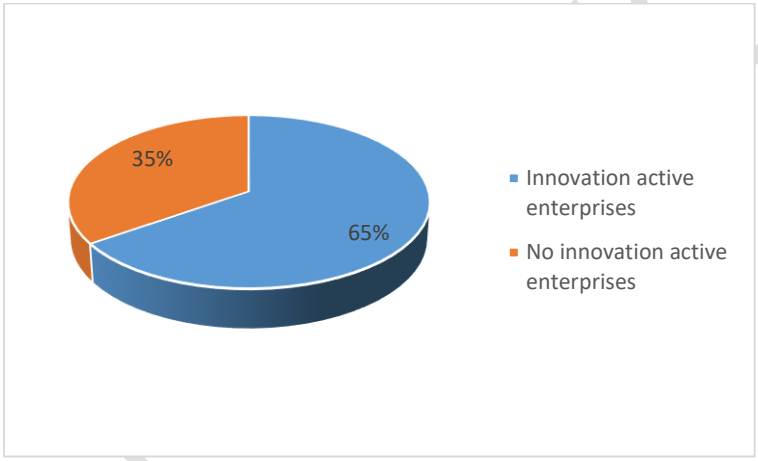


*Figure 80 for distribution by innovation activity of ICT micro companies which sell goods and/or services in other EU and EFTA countries-75*

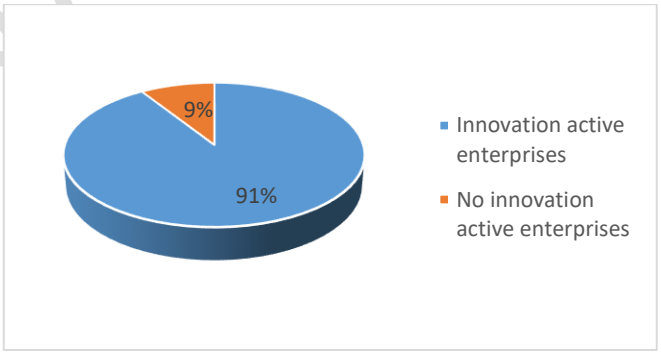


*Figure 81 for distribution by innovation activity of ICT small companies which sell goods and/or services in other EU and EFTA countries.-33*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

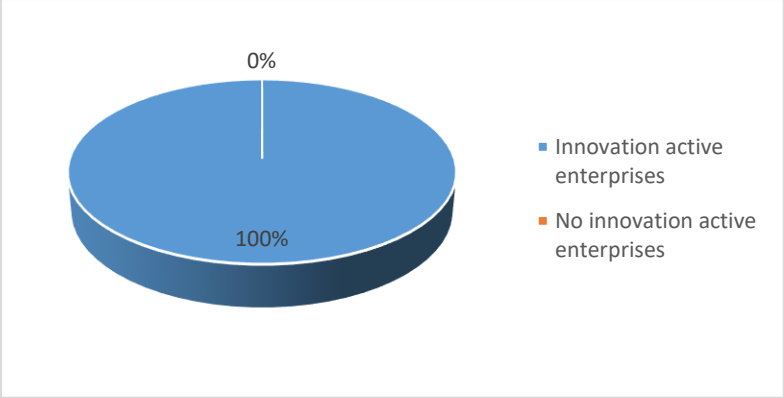


*Figure 82 for distribution by innovation activity of ICT medium sized companies which sell goods and/or services in other EU and EFTA countries-7*

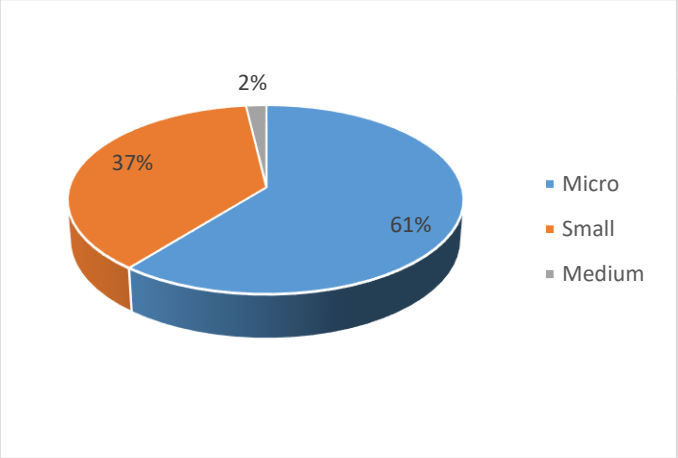


*Figure 83 for distribution by size of ICT SMEs which sell goods and/or services to other countries. -107*



*Figure 84 for distribution by ICT sub-sector of SMEs which sell goods and/or services to other countries - INCORRECT DISTRUBUTION BY SUBSECTOR IN DATA (MARKED WITH RED IN THE DATA FILE) - PLEASE CHECK THE DATA*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

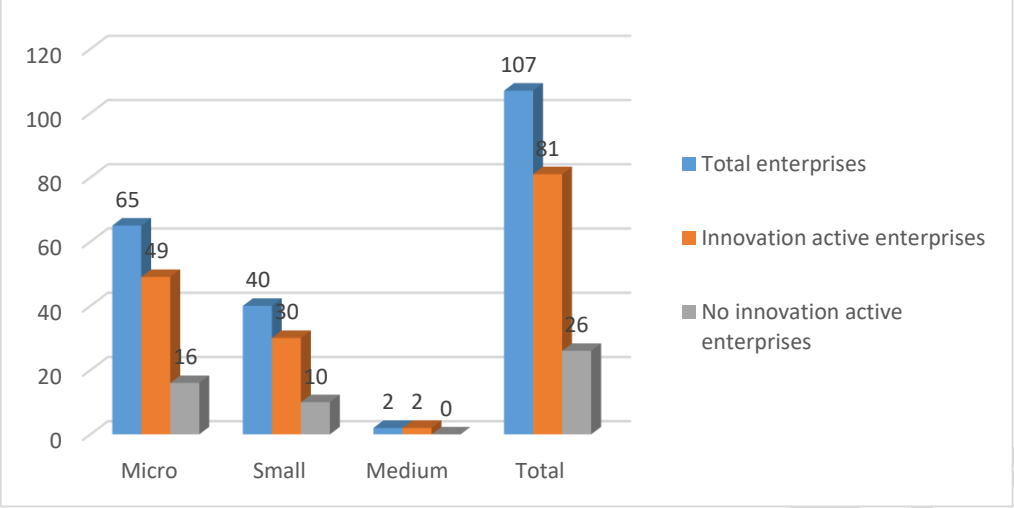


*Figure 85 for distribution by innovation activity of ICT SMEs which sell goods and/or services to other countries.-107*

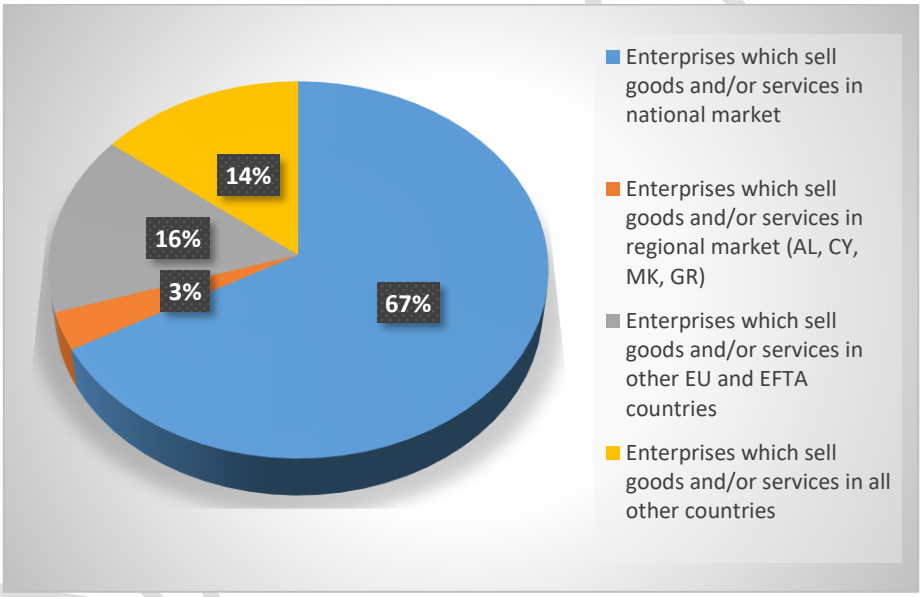


*Figure 86 Geographic areas with the largest market in terms of turnover between 2016 and 2018 -744*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

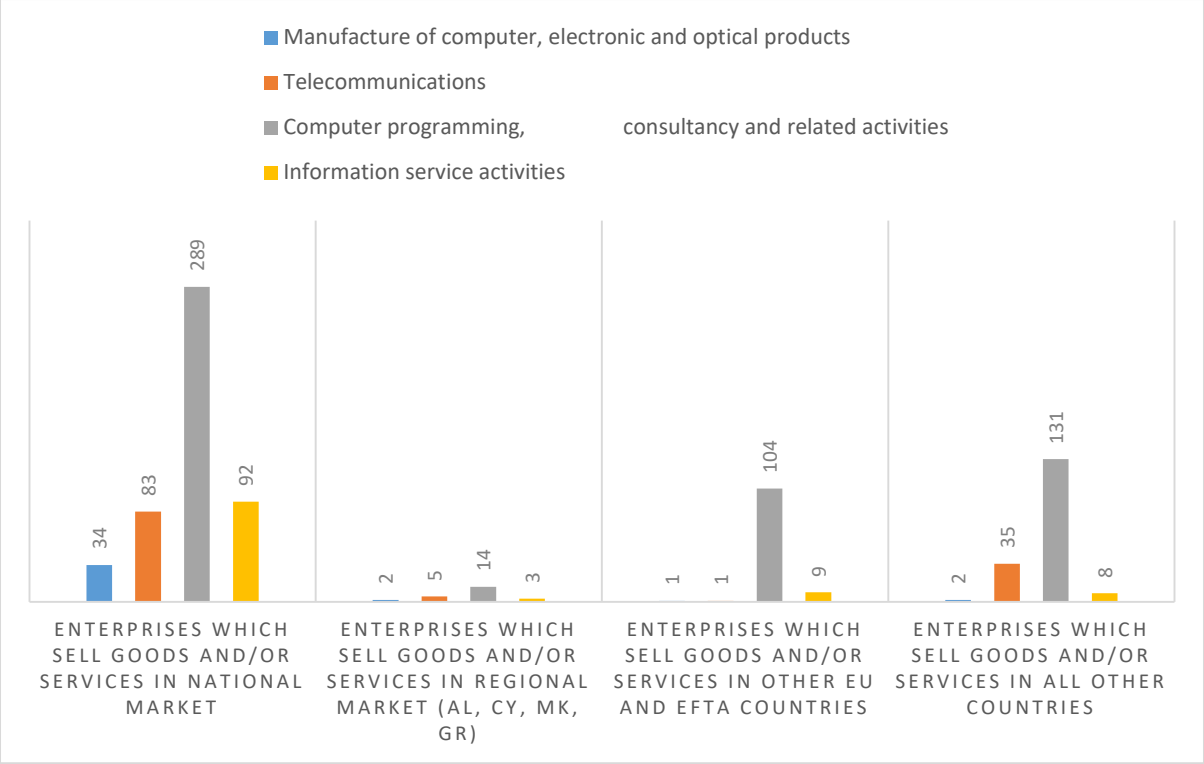


*Figure 87 Geographic areas with the largest market in terms of turnover by sub-sectors between 2016 and 2018 -744*

### CONCLUSIONS

(1) The bigest share is enterprises which sell goods and/or services in national market with 83% micro enteprises, and 62% share of sub-sector Computer programing, consultancy and related activities.

(2) The share of Innovative active enterpises is between 73 and 80% with dominant sgare of micro enterpises and sub-sector Computer programing, consultancy and related activities.

(3) Geographic areas with the largest market in terms of turnover between 2016 and 2018 is national market -67%, other EU and EFTA countries -16%, All other countris -14, and regional market 3%.



## 4. ENTERPRISES BY TYPE OF BUSINESS STRATEGY APPLIED, IMPORTANCE OF THE STRATEGY

Importance of business strategy is analised in terms of focus on good and services, consumers and prices.



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

### FOCUS OF GOODS AND SERVICES

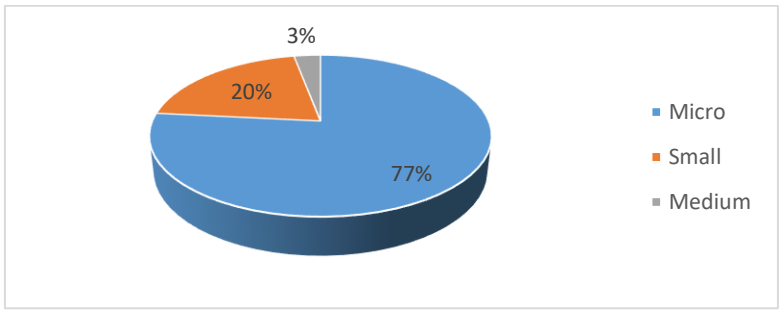


*Figure 88 for distribution by size of ICT Enterprises with high or medium focus on existing goods or services-637*

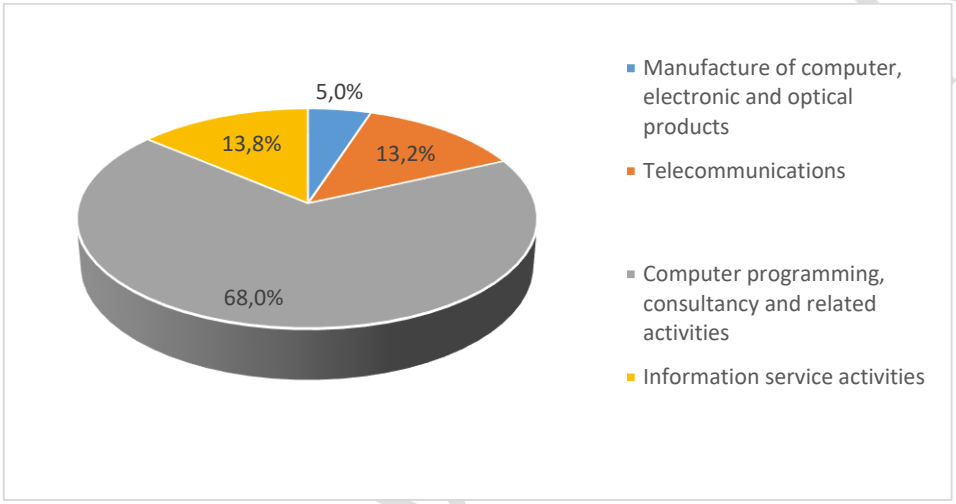


*Figure 89 for distribution by ICT sub-sectors of Enterprises with high or medium focus on existing goods or services-637*

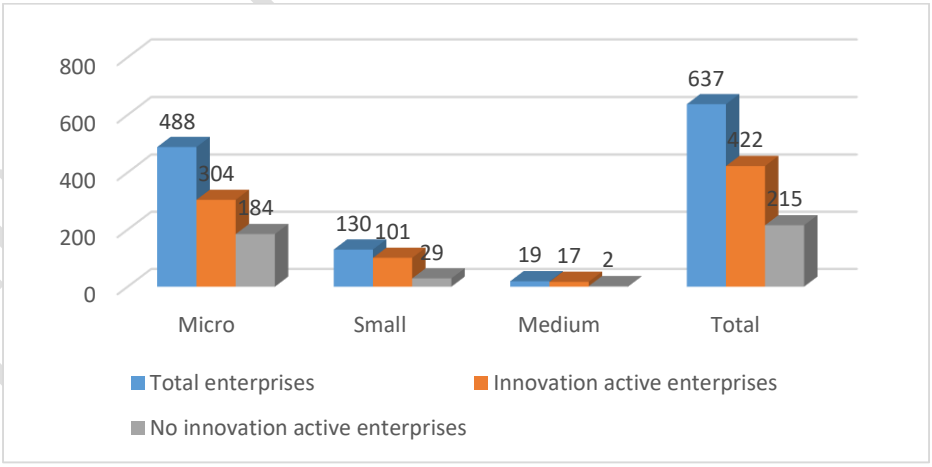


*Figure 90 for distribution by innovation activity of ICT Enterprises with high or medium focus on existing goods or services-637*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

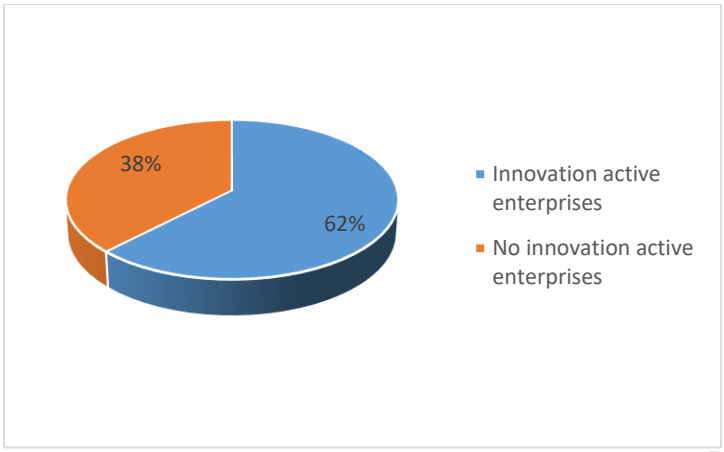


*Figure 91 for distribution by innovation activity of ICT micro Enterprises with high or medium focus on existing goods or services-488*

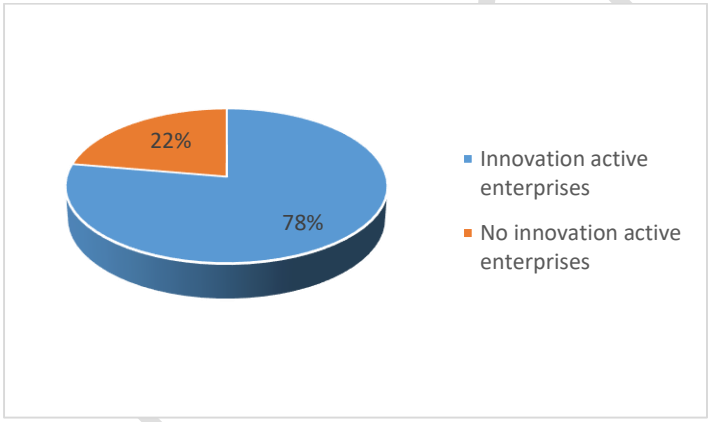


*Figure 92 for distribution by innovation activity of ICT small Enterprises with high or medium focus on existing goods or services-130*

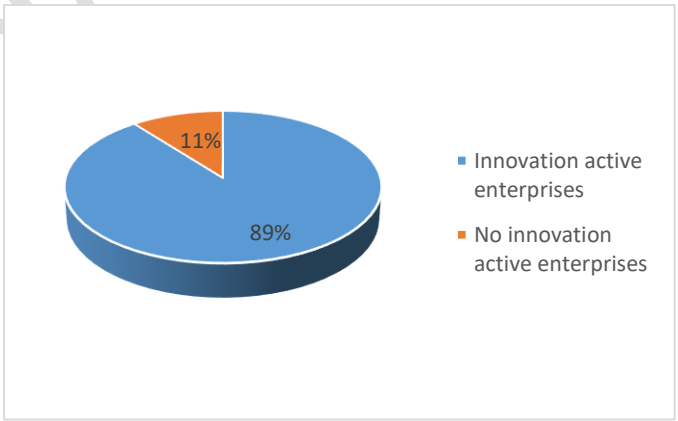


*Figure 93 for distribution by innovation activity of ICT medium sized Enterprises with high or medium focus on existing goods or services -19*





*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

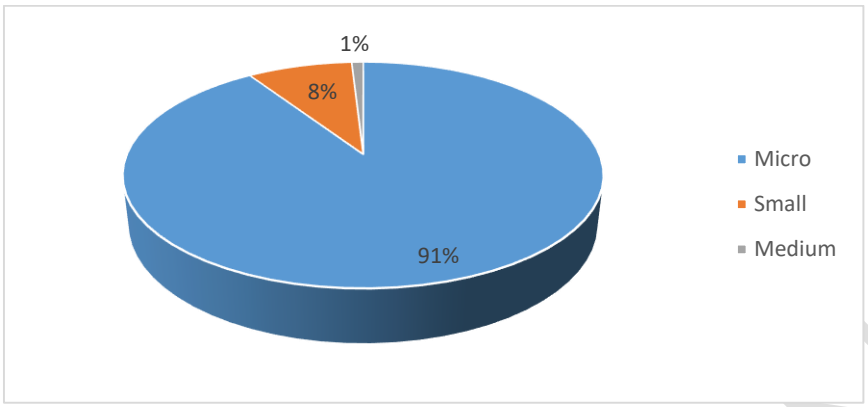


*Figure 94 for distribution by size of ICT Enterprises with no or low focus on existing goods or services-107*

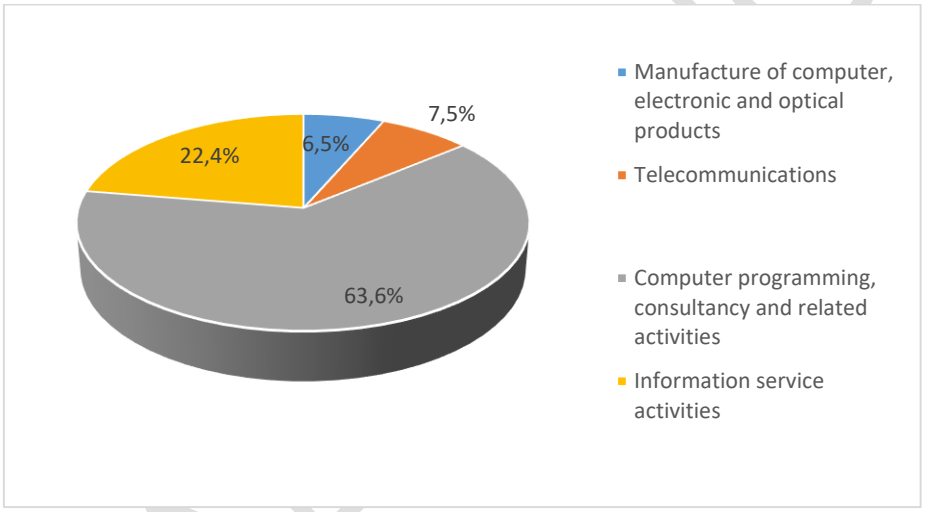


*Figure 95 for distribution by ICT sub-sectors of Enterprises with no or low focus on existing goods or services-107*

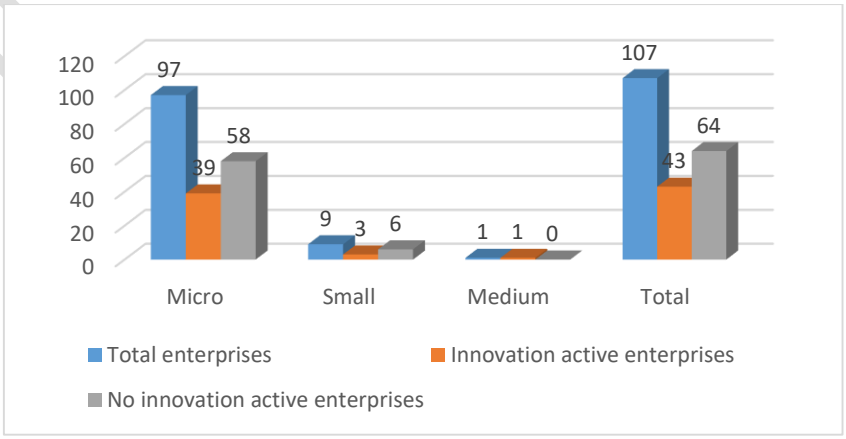


*Figure 96 for distribution by innovation activity of ICT Enterprises with no or low focus on existing goods or services*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

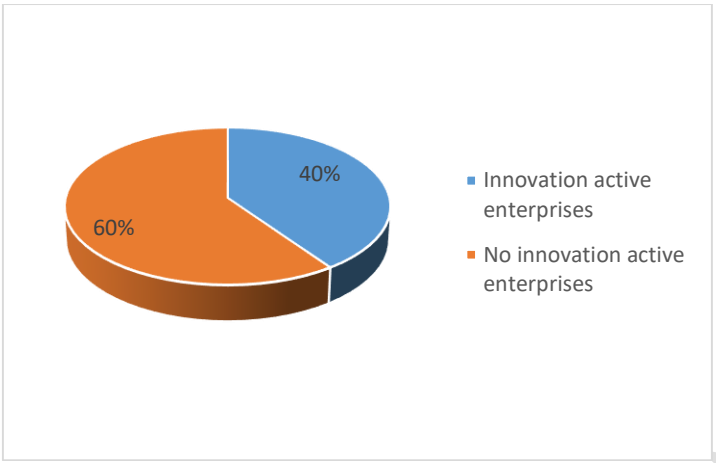


*Figure 97 for distribution by innovation activity of ICT micro enterprises with no or low focus on existing goods or services-97*

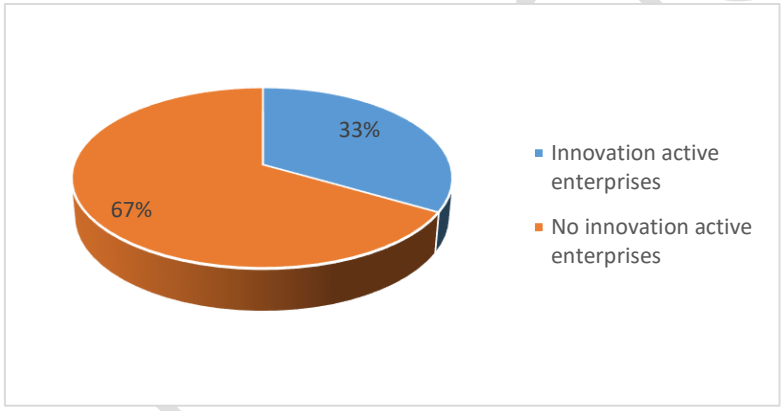


*Figure 98 for distribution by size of ICT small enterprises with no or low focus on existing goods or services-9*

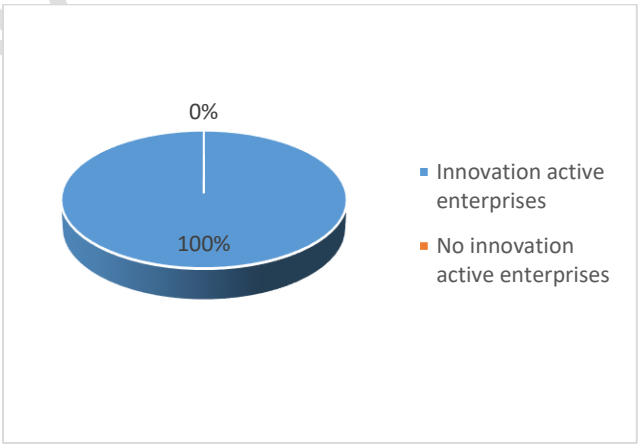


*Figure 99 for distribution by size of ICT medium enterprises with no or low focus on existing goods or services-1*





*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

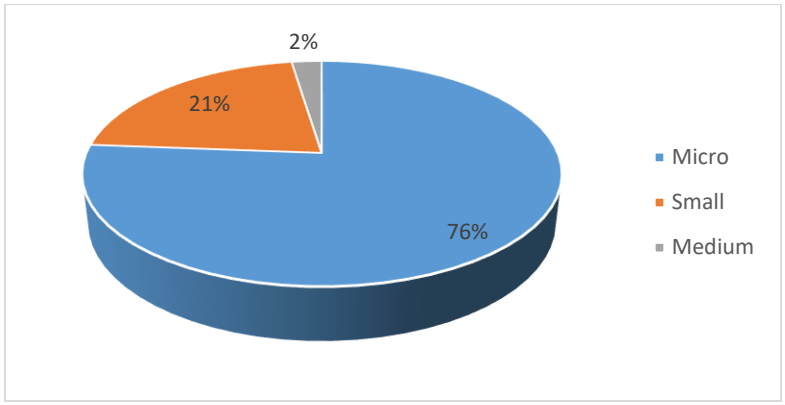


*Figure 100 of distribution by size of ICT SMEs with high or medium focus on new goods or services-496*

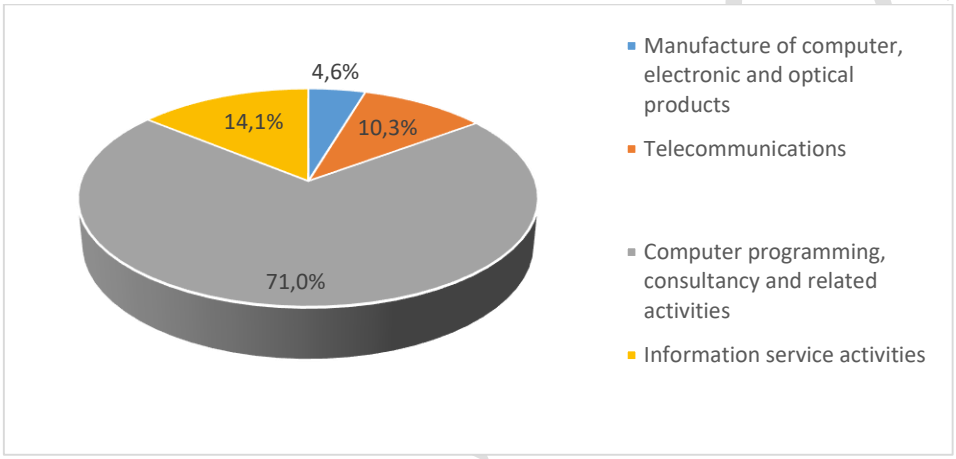


*Figure 101 of distribution by ICT sub-sectors of SMEs with high or medium focus on new goods or services-496*

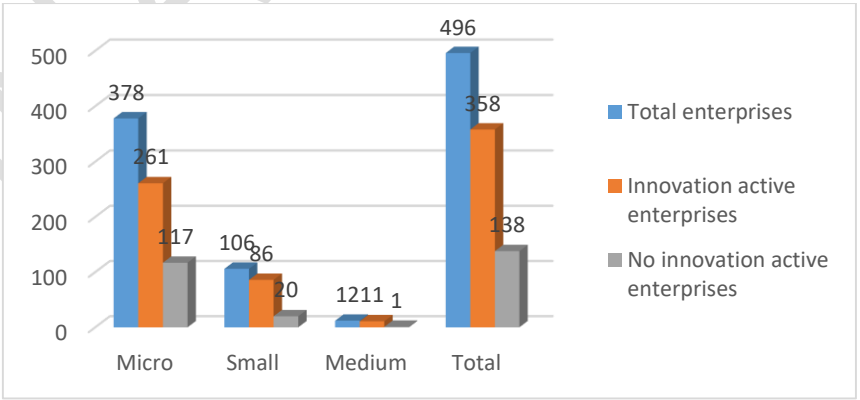


*Figure 102 of distribution by innovation activity of ICT SMEs with high or medium focus on new goods or services*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

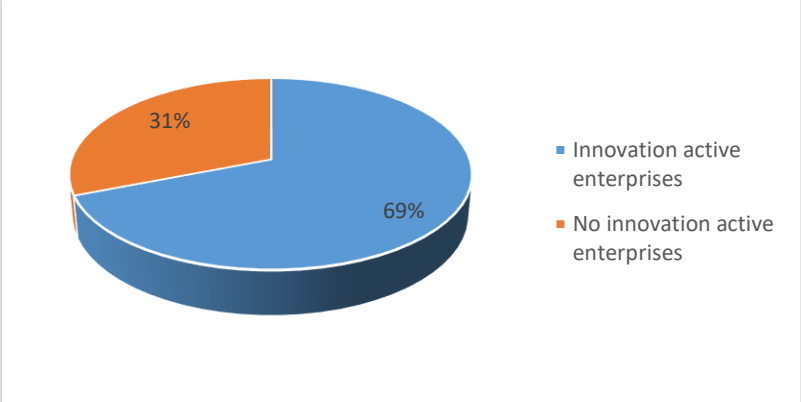


*Figure 103 of distribution by innovation activity of ICT micro companies with high or medium focus on new goods or services-378*

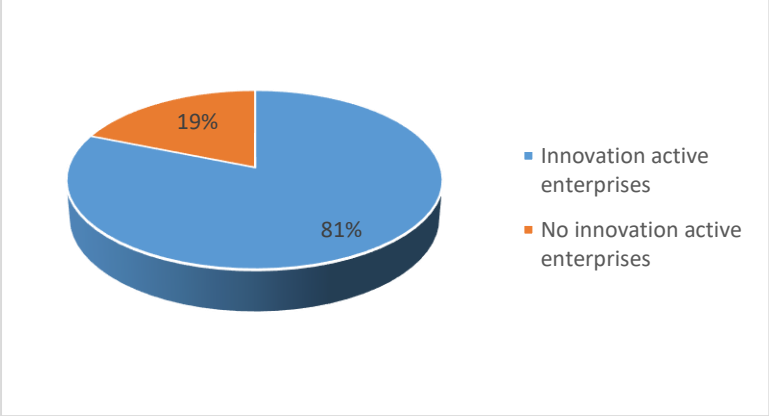


*Figure 104 of distribution by innovation activity of ICT small companies with high or medium focus on new goods or services-106*

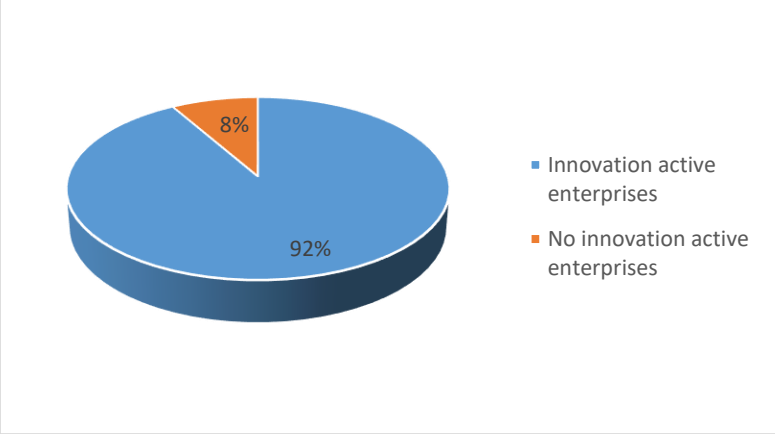


*Figure 105 of distribution by innovation activity of ICT medium companies with high or medium focus on new goods or services*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

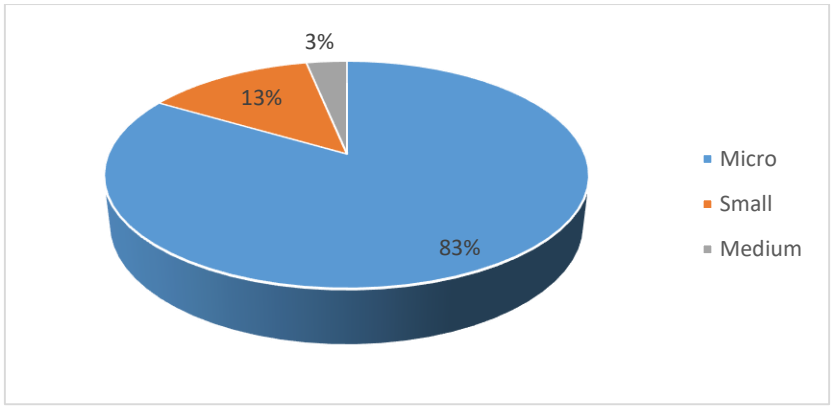


*Figure 106 of distribution by size of ICT SMEs with no or low focus on new goods or services-248*

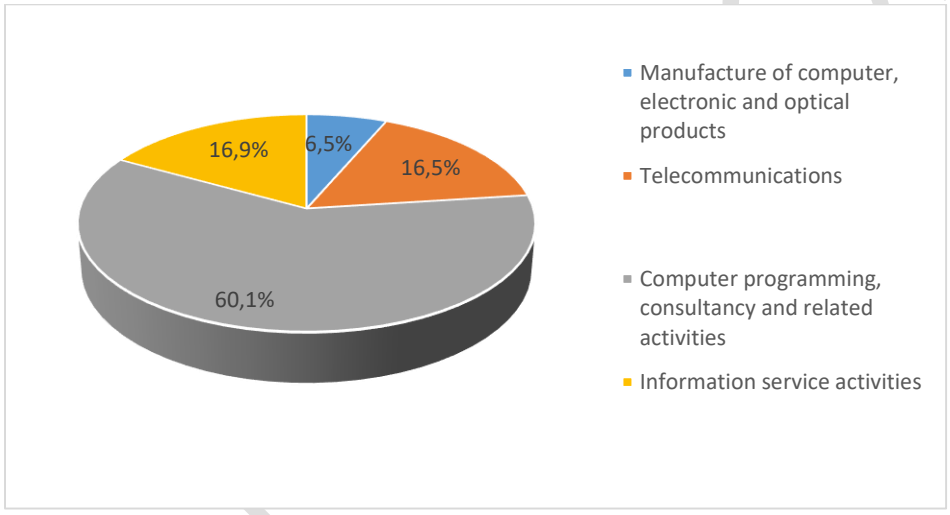


*Figure 107 of distribution by ICT sub-sectors of SMEs with no or low focus on new goods or services-248*

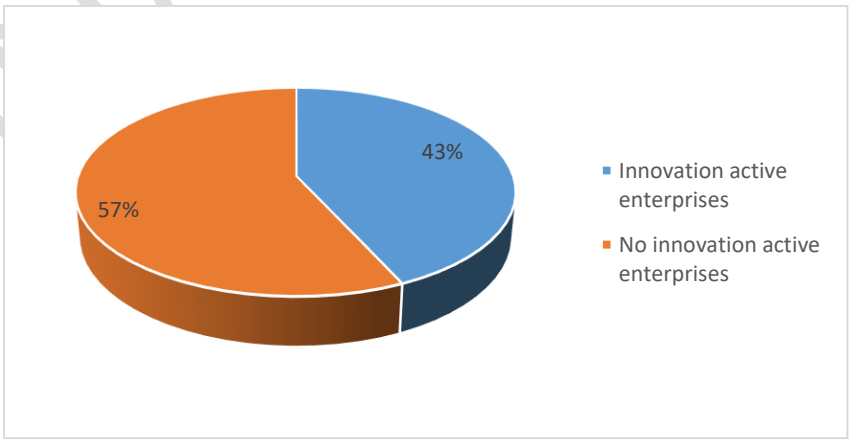


*Figure 108 of distribution by innovation activity of ICT SMEs with no or low focus on new goods or services-248*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

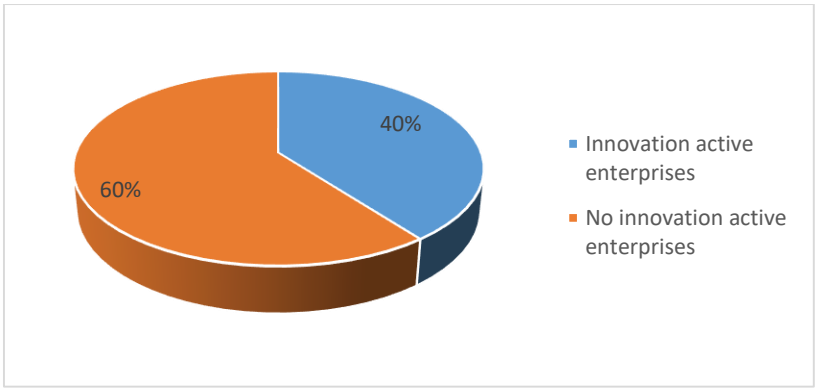


*Figure 109 of distribution by size of ICT micro companies with no or low focus on new goods or services-207*

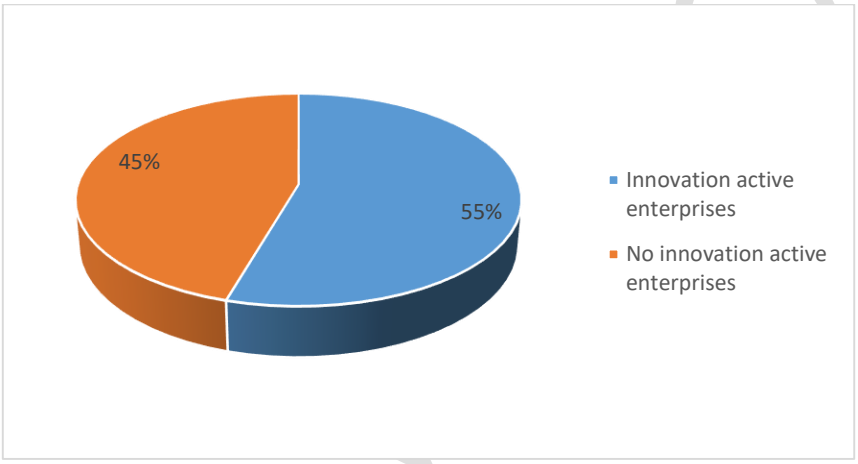


*Figure 110 of distribution by size of ICT small companies with no or low focus on new goods or services-33*

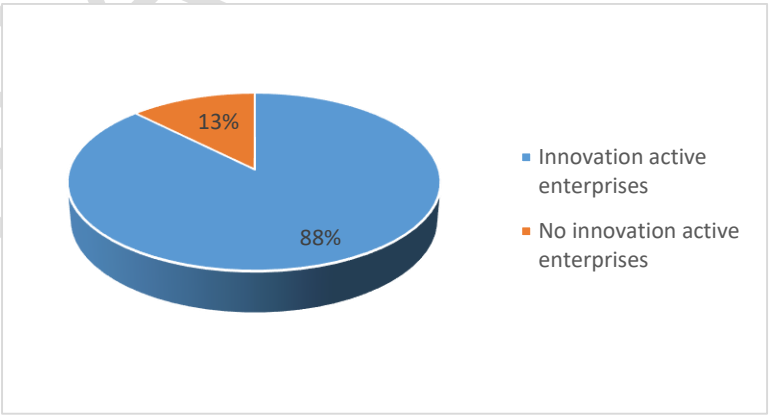


*Figure 111 of distribution by size of ICT medium sized companies with no or low focus on new goods or services-8*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

### FOCUS ON CONSUMERS GROUPS

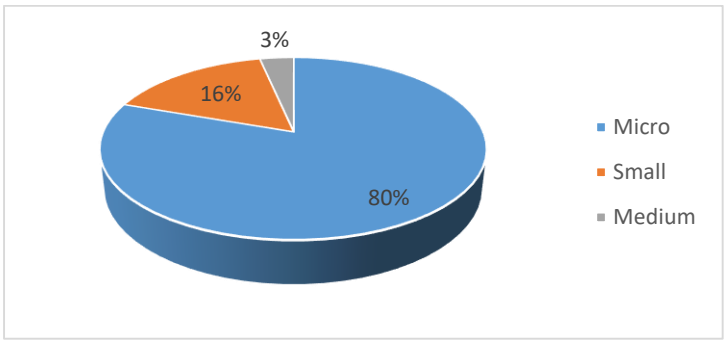


*Figure 112 of distribution by size of ICT Enterprises with high or medium focus on reaching new customer groups-178*

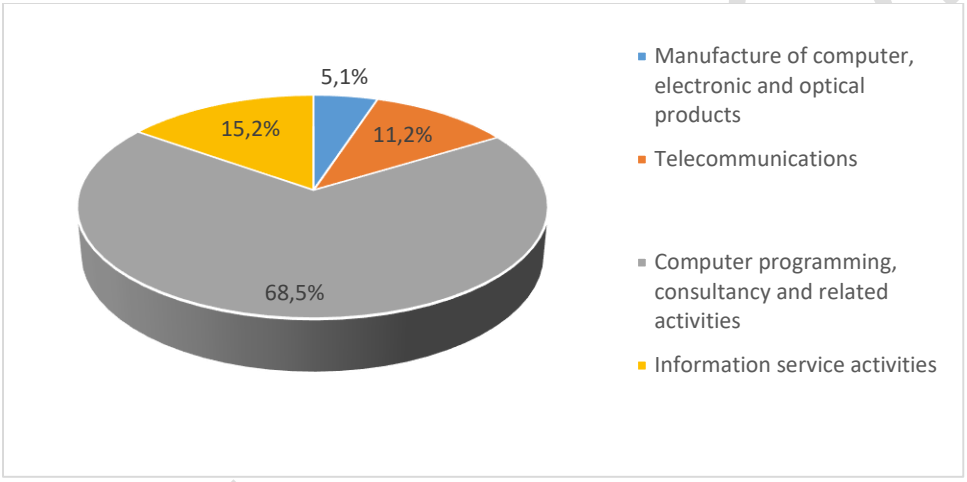


*Figure 113 of distribution by ICT sub-sector of Enterprises with high or medium focus on reaching new customer groups-178*

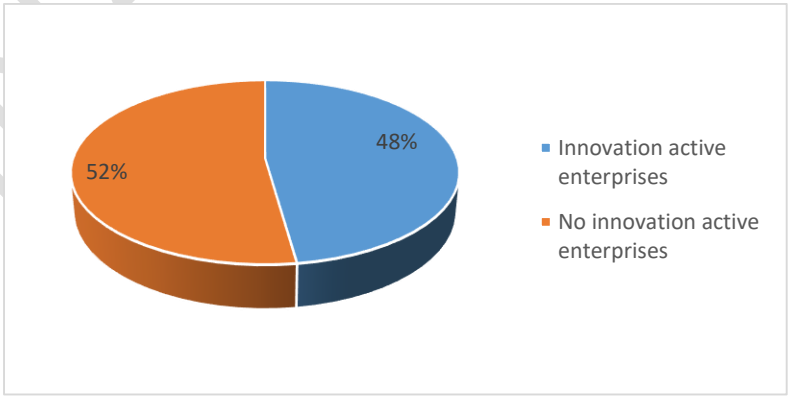


*Figure 114 of distribution by innovation activity of ICT Enterprises with high or medium focus on reaching new customer groups-178*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

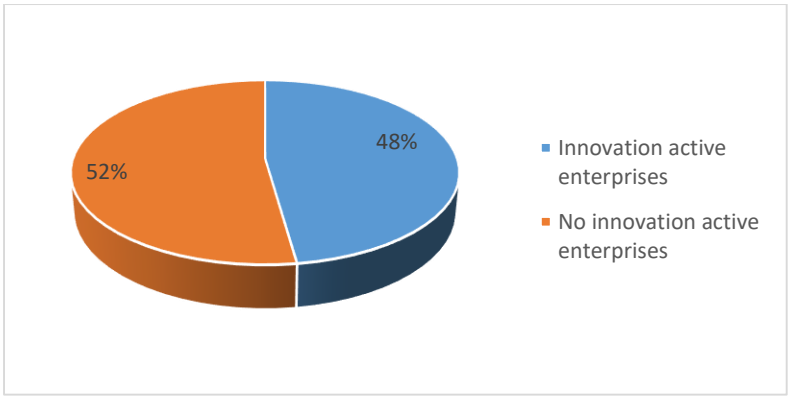


*Figure* 115 *of distribution by innovation activity of ICT micro Enterprises with high or medium focus on reaching new customer groups-143*

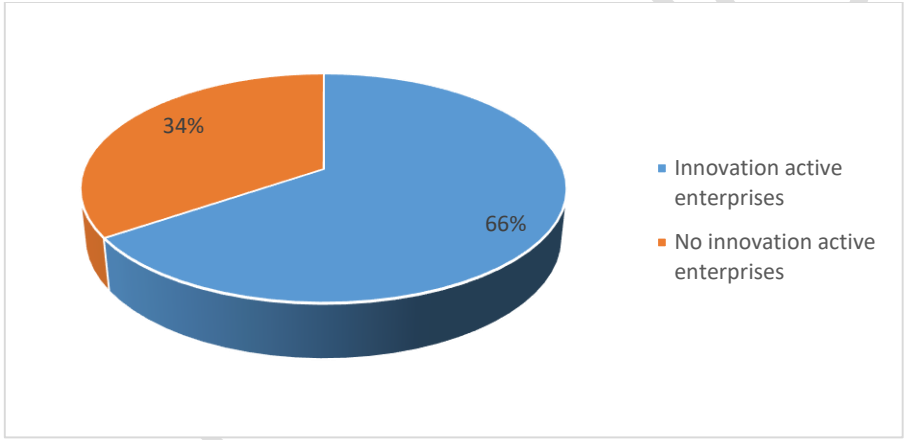


*Figure* 116 *of distribution by innovation activity of ICT small Enterprises with high or medium focus on reaching new customer groups -29*

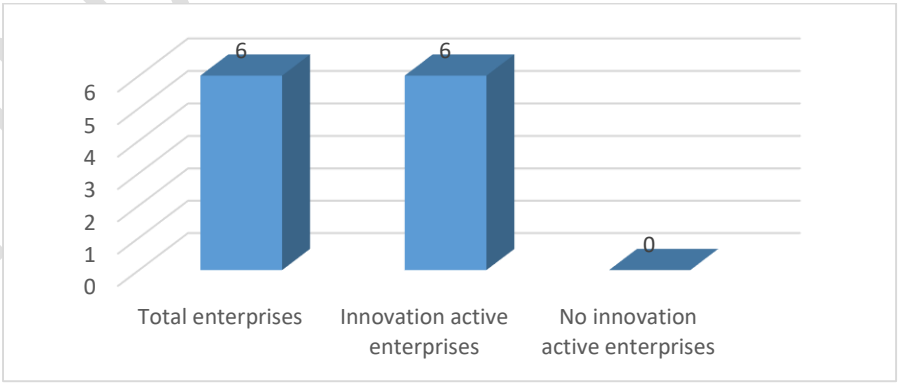


*Figure* 117 *of distribution by innovation activity of ICT medium sized Enterprises with high or medium focus on reaching new customer groups* -6



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

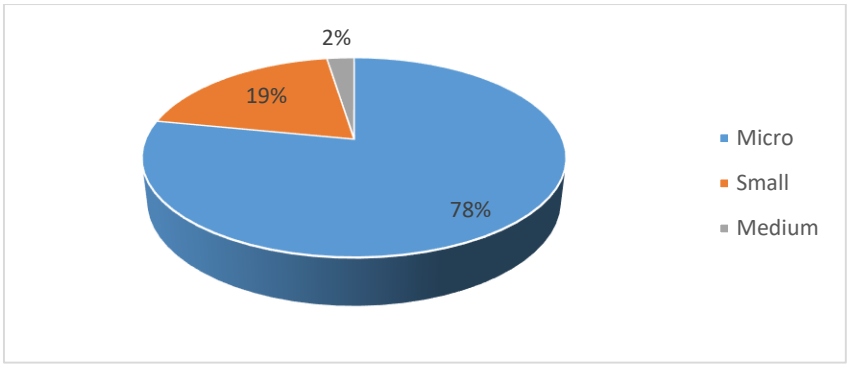


*Figure 118 of distribution by size of ICT Enterprises with no or low focus on reaching new customer groups-566*

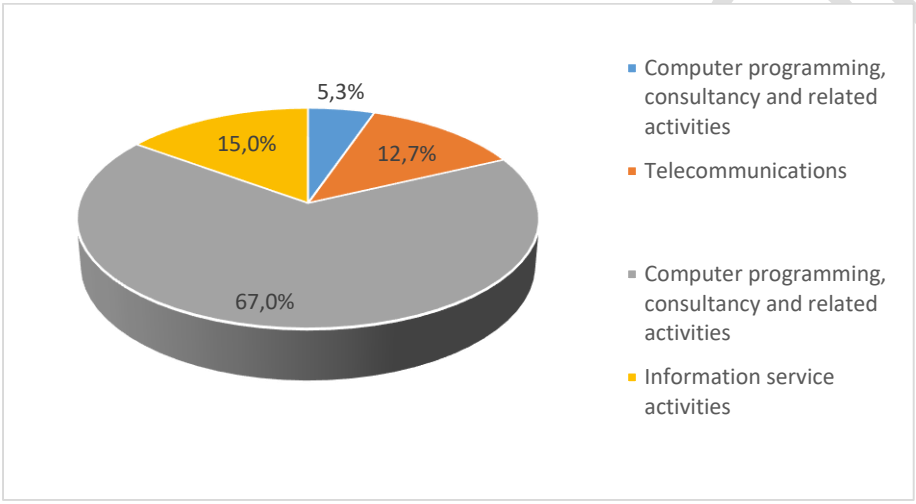


*Figure 119 of distribution by ICT sub-sectors of SMEs with no or low focus on reaching new customer groups-566*

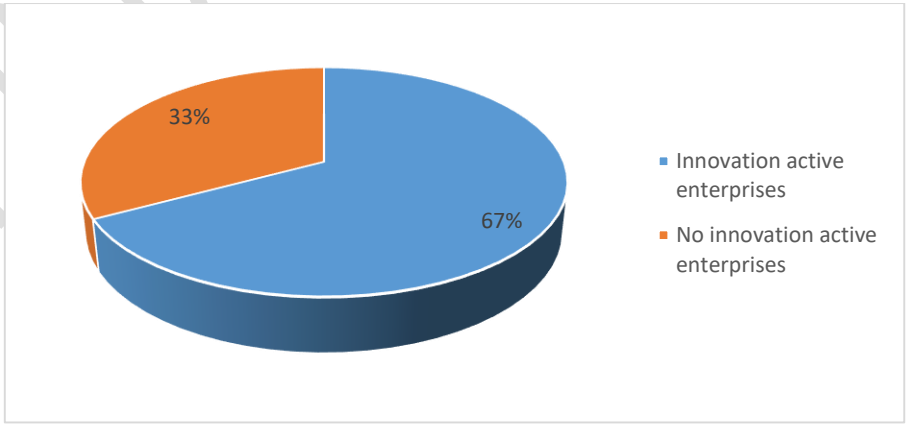


*Figure 120 of distribution by innovation activity of ICT Enterprises with no or low focus on reaching new customer groups.*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

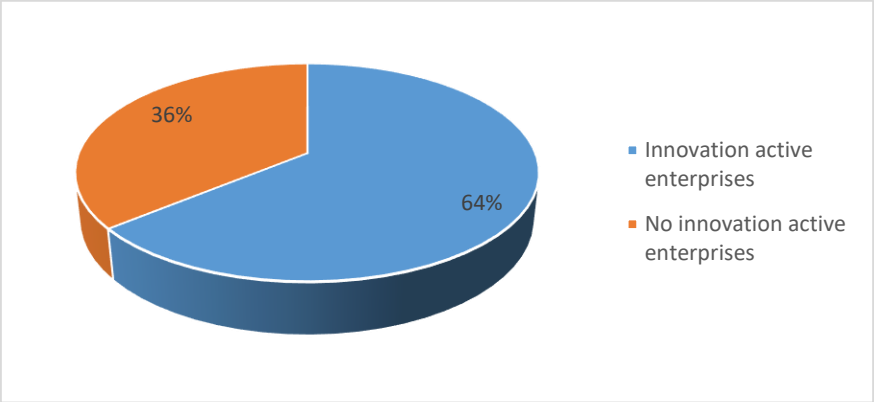


*Figure 121 of distribution by innovation activity of ICT micro Enterprises with no or low focus on reaching new customer groups-422*

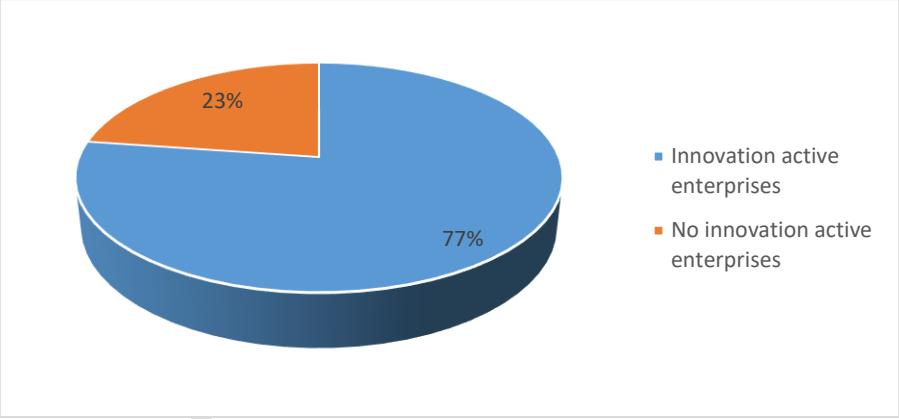


*Figure 122 of distribution by innovation activity of ICT small Enterprises with no or low focus on reaching new customer groups-110*

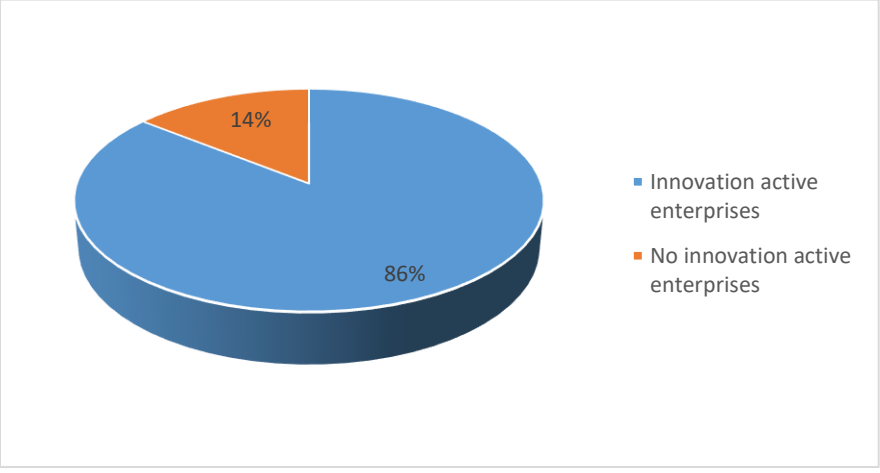


*Figure 123 of distribution by innovation activity of ICT medium sized Enterprises with no or low focus on reaching new customer groups-14*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

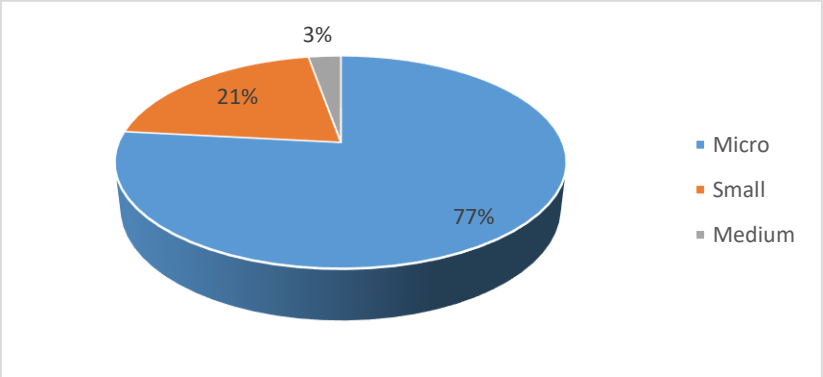


*Figure 124 for distribution by size of ICT SMEs with high or medium focus on customer specific solutions-541*

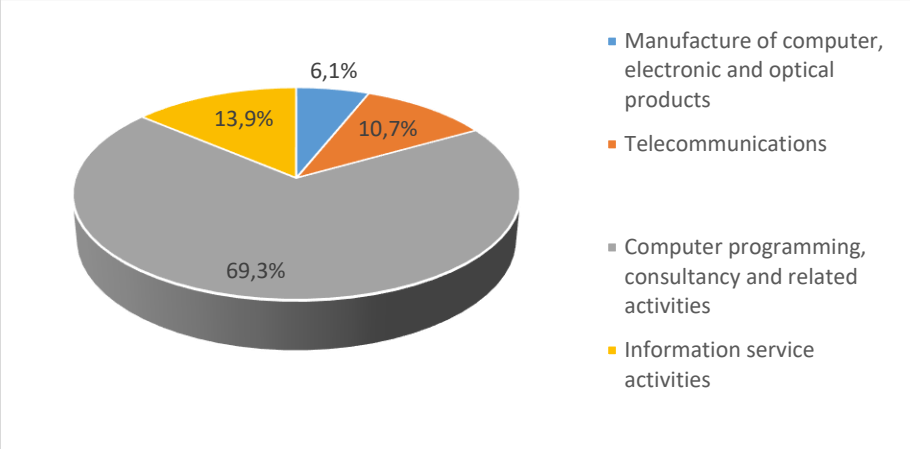


*Figure 125 for distribution by ICT sub-sectors of SMEs with high or medium focus on customer specific solutions-541*

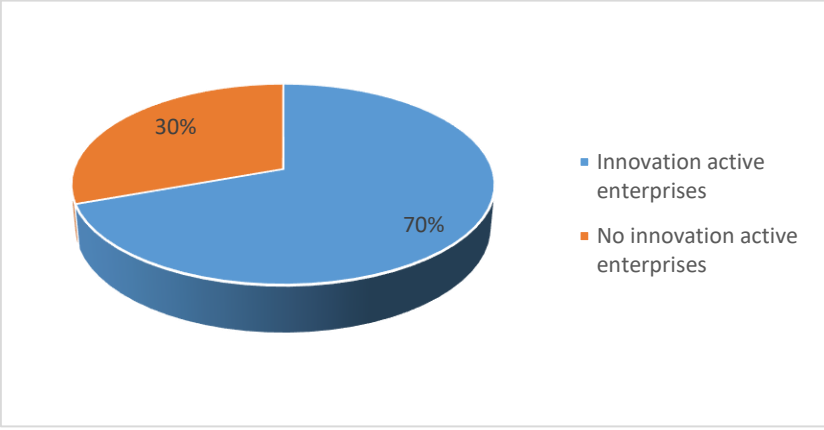


*Figure 126 for distribution by innovation activities of ICT SMEs with high or medium focus on customer specific solutions -541*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

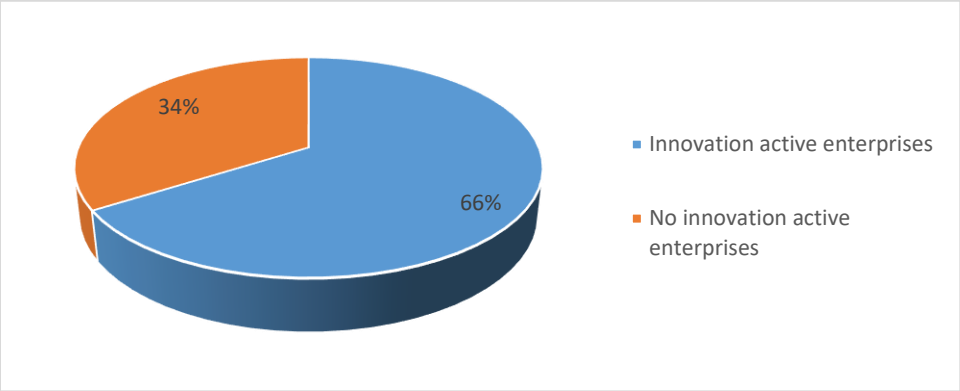


*Figure 127 for distribution by innovation activity of ICT micro enterprises with high or medium focus on customer specific solutions-415*

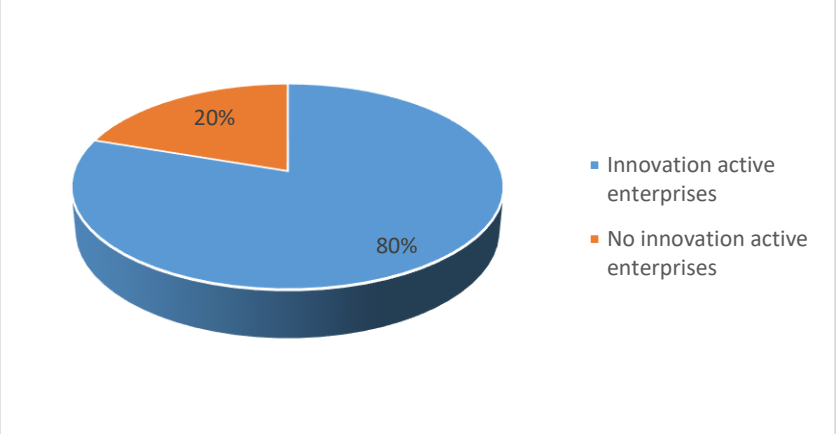


*Figure 128 for distribution by innovation activity of ICT small enterprises with high or medium focus on customer specific solutions-111*

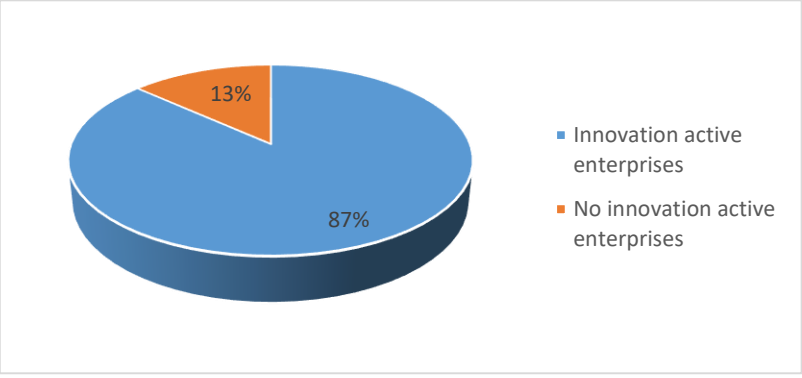


*Figure 129 for distribution by innovation activity of ICT medium sized enterprises with high or medium focus on customer specific solutions-15*





*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

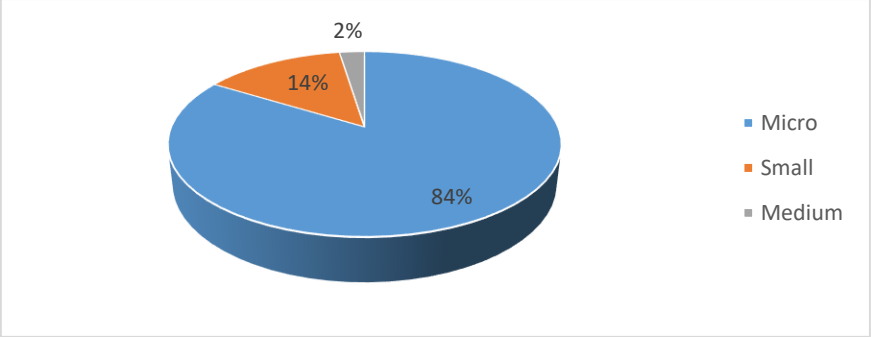


*Figure 130 for distribution by size of ICT enterprises with no or low focus on customer specific solutions -203*

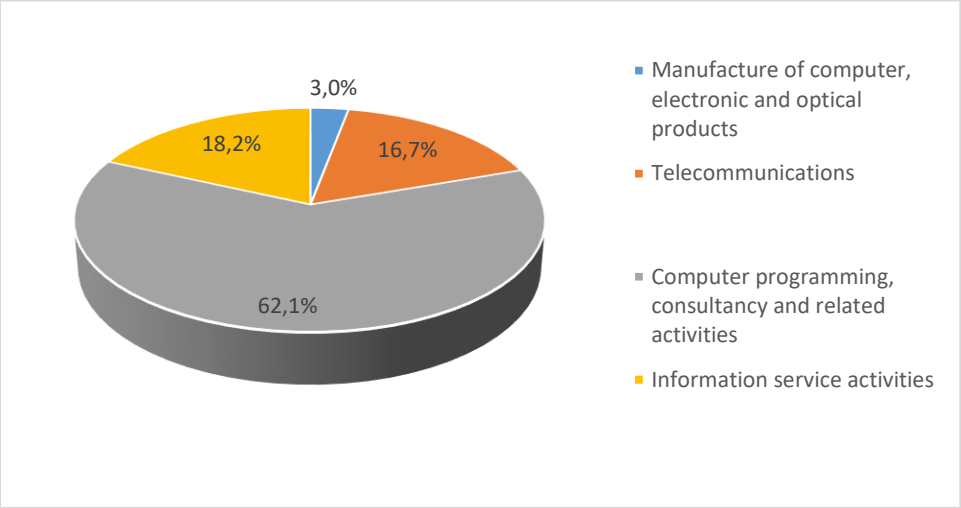


*Figure 131 for distribution by ICT sub-sectors of enterprises with no or low focus on customer specific solutions -203*

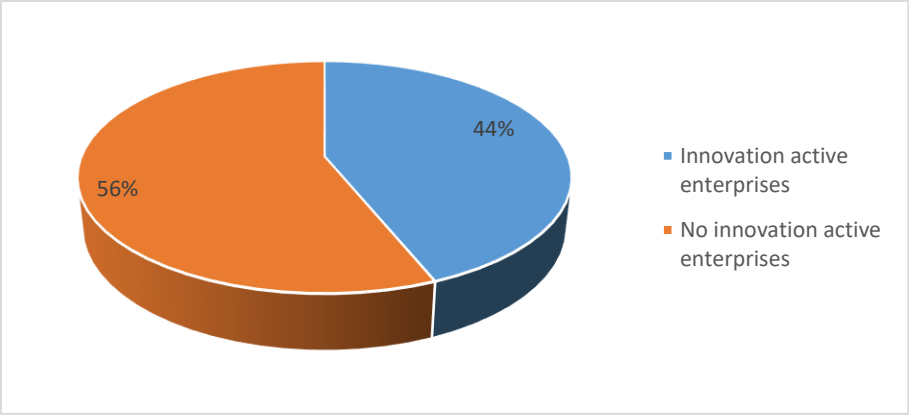


*Figure 132 for distribution by innovation activities of ICT enterprises with no or low focus on customer specific solutions-203*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

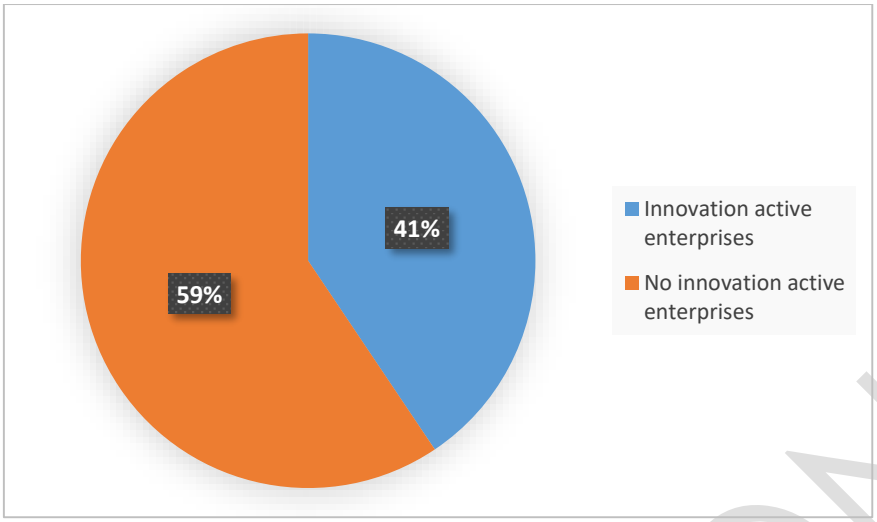


*Figure 133 for distribution by innovation activities of ICT micro enterprises with no or low focus on customer specific solutions-170*

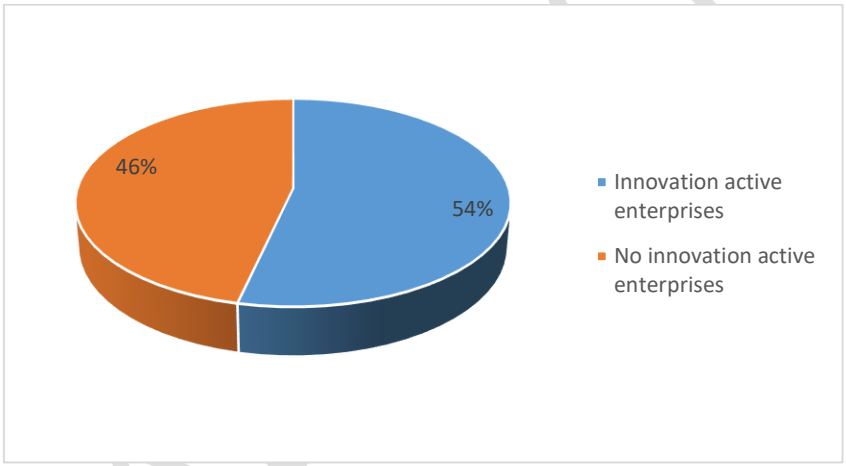


*Figure 134 for distribution by innovation activities of ICT small enterprises with no or low focus on customer specific solutions-28*

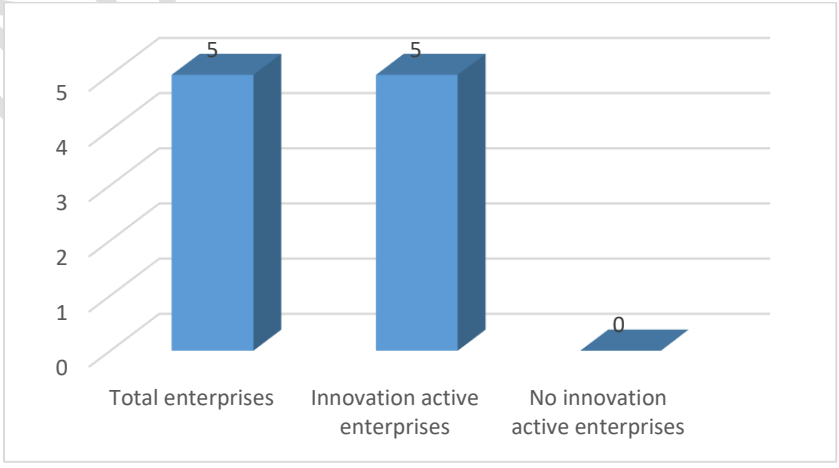


*Figure 135 for distribution by innovation activities of ICT medium sized enterprises with no or low focus on customer specific solutions -5*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

### FOCUS ON PRICE

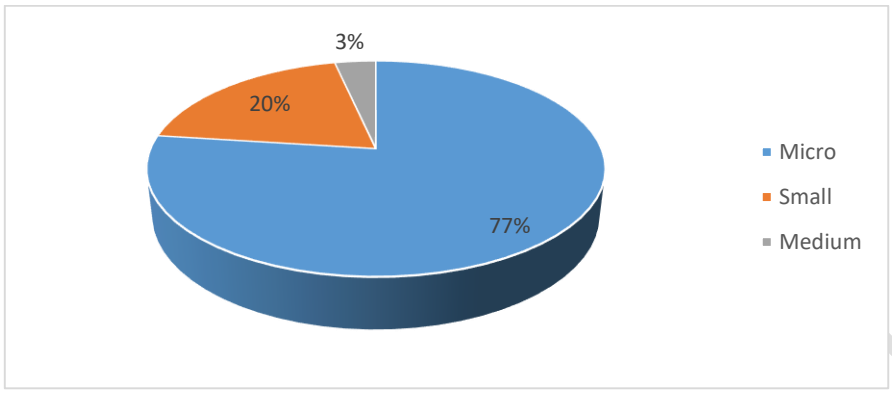


*Figure 136 for distribution by size of ICT enterprises with high or medium focus on low price-405*

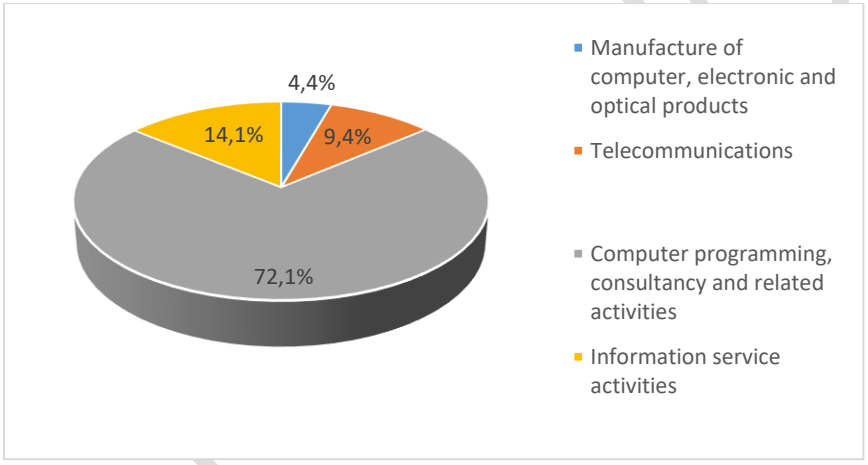


*Figure 137 for distribution by ICT sub-sectors of enterprises with high or medium focus on low price-405*

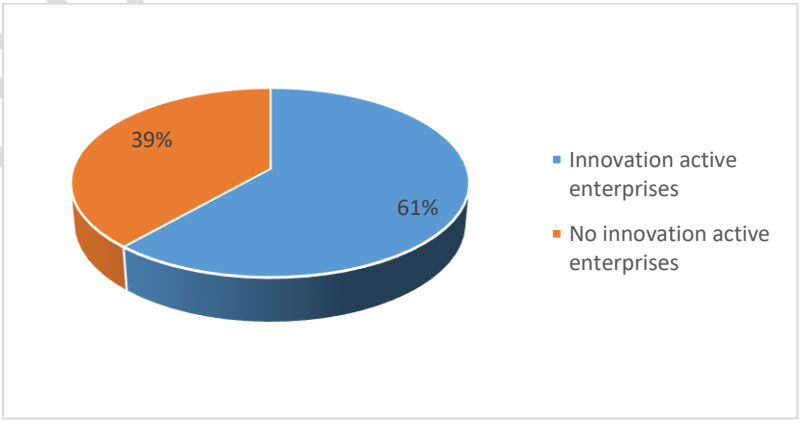


*Figure 138 for distribution by innovation activity of ICT enterprises with high or medium focus on low price-405*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

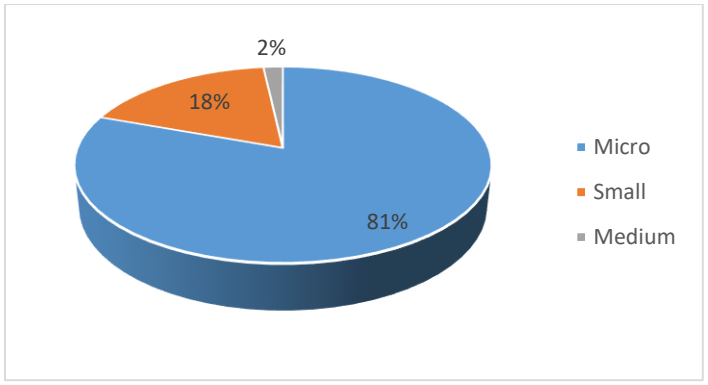


*Figure 139 for distribution by size of ICT enterprises with no or low focus on low price-339*

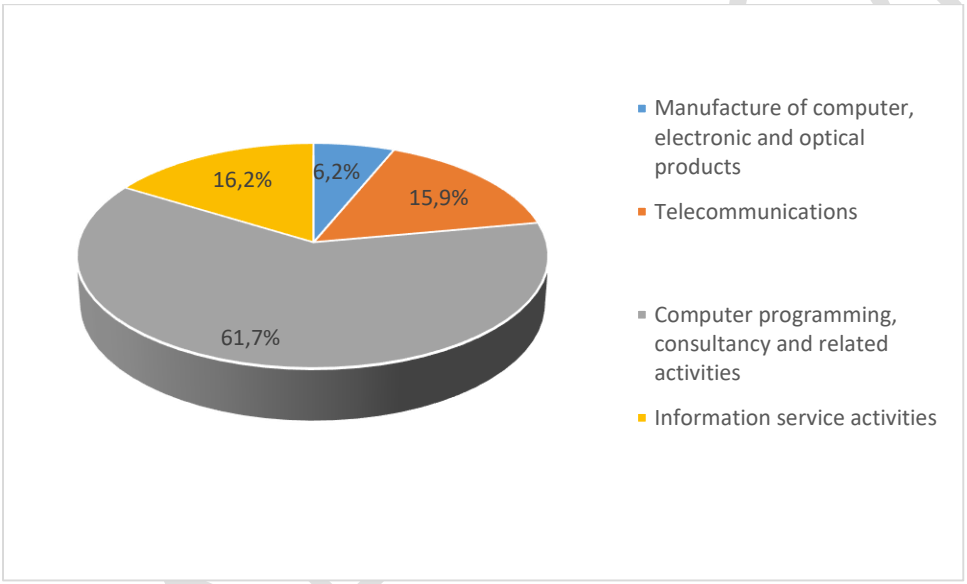


*Figure 140 for distribution by ICT sub-sectors of enterprises with no or low focus on low price-339*

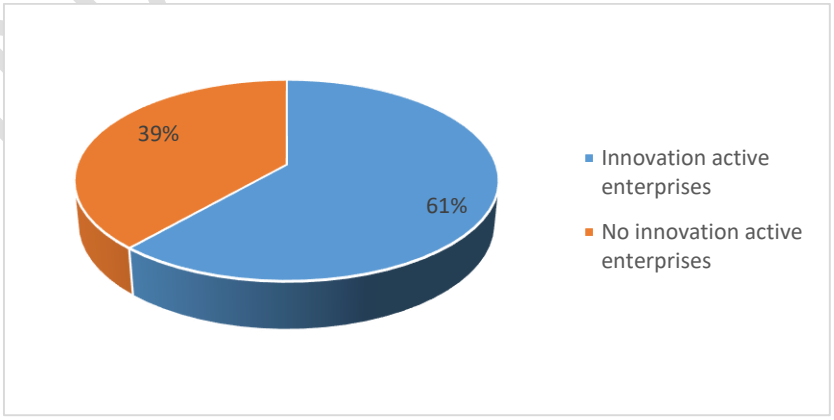


*Figure 141 for distribution by innovation activity of ICT enterprises with no or low focus on low price-405*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

### CONCLUSIONS

(1) Mayority of enterpises (637) is with high or medium focus on existing goods or services and 78% are innovation active enterpises, while 89% (19) are medium. The high or medium focus on new goods or services has 496 enterpises, following the same structure of the enterpises regarding size, sub-sectors and innovation activities

(2) Lower number of ICT SMEs are with high or medium focus on reaching new customer groups (178), 70% innovation active enterpises and 69.3% from sub-sector computer programming, compared to number of ICT SME with high or medium focus on customers specific soultions (541).

(3) Third strategic priority is focus on low price -405 enteprises, 61% innovative active enterpises, 81% micro.

## 5. INNOVATION ACTIVE ENTERPRISES BY INNOVATION DEVELOPER, DEGEE OF NOVELTY OF PRODUCT INNOVATION

This group of questions encopass distribution about ahow thr iinovation is developing, cooperation level with others and degree of novelty (only for compnay or new on the markets).

### DEVELOPMENT INNOVATION ALONE

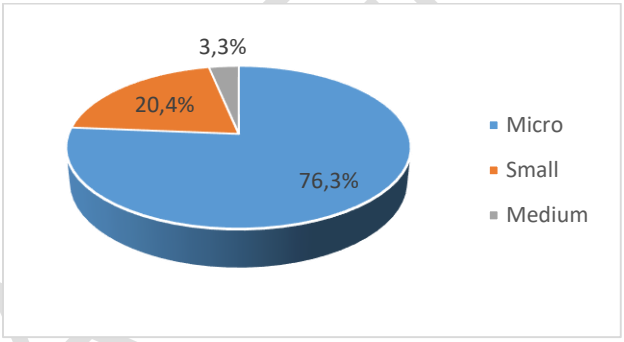


*Figure 142 for distribution by size of ICT enterprises that developed innovation alone -367*

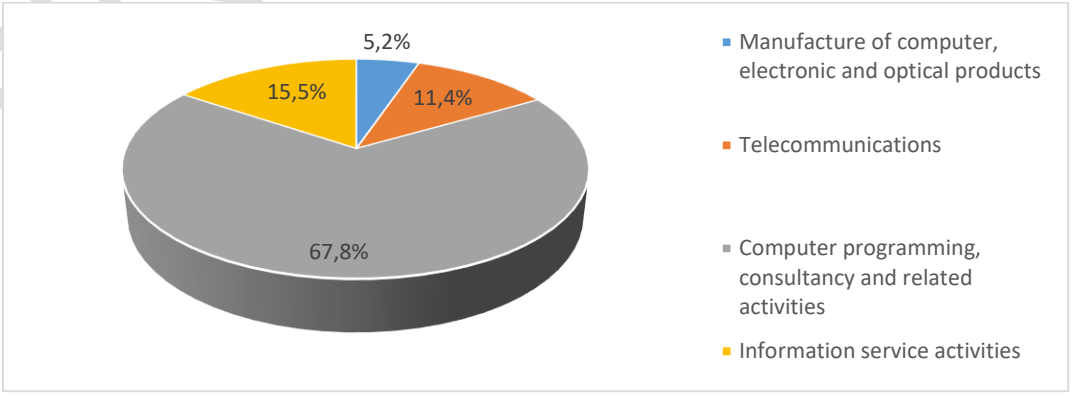


*Figure 143 for distribution by ICT sub-sector of enterprises that developed innovation alone 367*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

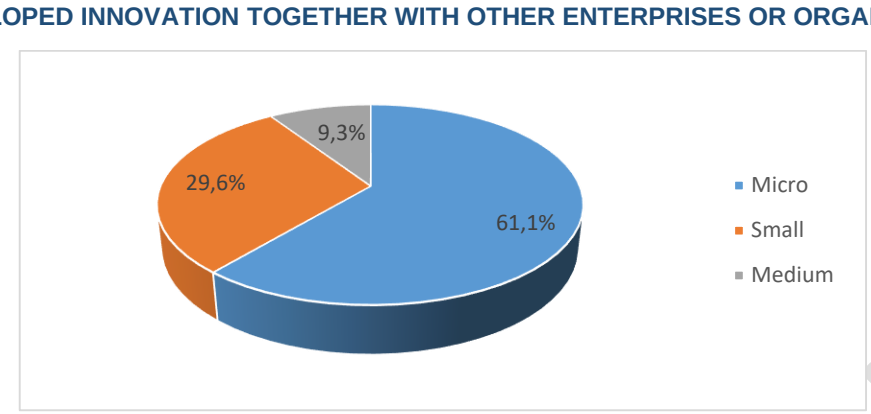


*Figure 144 for distribution by size of ICT enterprises that developed innovation together with other enterprises or organisations-108*

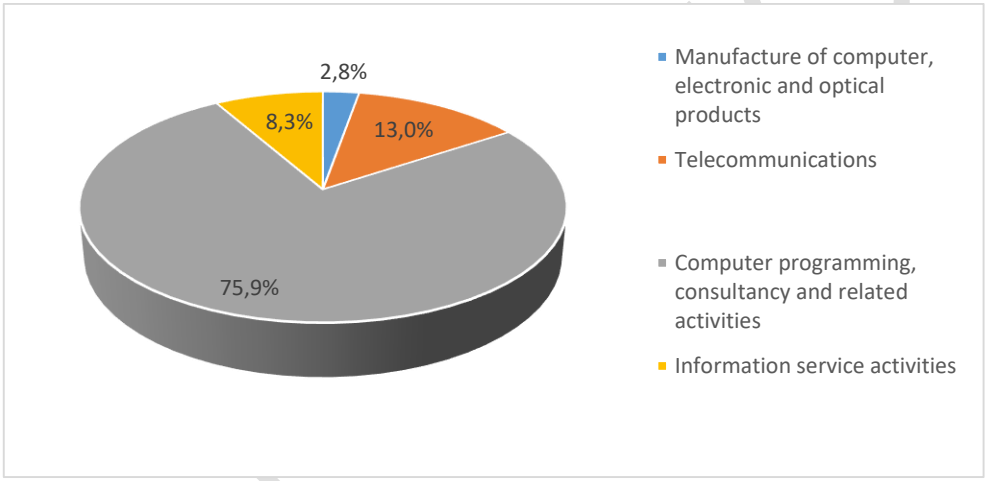


*Figure 145 for distribution by ICT sub-sectors of enterprises that developed innovation together with other enterprises or organisations-108*

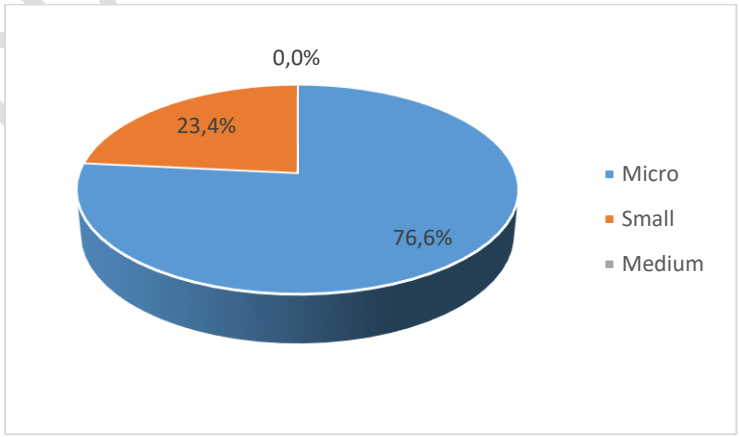


*Figure 146 for distribution by size of ICT enterprises that developed innovation by adapting or modifying originally developed by other enterprises or organisations-64*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

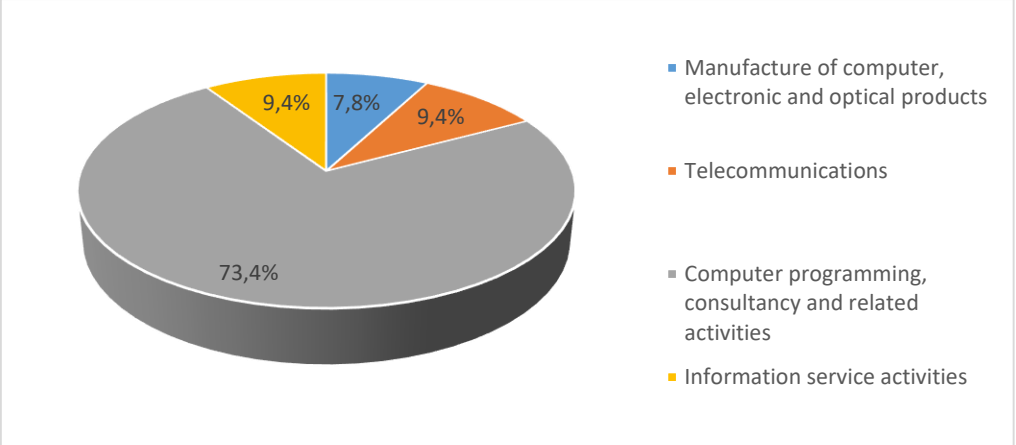


*Figure 147 for distribution by ICT sub-sectors of enterprises that developed innovation by adapting or modifying originally developed by other enterprises or organisations-64*

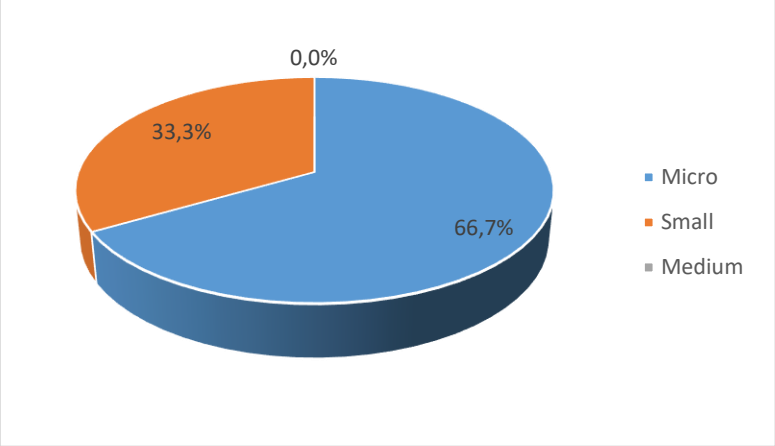


*Figure 148 for distribution by size of ICT enterprises with innovation developed by other enterprises or organisations-21*

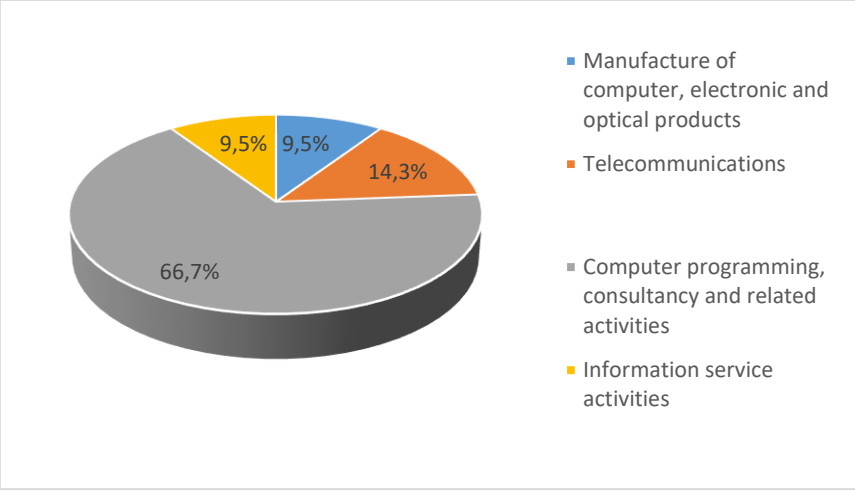


*Figure 149 for distribution by ICT sub-sectors of enterprises with innovation developed by other enterprises or organisations-21*



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### PRODUCT INNOVATION IS NEW ON THE MARKET OR NEW FOR COMPANY ONLY

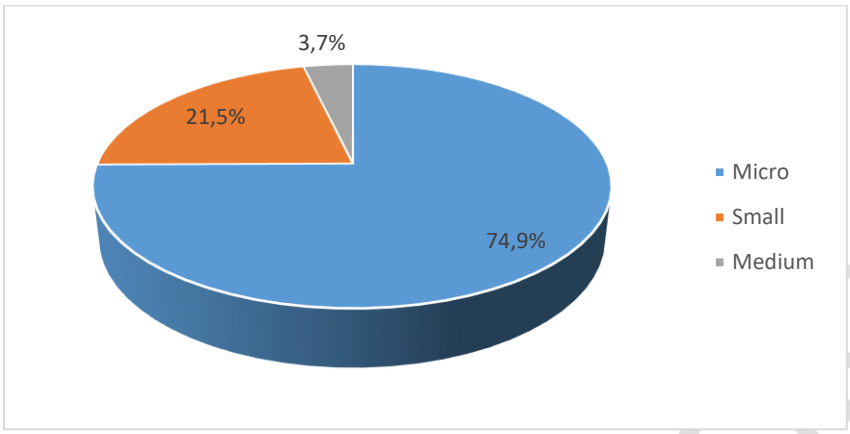


*Figure 150 for distribution by size of ICT enterprises with at least one product innovation that was new to market-191*

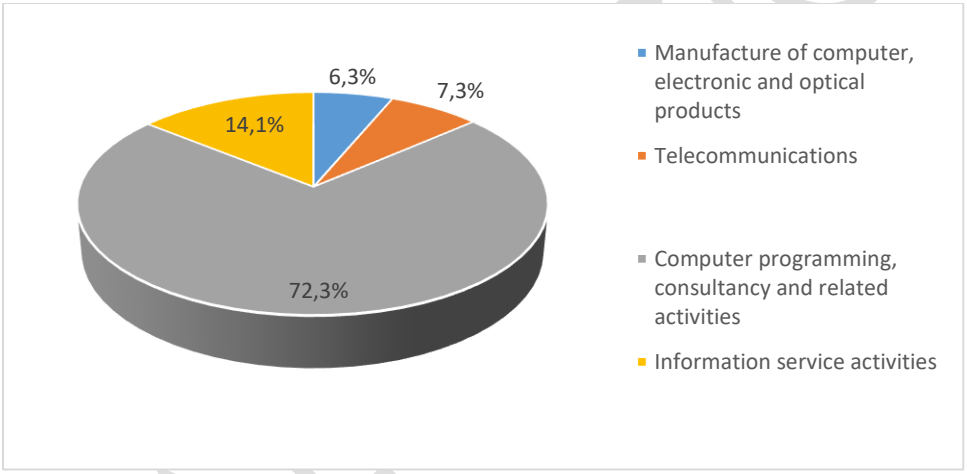


*Figure 151for distribution by sub sector of ICT enterprises with at least one product innovation that was new to market-191*

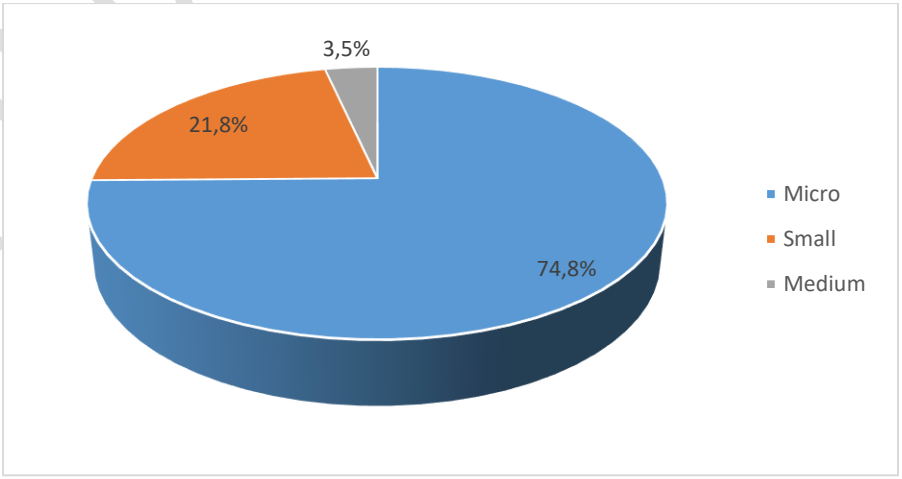


*Figure 152 for distribution by size of ICT enterprises with product innovation that is only new to the enterprise-317*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

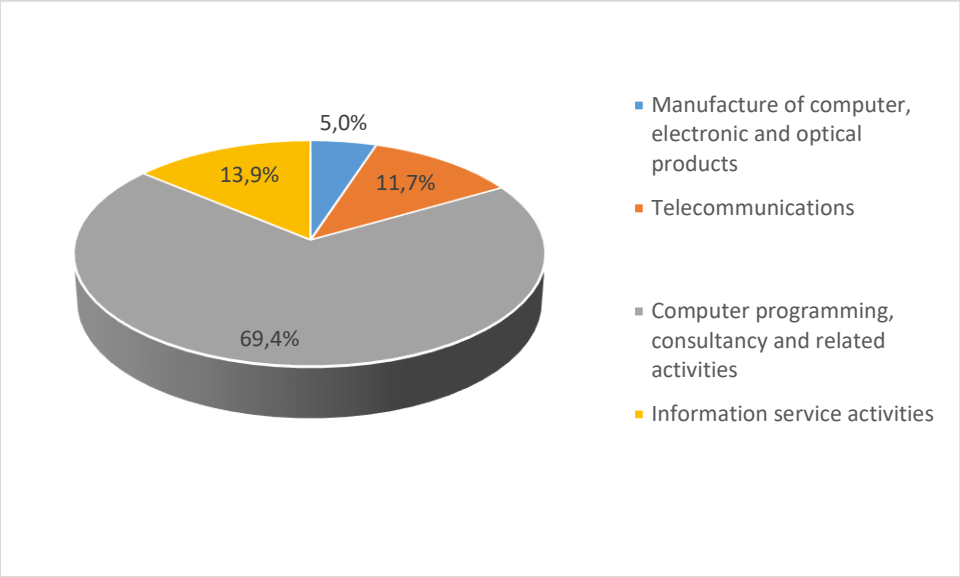


*Figure 153 for distribution by ICT sub-sectors of enterprises with product innovation that is only new to the enterprise-317*

### CONCLUSIONS

(1) Small part, 108 enterises, developed innovation with other neterpises or organziations, while 367 dveloped innovation alone.

(2) Almost haf of population (317 innovative enteprises) is with product innovation that is only new to te enterprise.

## 6. INNOVATION ACTIVE ENTERPRISES THAT RECEIVED PUBLIC FINANCIAL SUPPORT FOR INNOVATION ACTIVITIES BY SOURCE OF FOUNDING

- 65 from 465 innovation active ICT SMEs received public financial support or 14%.

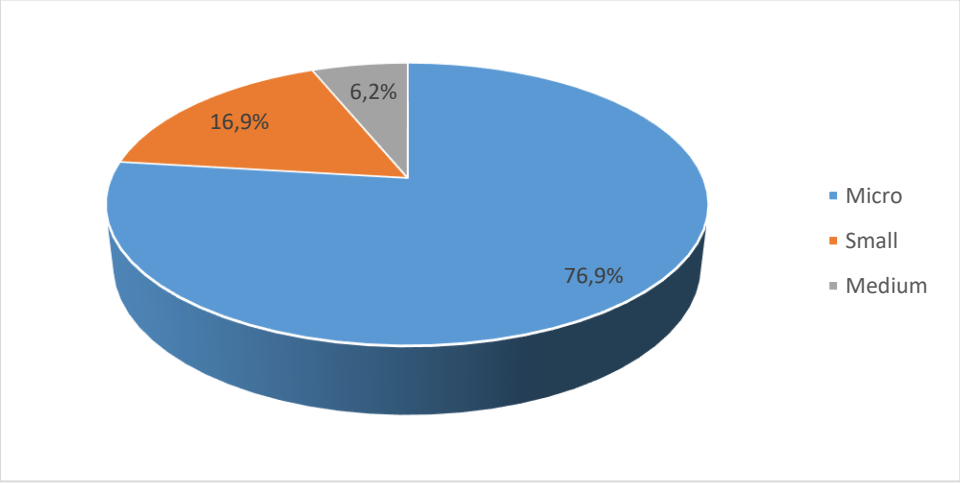


*Figure 154 for distribution by size of ICT enterprises that received any public financial support for innovation activities-65*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

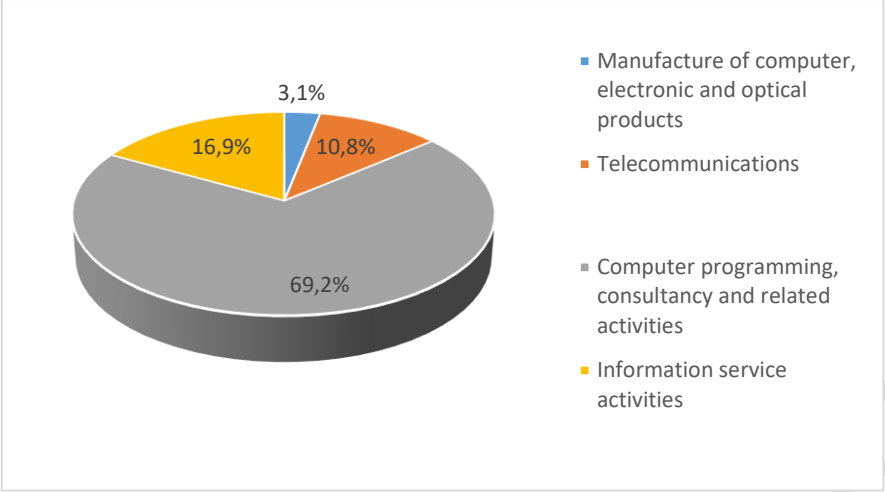


*Figure 155 for distribution by ICT sub-sectors of ICT enterprises that received any public financial support for innovation activities-65*

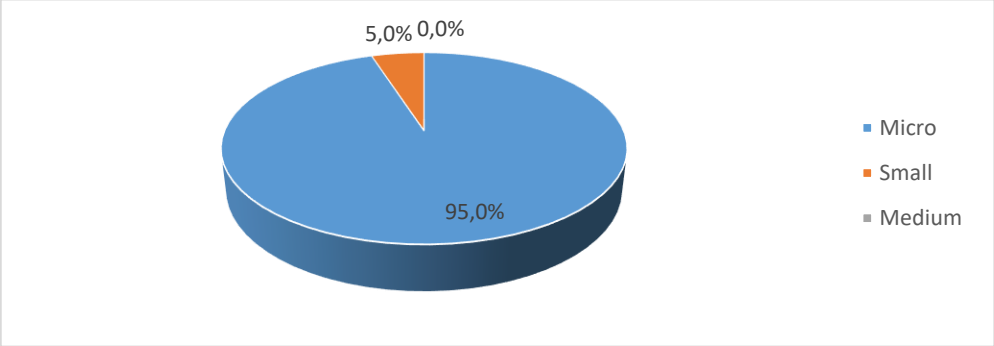


*Figure 156 for distribution by size of ICT enterprises that received financial support from local or regional authorities for innovation activities-20*

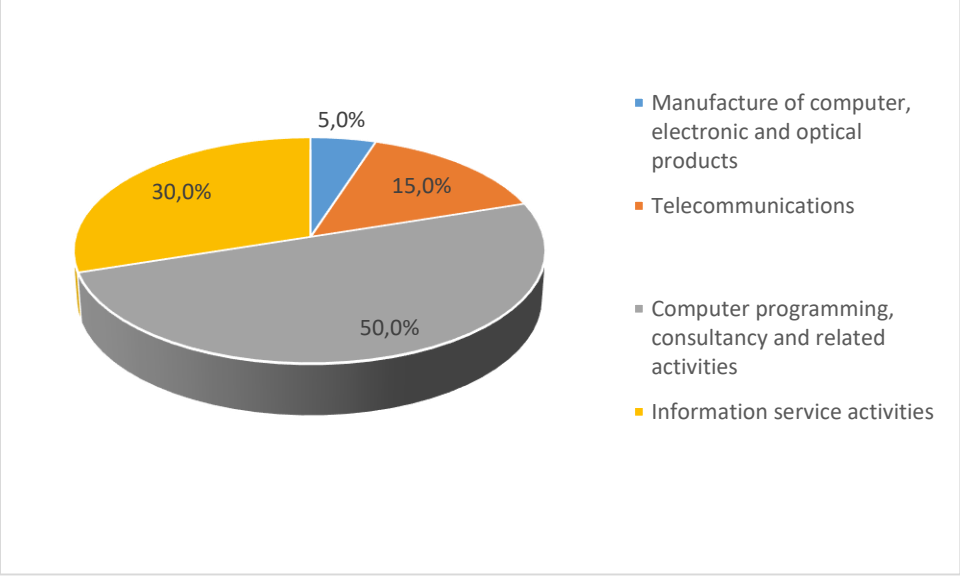


*Figure 157 for distribution by ICT sub-sectors of enterprises that received financial support from local or regional authorities for innovation activities-20*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

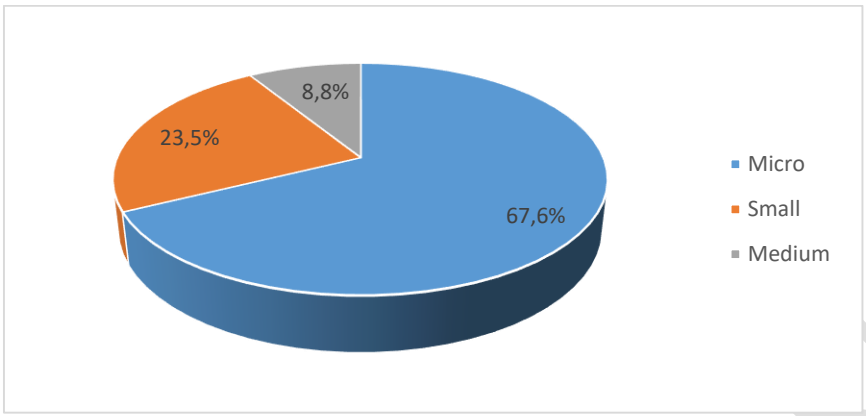


*Figure 158 for distribution by size of ICT enterprises that received financial support from central government (incl. central government agencies or ministries) for innovation activities-34*

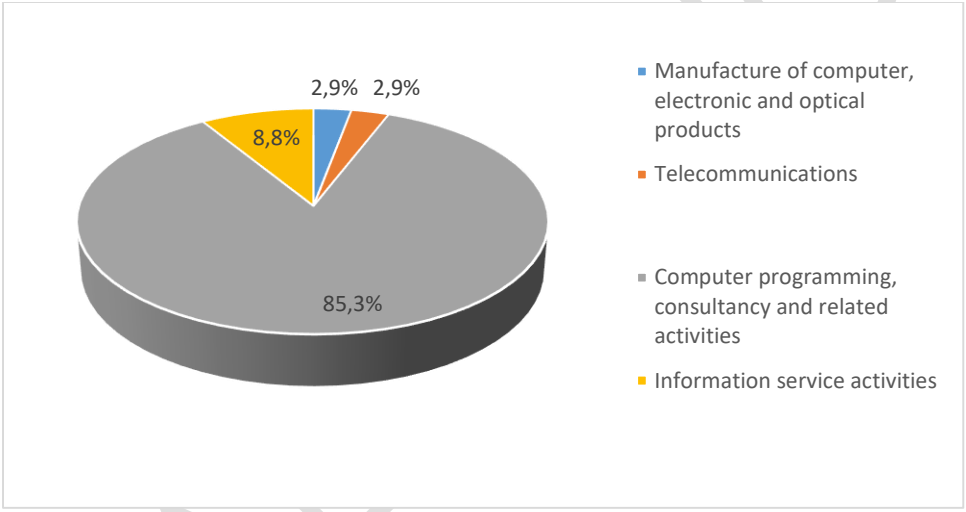


*Figure 159 for distribution by ICT sub-sectors of enterprises received financial support from central government (incl. central government agencies or ministries) for innovation activities-34*

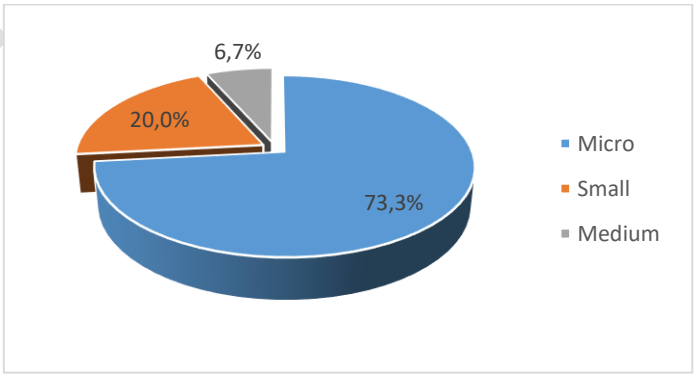


*Figure 160 for distribution by size of ICT enterprises that received financial support from the European Union for innovation activities-15*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

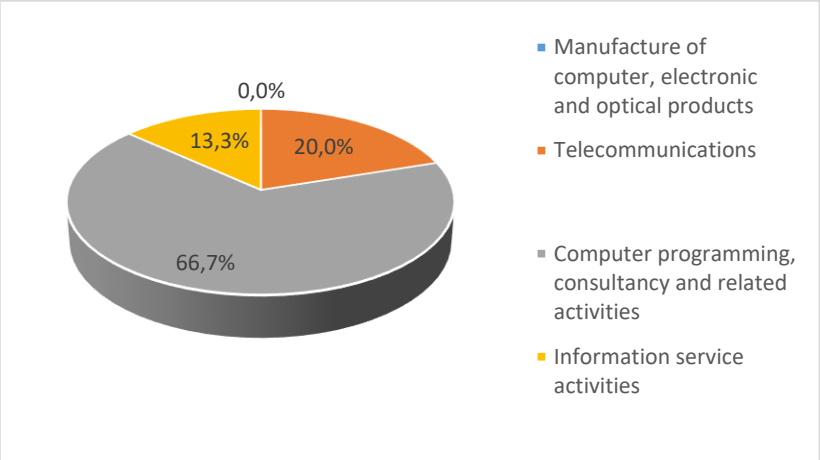


*Figure 161 for distribution by ICT sub-sectors of enterprises that received financial support from the European Union for innovation activities-15*

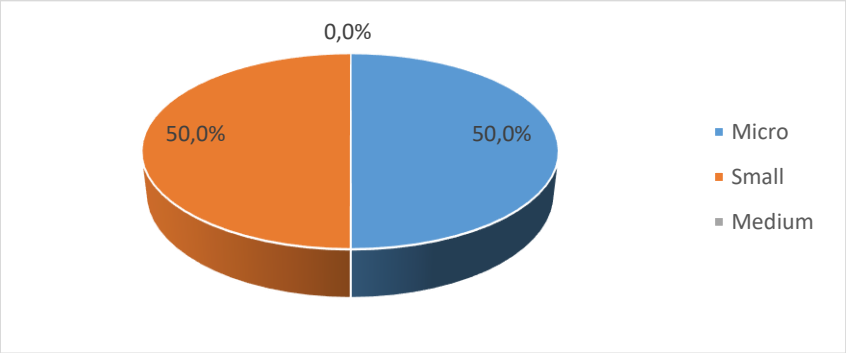


*Figure 162 for distribution by ICT size of enterprises that received financial support from Horizon 2020 Programme for Research and Innovation-2*

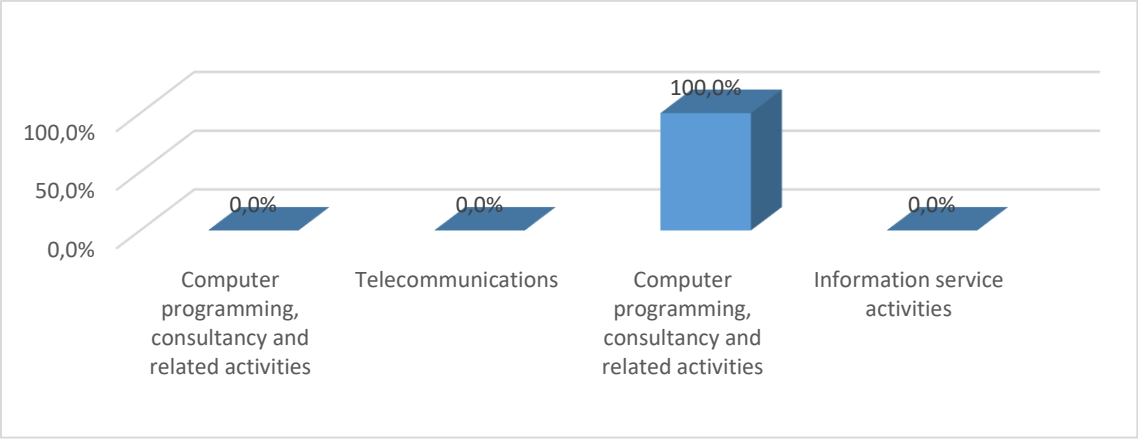


*Figure 163 for distribution by ICT sub-sectors of enterprises that received financial support from Horizon 2020 Programme for Research and Innovation-2*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

## 7. INNOVATION ACTIVE ENTERPRISES ENGAGED IN CO-OPERATION BY CO-OPERATION PARTNER, NACE REV. 2 ACTIVITY AND SIZE CLASS IN 2018

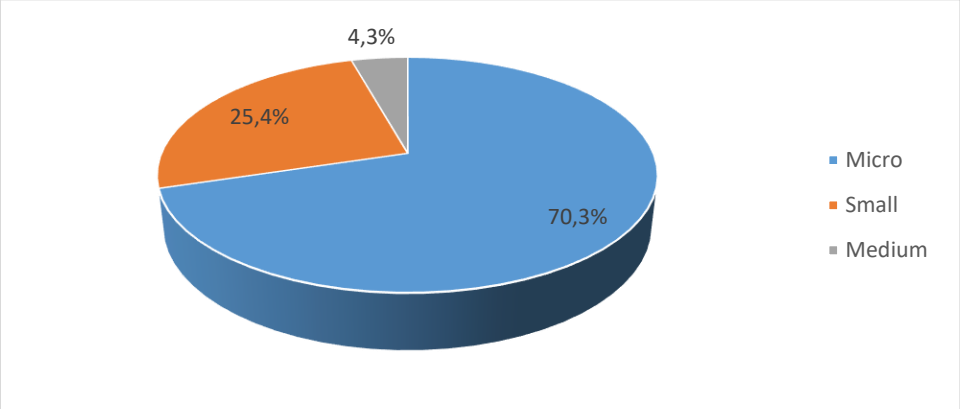


*Figure 164 for distribution by size of ICT enterprises that that co-operated with other enterprises or organisations on innovation activities-138*

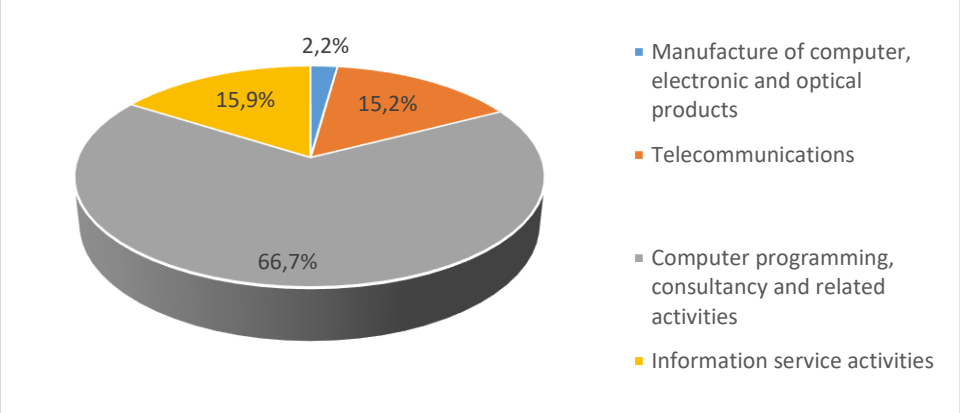


*Figure 165 for distribution by ICT sub-sectors of enterprises that co-operated with other enterprises or organisations on innovation activities-138*

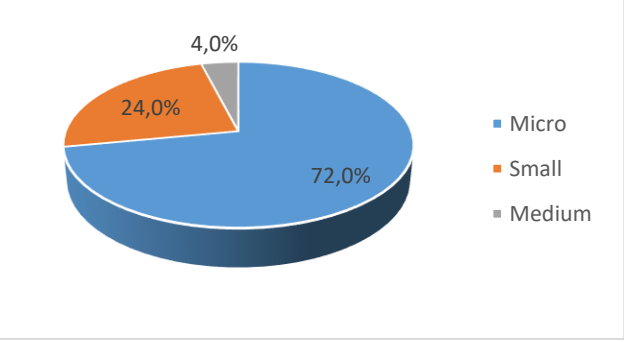


*Figure 166 for distribution by size of ICT enterprises that co-operated with enterprises within enterprise group-100*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

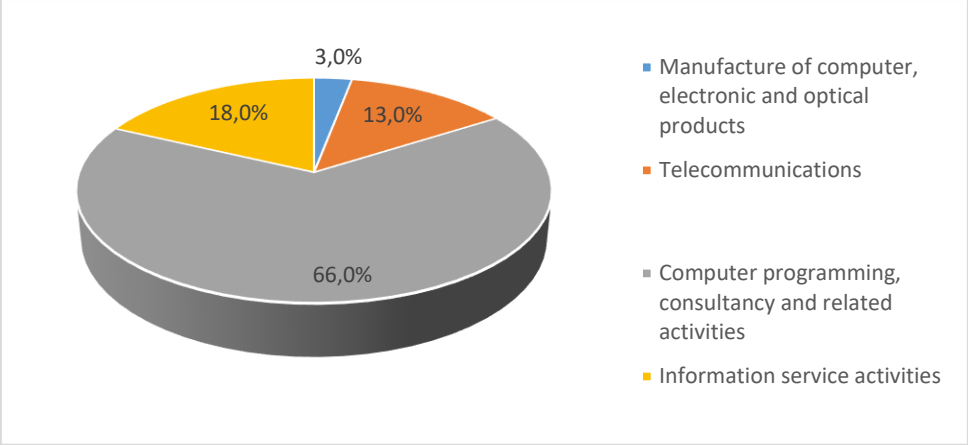


*Figure 167 for distribution by ICT sub-sectors of enterprises that co-operated with enterprises within enterprise group -100*

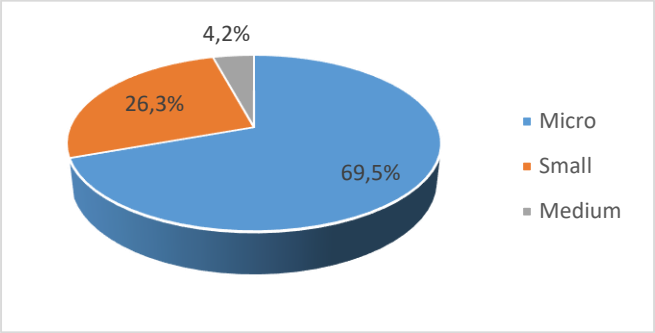


*Figure 168 for distribution by size of ICT enterprises that co-operated with suppliers of equipment, materials, components or software-95*

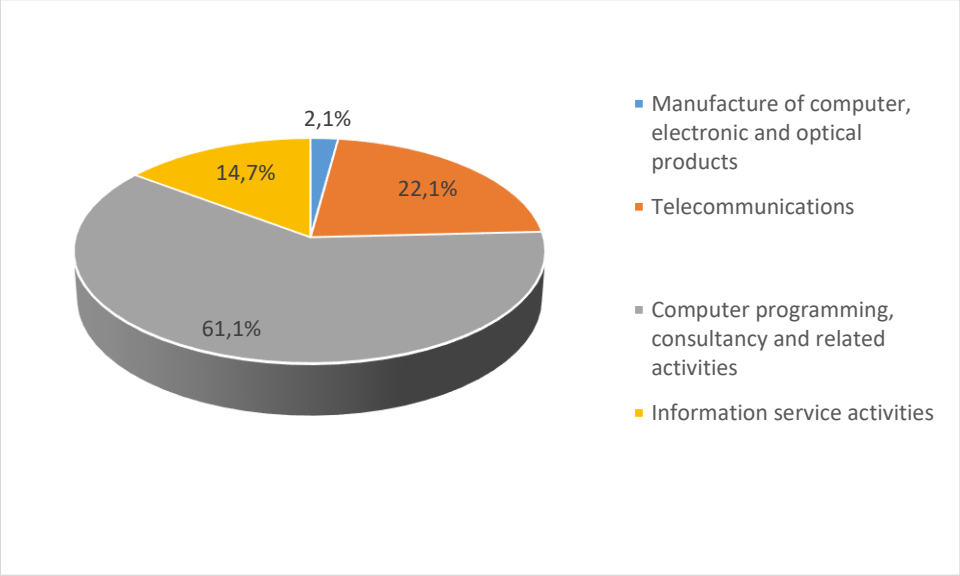


*Figure 169 for distribution by ICT sub-sectors of enterprises that co-operated with suppliers of equipment, materials, components or software-95*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

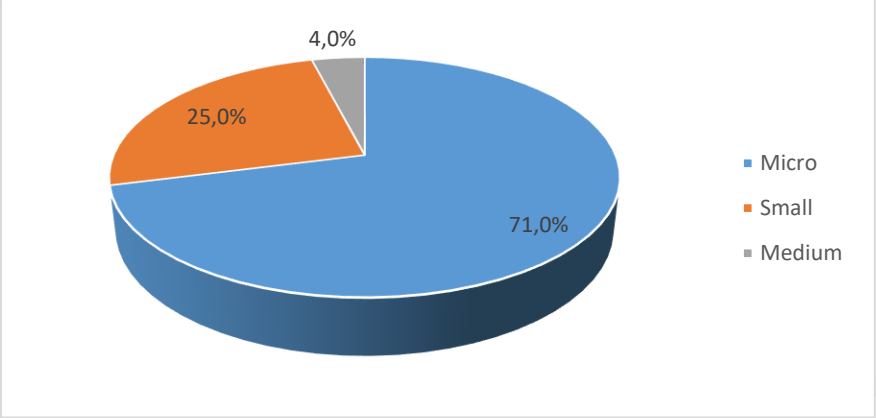


*Figure 170 for distribution by size of ICT enterprises that co-operated with clients or customers from the private sector-100*

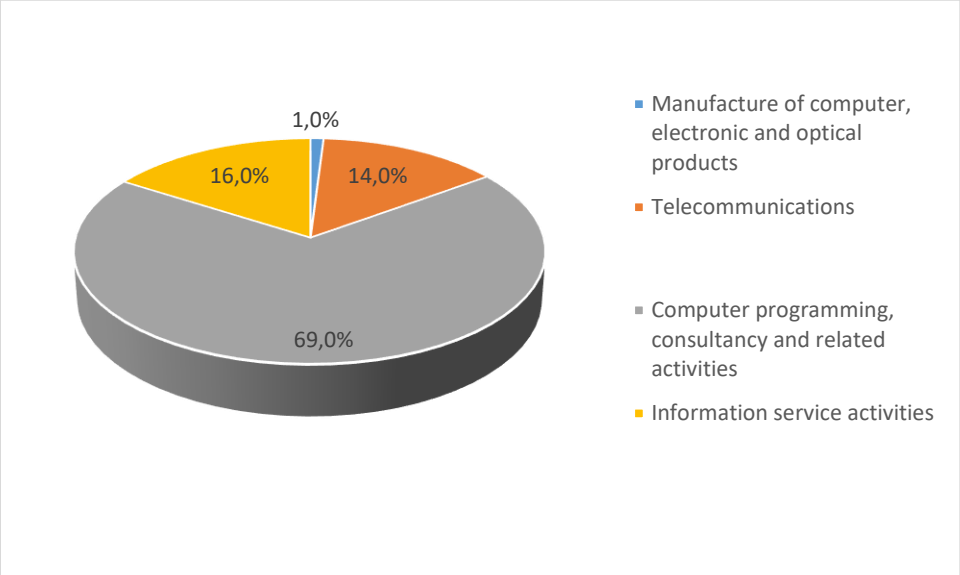


*Figure 171 for distribution by ICT sub-sectors of enterprises that co-operated with clients or customers from the private sector -100*

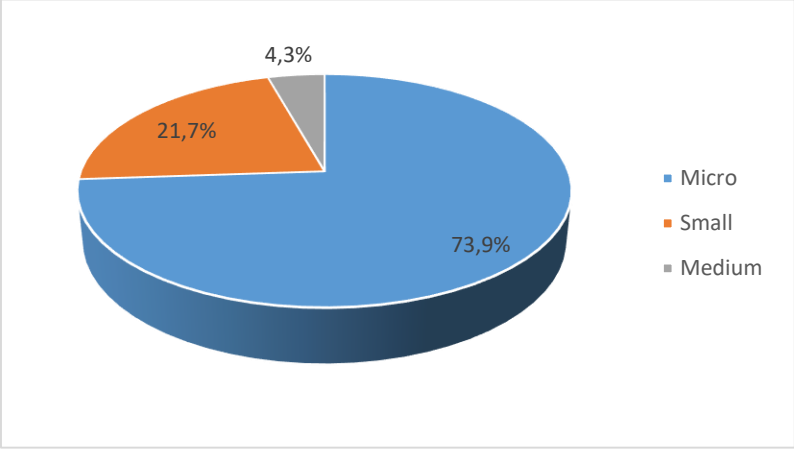


*Figure 172 for distribution by size of ICT enterprises that co-operated with clients or customers from the public sector-46*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

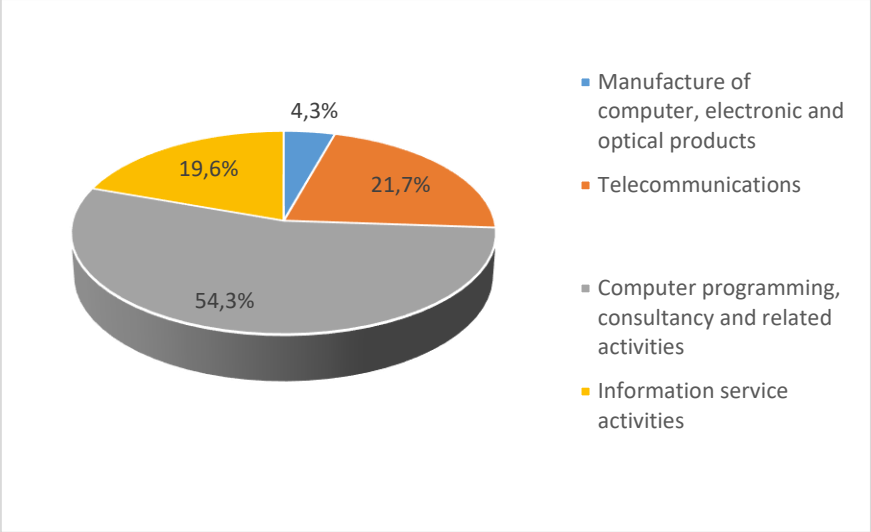


*Figure 173 for distribution by ICT sub-sectors of enterprises that co-operated with clients or customers from the public sector -46*

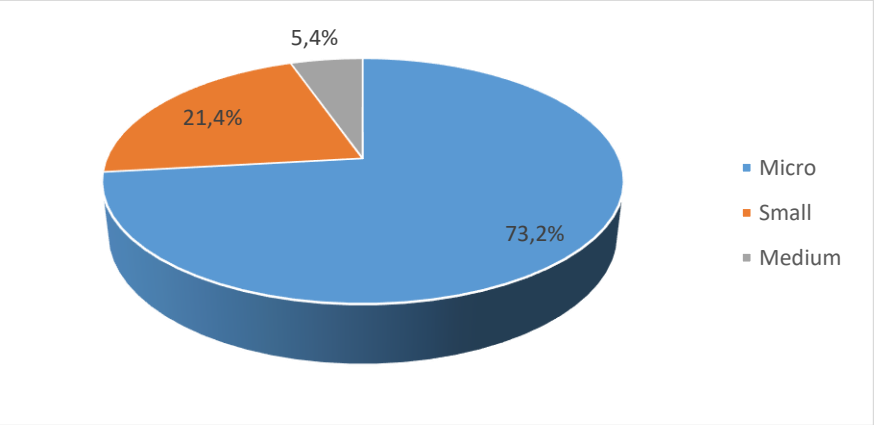


*Figure 174 for distribution by size of ICT enterprises that co-operated with competitors or other enterprises in the same sector-56*

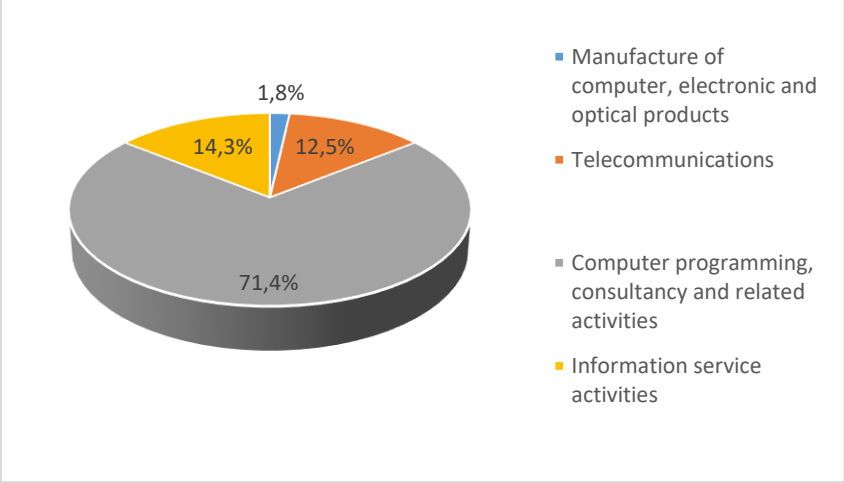


*Figure 175 for distribution by ICT sub-sectors of enterprises that co-operated with competitors or other enterprises in the same sector-56*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

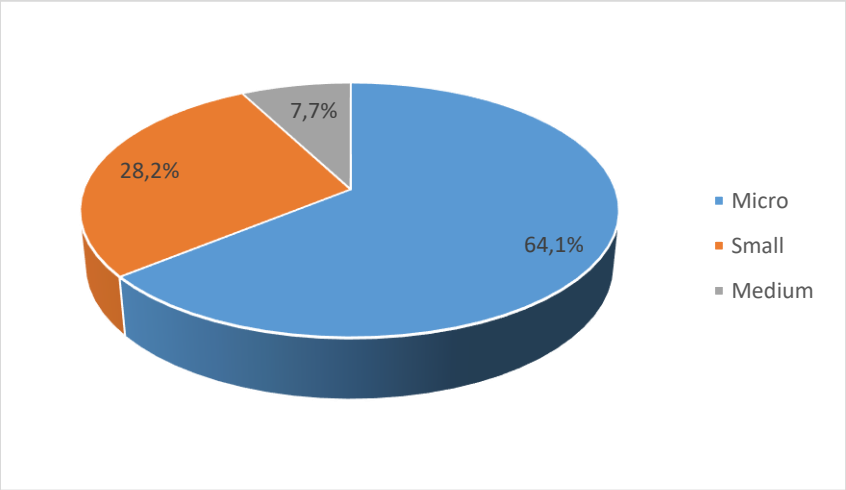


*Figure 176 for distribution by size of ICT enterprises that co-operated with consultants and commercial labs-39*

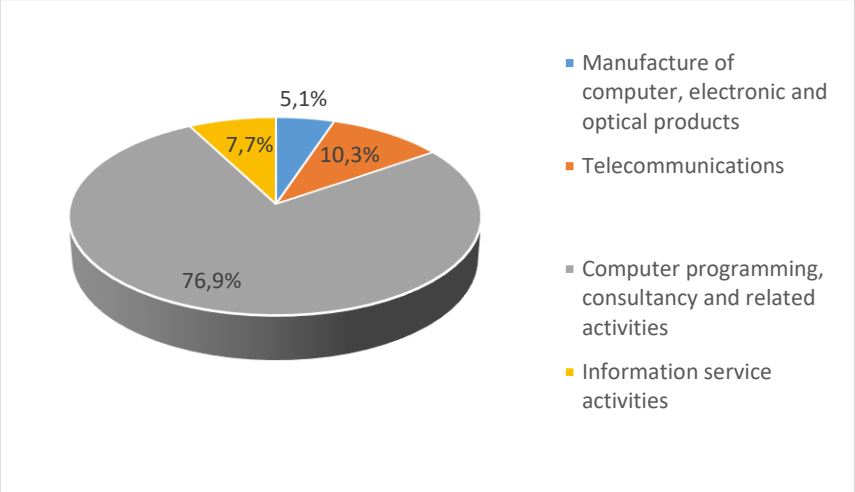


*Figure 177 for distribution by ICT sub-sectors of enterprises that co-operated with consultants and commercial labs-39*

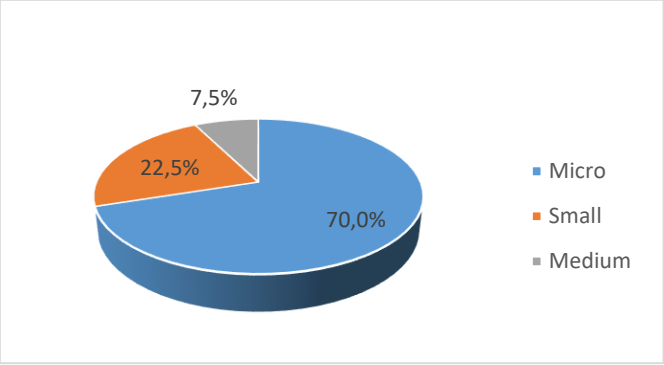


*Figure 178 for distribution by size of ICT enterprises that co-operated with universities or other higher education institutions -40*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

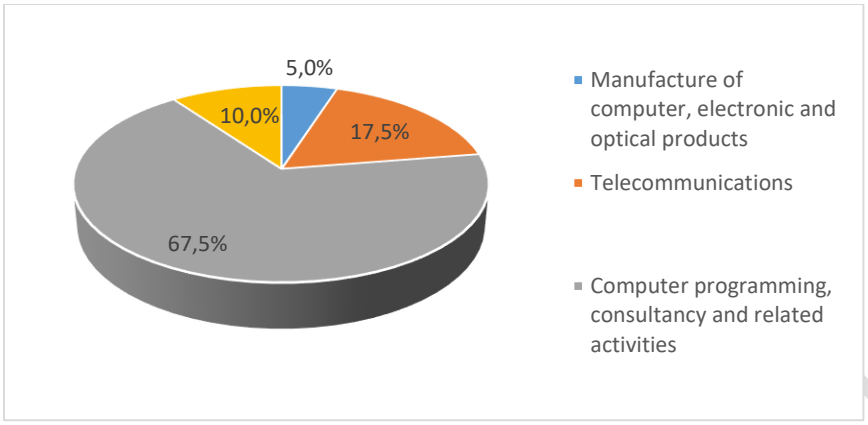


*Figure 179 for distribution by ICT sub-sectors of enterprises that co-operated with universities or other higher education institutions-40*

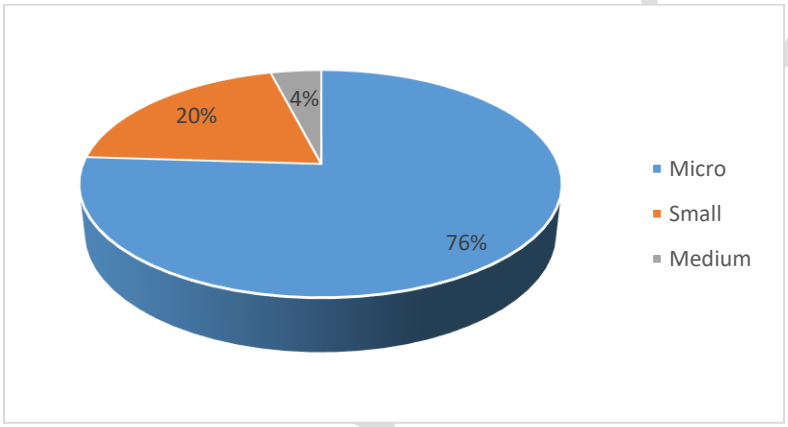


*Figure 180 for distribution by size of ICT enterprises that co-operated with government or public research institutes-25*

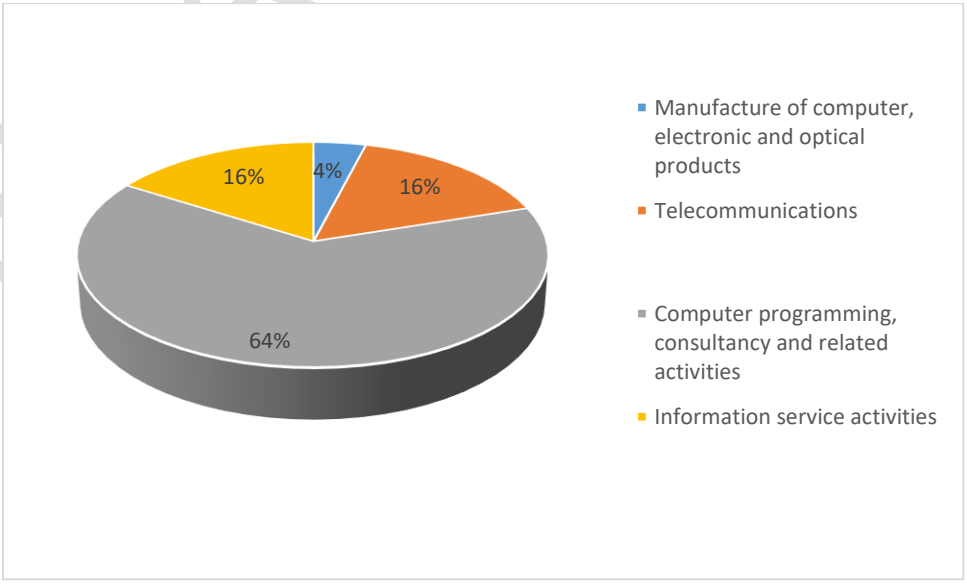


*Figure 181 for distribution by ICT sub-sectors of enterprises that co-operated with government or public research institutes-25*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

*Figure 182 for distribution by size of ICT enterprises that co-operated with private research institutes-0*

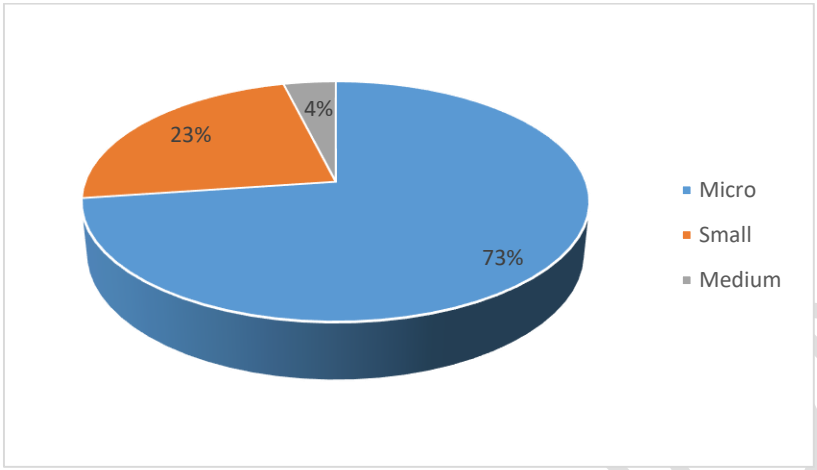


*Figure 183 for distribution by size of ICT enterprises that co-operated with national partner-103*

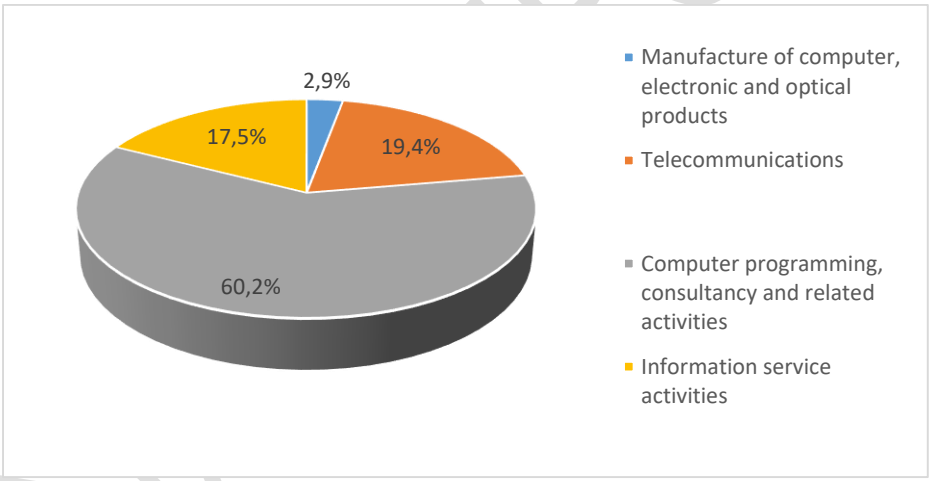


*Figure 184 for distribution by ICT sub-sectors of enterprises that co-operated with national partner-103*

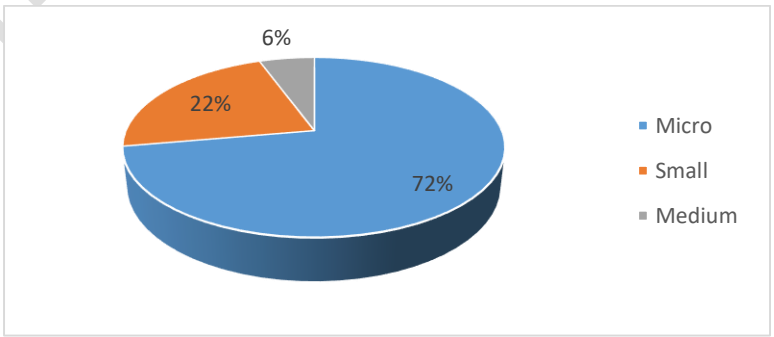


*Figure 185 for distribution by ICT sub-sectors of enterprises that co-operated with international partner located in AL, MK, GR, CY-18*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

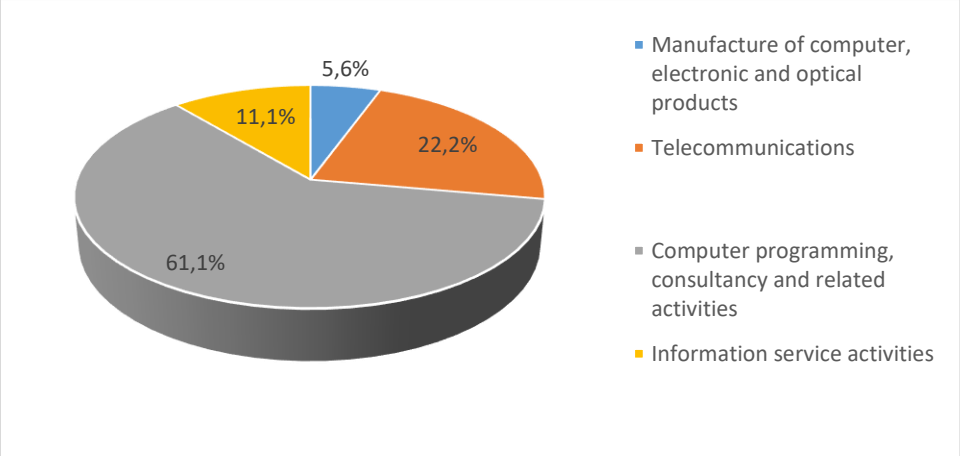


*Figure 186 for distribution by ICT sub-sectors of enterprises that co-operated with international partner located in AL, MK, GR, CY-18*

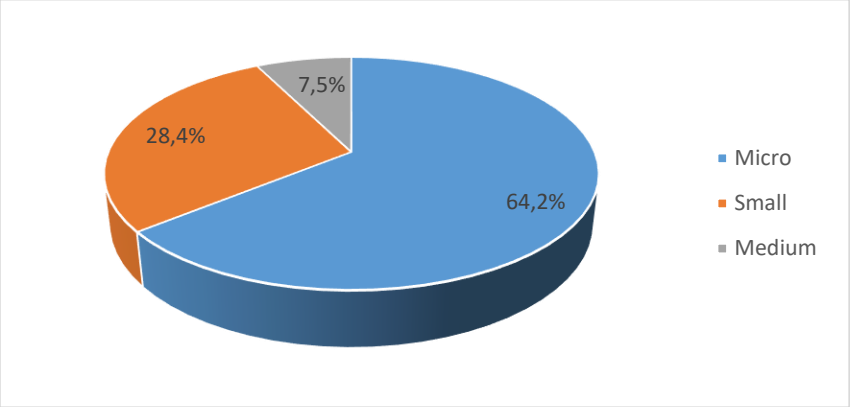


*Figure 187 for distribution by size of ICT enterprises that co-operated with international partner located in EU and EFTA-67*

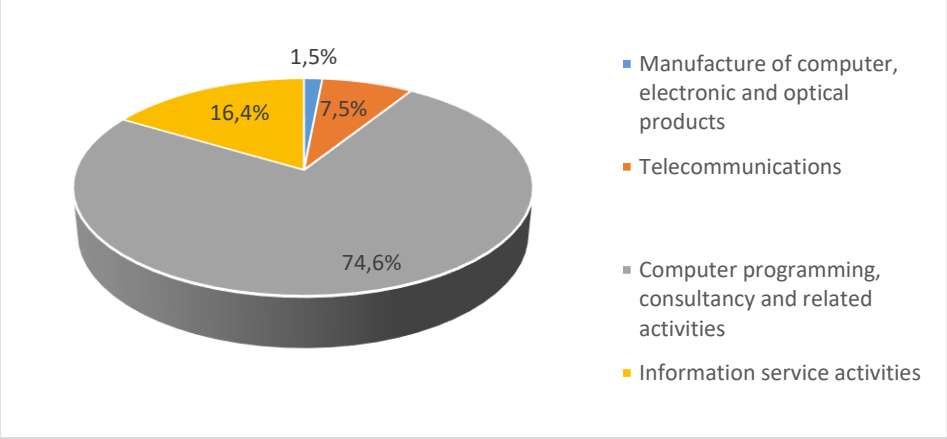


*Figure 188 for distribution by ICT sub-sectors of enterprises that co-operated with international partner located in EU and EFTA-67*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

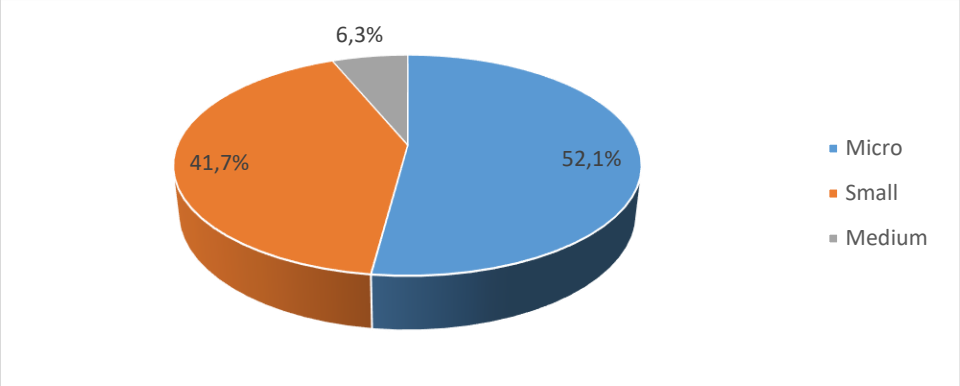


*Figure 189 for distribution by size of ICT enterprises that co-operated with international partner located in other countries-48*

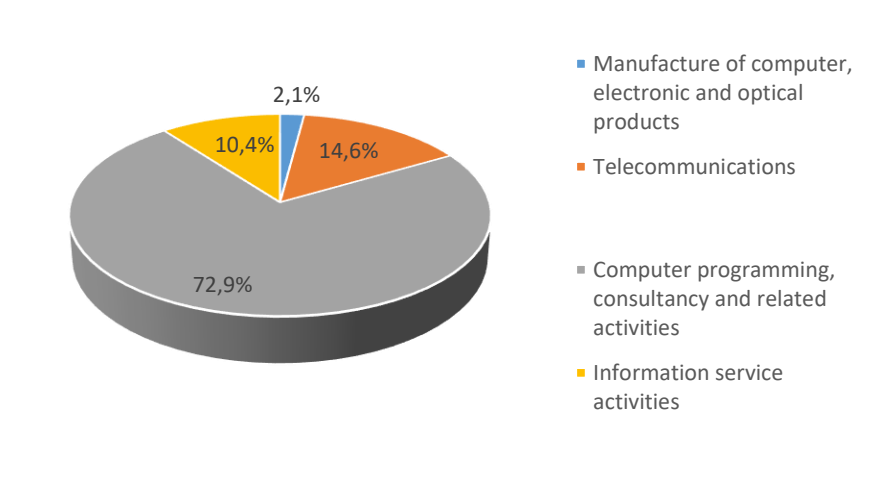


*Figure 190 for distribution by ICT sub-sectors of enterprises that co-operated with international partner located in other countries-48*

### CONCLUSIONS

(1) The cooperation is more focused on private sector enterprises less on government and educational organizations.

(2) Small share of innovation active enterprises co-operated with international partners.

## 8. INNOVATION ACTIVE ENTERPRISES BY FACTOR ENABLING INNOVATION ACTIVITIES, LEVEL OF IMPORTANCE OF THE ENABLING FACTOR,

Six groups of enabling factors were surveyed: Availability of finance, availability of skilled employees; new information and computer technoloies, aplications and software; new knowledge or discoveries from science or universities; opportunities for collaborating on innovation with external partners; and keeping up with competitiros in the market.

It was done regarding to importance of the enabling factors for innovation activities of the repondent.



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## AVAILABILITY OF FINANCE

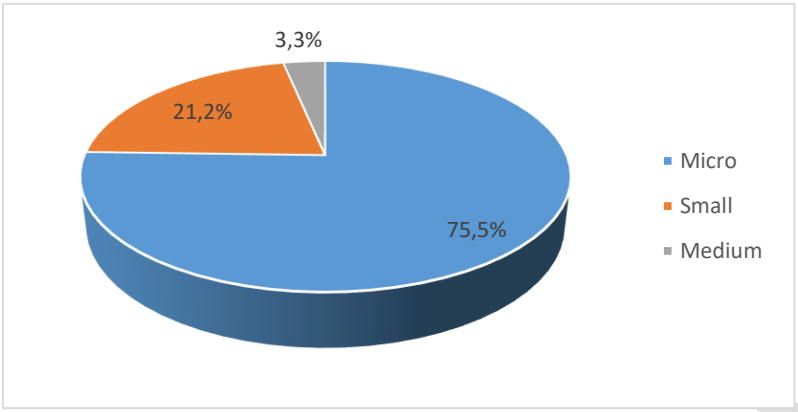


*Figure 191 for distribution by size of ICT enterprises where 'availability of internal finance for innovation' was a factor enabling innovation activities of high or medium importance-273*

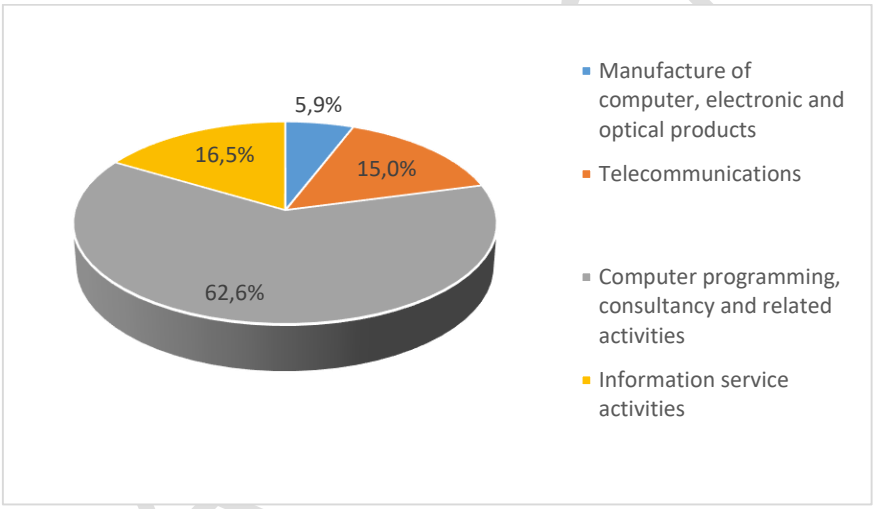


*Figure 192 for distribution by ICT sub-sector of enterprises where 'availability of internal finance for innovation' was a factor enabling innovation activities of high or medium importance-273*

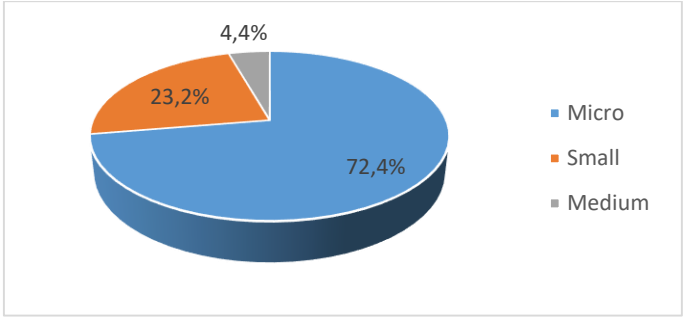


*Figure 193 for distribution by size of ICT enterprises where 'availability of internal finance for innovation' was a factor enabling innovation activities of low or no importance-181*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

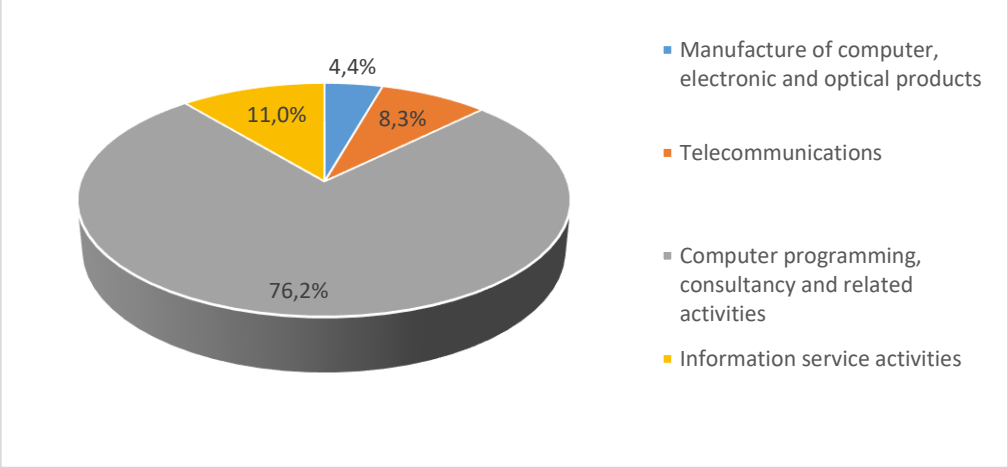


*Figure* 194 *for distribution by ICT sub-sector of enterprises where 'availability of internal finance for innovation' was a factor enabling innovation activities of low or no importance-181*

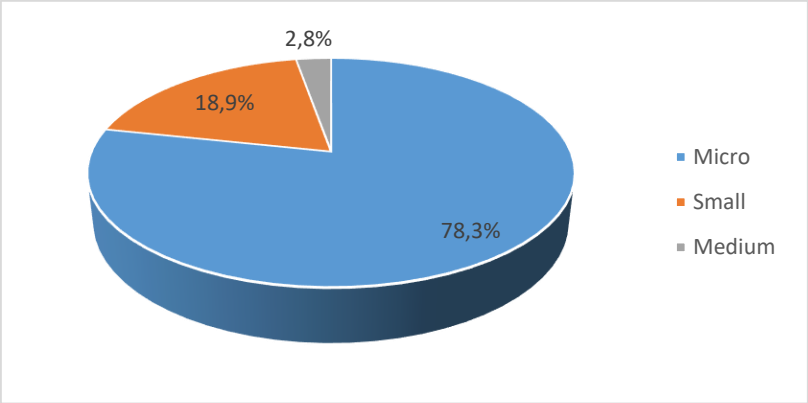


*Figure* 195 *for distribution by size of ICT of enterprises where 'availability of credit or private equity' was a factor enabling innovation activities of high or medium importance-180*

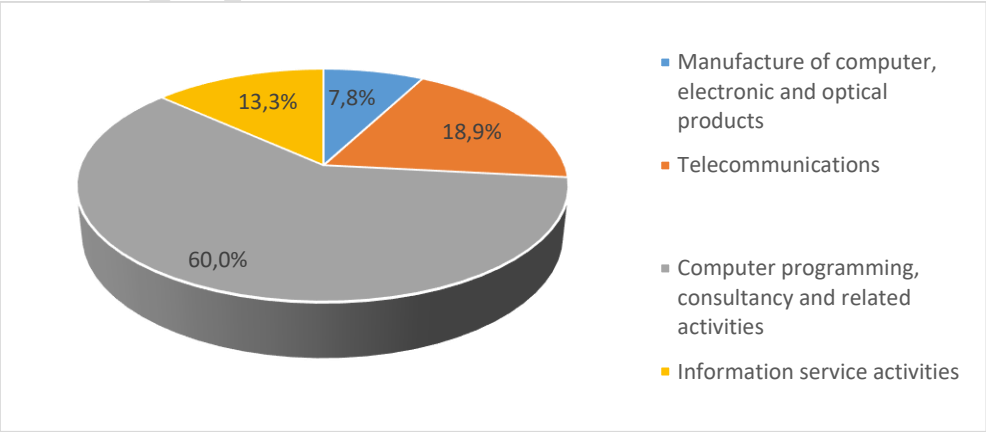


*Figure* 196 *for distribution by ICT sub-sector of enterprises where 'availability of credit or private equity' was a factor enabling innovation activities of high or medium importance-180*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

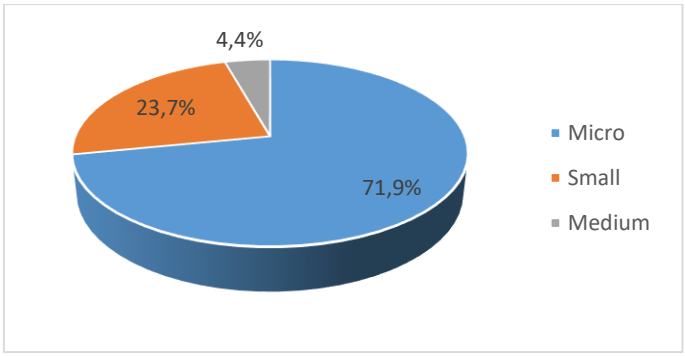


*Figure 197 for distribution by size of ICT of enterprises where 'availability of credit or private equity' was a factor enabling innovation activities of low or no importance-274*

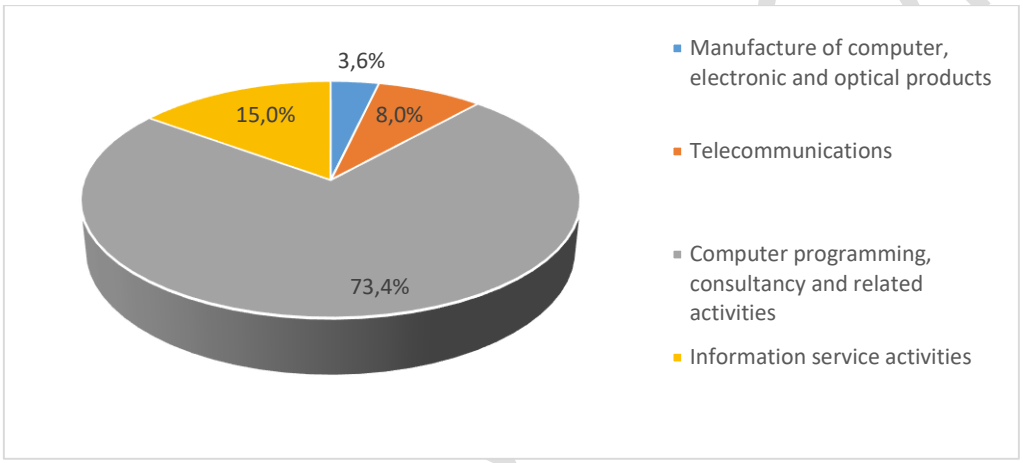


*Figure 198 for distribution by ICT sub-sector of enterprises where 'availability of credit or private equity' was a factor enabling innovation activities of low or no importance-274*

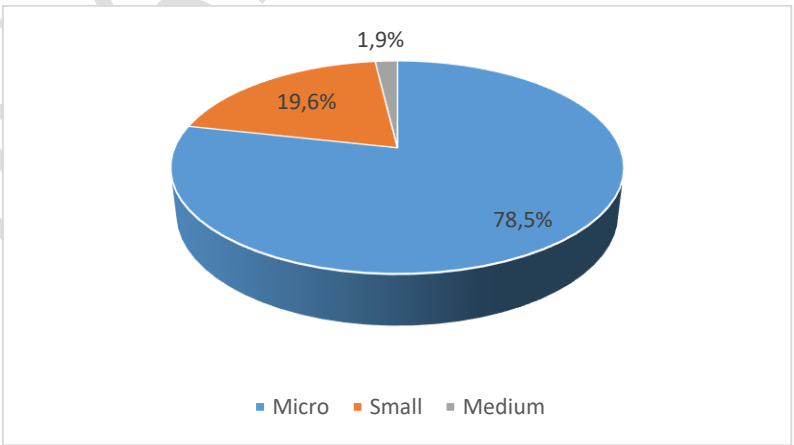


*Figure 199 for distribution by size of ICT of enterprises where 'availability of government grants or subsidies for innovation' was a factor enabling innovation activities of high or medium importance-158*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

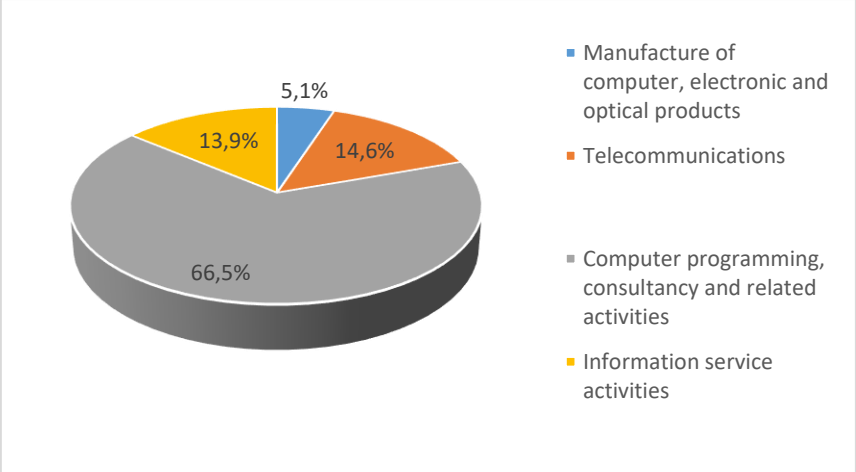


*Figure 200 for distribution by ICT sub-sector of enterprises where 'availability of government grants or subsidies for innovation' was a factor enabling innovation activities of high or medium importance-158*

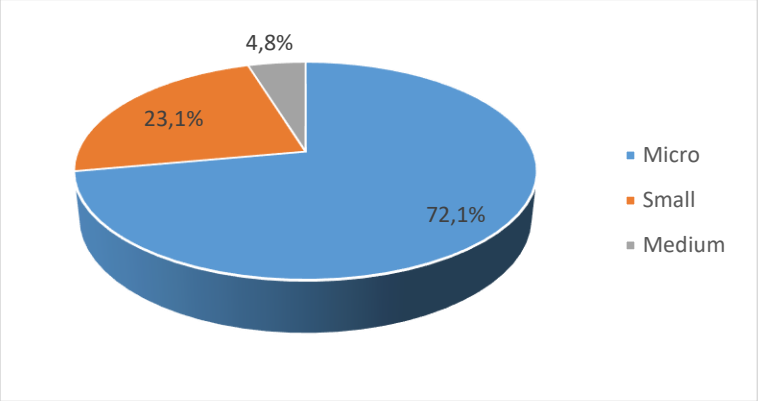


*Figure 201 for distribution by size of ICT of enterprises where 'availability of government grants or subsidies for innovation' was a factor enabling innovation activities of low or no importance-294*

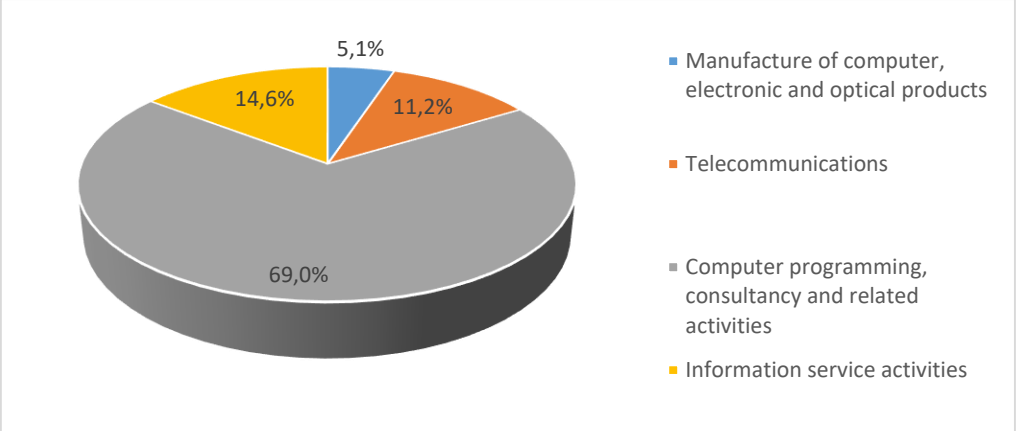


*Figure 202 for distribution by ICT sub-sector of enterprises where 'availability of government grants or subsidies for innovation' was a factor enabling innovation activities of low or no importance-294*



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### AVAILABILITY OF SKILLED EMPLOYEES

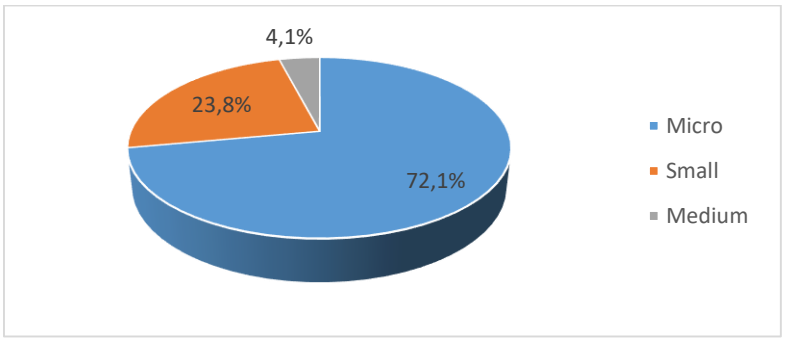


*Figure 203 for distribution by size of ICT of enterprises where 'availability of skilled employees within your enterprise' was a factor enabling innovation activities of high or medium importance-344*

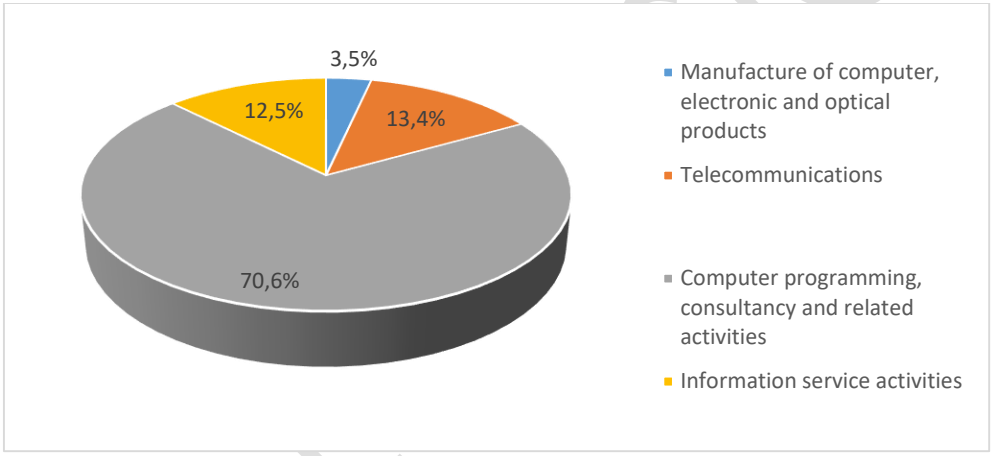


*Figure 204 for distribution by ICT sub-sector of enterprises where 'availability of skilled employees within your enterprise' was a factor enabling innovation activities of high or medium importance -344*

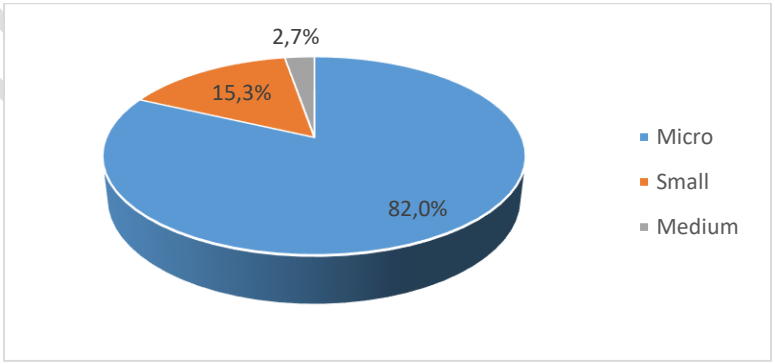


*Figure 205 for distribution by size of ICT of enterprises where 'availability of skilled employees within your enterprise' was a factor enabling innovation activities of low or no importance-111*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

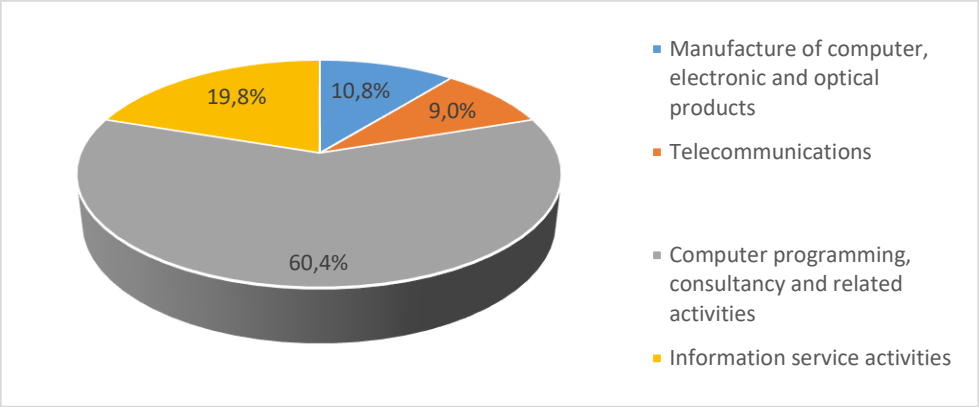


*Figure 206 for distribution by ICT sub-sector of enterprises where 'availability of skilled employees within your enterprise' was a factor enabling innovation activities of low or no importance-111*

### NEW INFORMATION AND COMPUTER TECHNOLOGIES, APPLICATIONS OR SOFTWARE

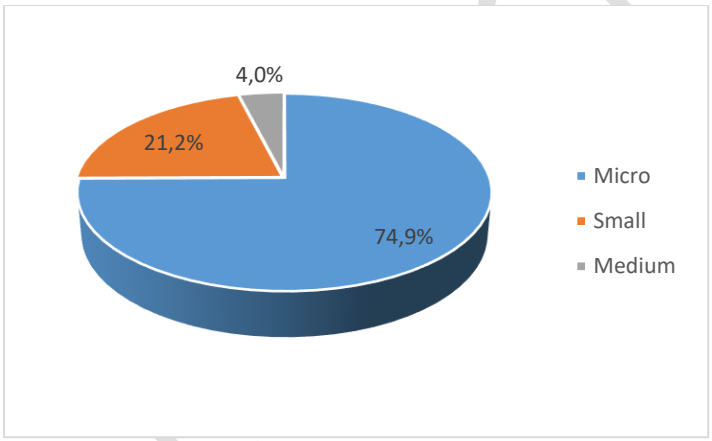


*Figure 207 for distribution by size of ICT of enterprises where 'new information and computer technologies, applications or software' was a factor enabling innovation activities of high or medium importance-378*

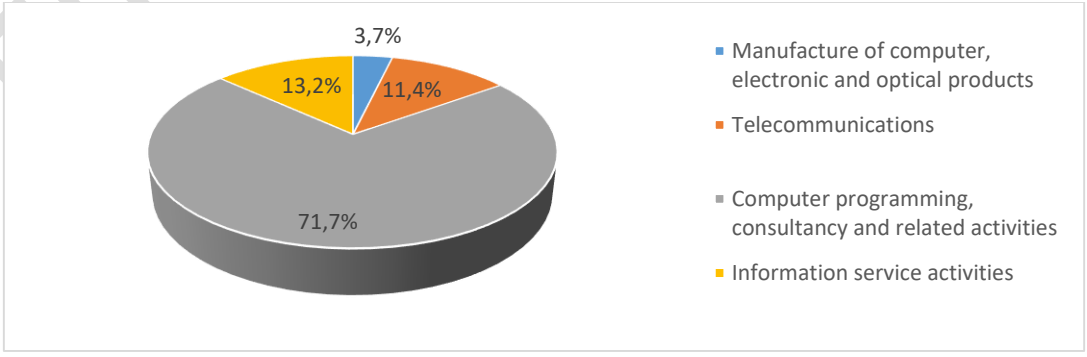


*Figure 208 for distribution by ICT sub-sector of enterprises where 'new information and computer technologies, applications or software' was a factor enabling innovation activities of high or medium importance-378*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

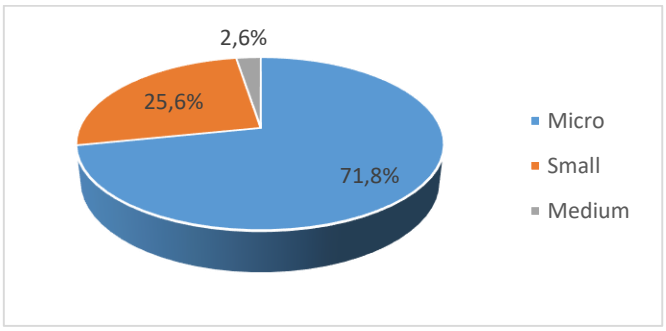


*Figure 209 for distribution by size of ICT of enterprises where 'new information and computer technologies, applications or software' was a factor enabling innovation activities of low or no importance-78*

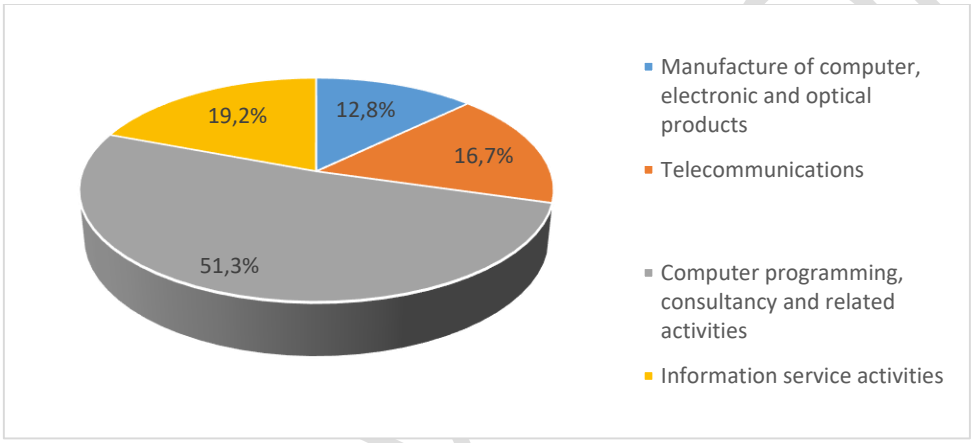


*Figure 210 for distribution by ICT sub-sector of enterprises where 'new information and computer technologies, applications or software' was a factor enabling innovation activities of low or no importance-111*

### NEW KNOWLEDGE OR DISCOVERIES FROM SCIENCE OR UNIVERSITIES

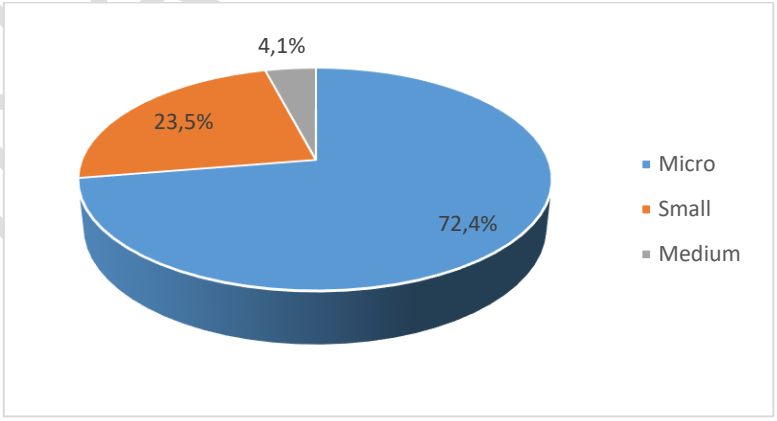


*Figure 211 for distribution by size of ICT of enterprises where 'new knowledge or discoveries from science or universities' was a factor enabling innovation activities of high or medium importance-221*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

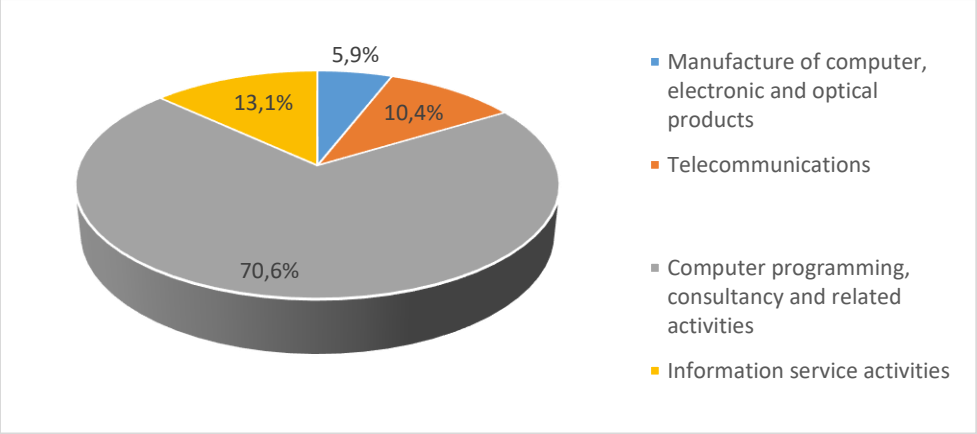


*Figure 212 for distribution by ICT sub-sector of enterprises where 'new knowledge or discoveries from science or universities' was a factor enabling innovation activities of high or medium importance-221*

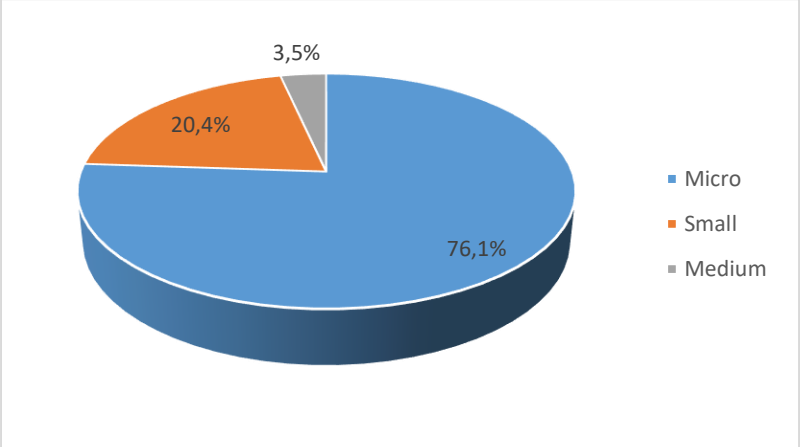


*Figure 213 for distribution by size of ICT of enterprises where 'new knowledge or discoveries from science or universities' was a factor enabling innovation activities of low or no importance-230*

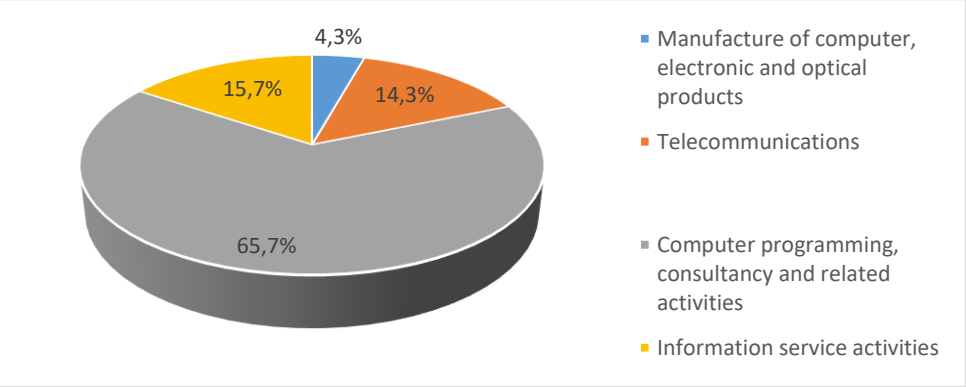


*Figure 214 for distribution by ICT sub-sector of enterprises where 'new knowledge or discoveries from science or universities' was a factor enabling innovation activities of low or no importance-230*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

## OPPORTUNITIES FOR COLLABORATING ON INNOVATION WITH EXTERNAL PARTNERS

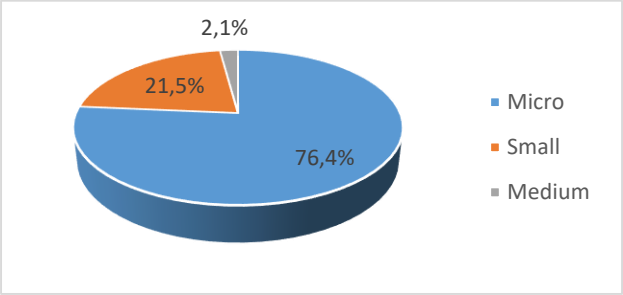


*Figure 215 for distribution by size of ICT of enterprises where 'opportunities for collaborating on innovation with external partners' was a factor enabling innovation activities of high or medium importance-284*

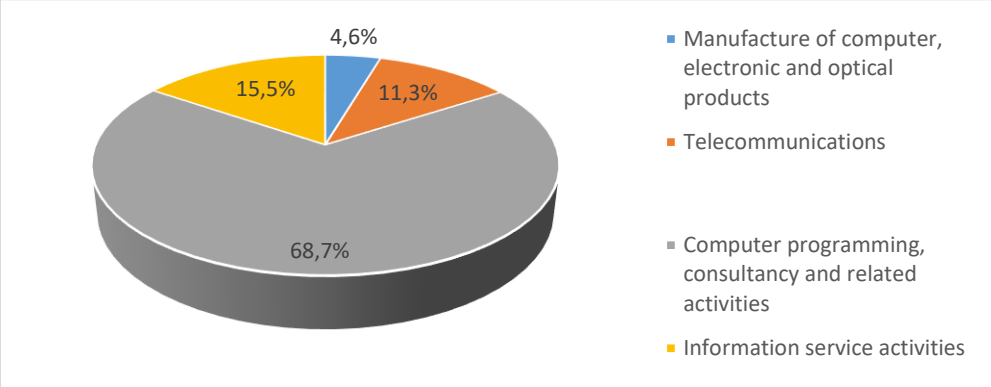


*Figure 216 for distribution by ICT sub-sector of enterprises where 'opportunities for collaborating on innovation with external partners' was a factor enabling innovation activities of high or medium importance-284*

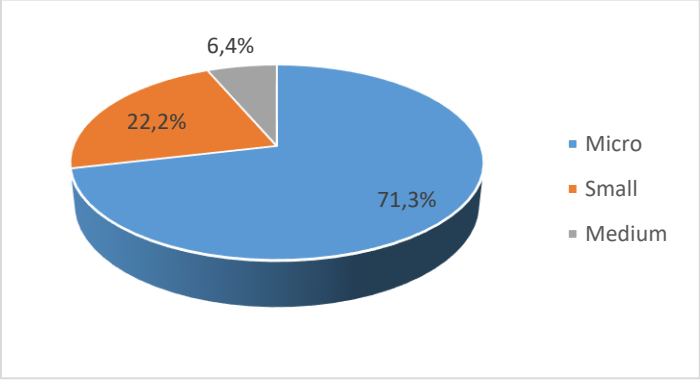


*Figure 217 for distribution by size of ICT of enterprises where 'opportunities for collaborating on innovation with external partners' was a factor enabling innovation activities of low or no importance-171*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

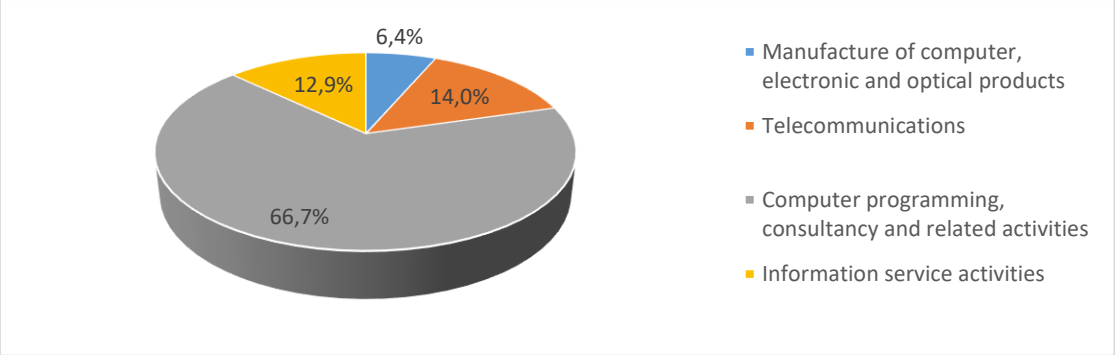


*Figure 218 for distribution by ICT sub-sector of enterprises where 'opportunities for collaborating on innovation with external partners' was a factor enabling innovation activities of low or no importance-171*

### KEEPING UP WITH COMPETITORS IN THE MARKET

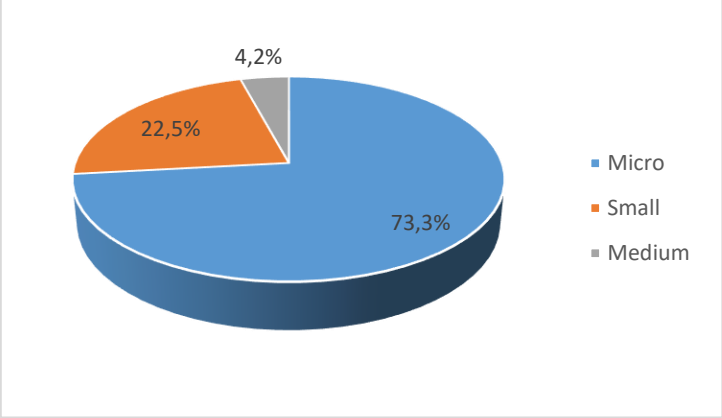


*Figure 219 for distribution by size of ICT of enterprises where ' keeping up with competitors in the market' was a factor enabling innovation activities of high or medium importance-333*

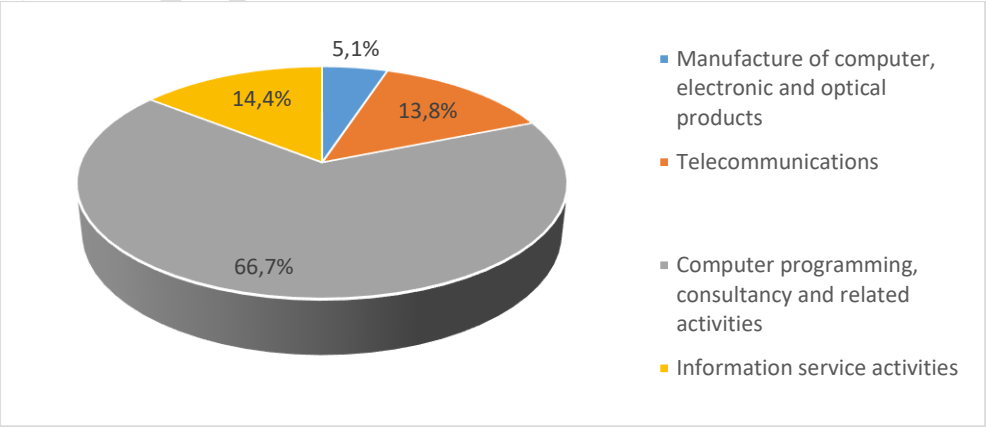


*Figure 220 for distribution by ICT sub-sector of enterprises where ' keeping up with competitors in the market' was a factor enabling innovation activities of high or medium importance-33*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

### CONCLUSIONS

(1) The most preferable factors enabling innovation, with high or medium importance, are new information and computer technolgies, application or software (378 enterprises), availability fo skilled employees (344), keeping up with competitors in the market (333) and availability of internal finance (273);

(2) The less important factors enabling innovation availability of government grants or subsidies for innovation (294), availability of credit or private equity (274), new knowledge or discoveries from science or universities (230) and opportunities for collaborating on innovation with external partners (171).

(3) Distribution by size of ICT enterprises and sub-secor are the same in terms of importance of factors enebaling innovation.

## 9. NO INNOVATION ACTIVE ENTERPRISES BY BARRIER AGAINST INNOVATION ACTIVITIES, LEVEL OF IMPORTANCE OF THE BARRIER

The barriers against innovation activities of no innovation active enterpises are considered as ***reasons for no innovation*** (*not compel reason to innovate low demand for innovation in the market; no need to innovate due to previous innovations; no need to innovate due to very little competition in the enterpise's market, lack of good idea for innovation*) and ***factors preventing innovations***(lack of finance for innovation; too high innovation costs; lack of skilled employees within enterpise, lack of collaboration partners, unceratin demand for innovation and too much competition on the market.

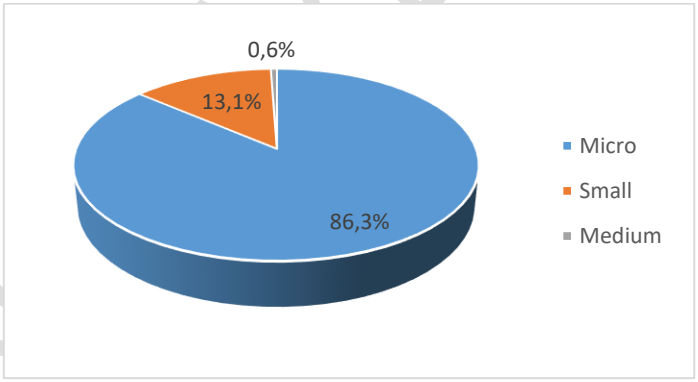


*Figure 221 for distribution by size of ICT of Enterprises that did not compel reason to innovate-175*

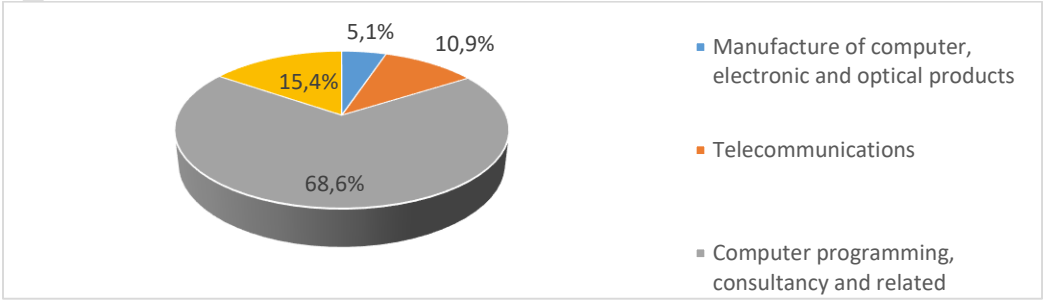


*Figure 222 for distribution by ICT sub-sector of Enterprises that did not compel reason to innovate -175*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

## RESONS FOR NO INNOVATION

### *Low demand for innovations in the market*

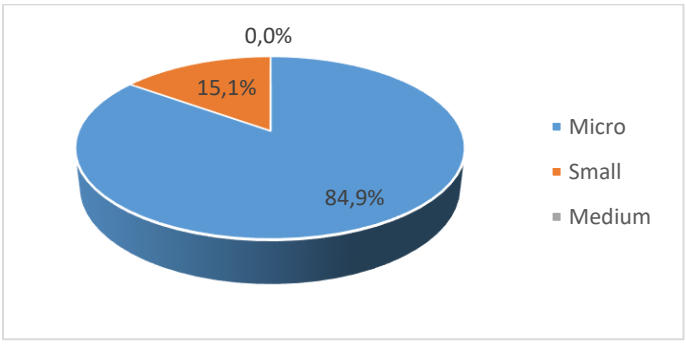


*Figure 223 for distribution by size of ICT of Enterprises where 'low demand for innovations in the market' was a reason not to conduct innovation of high or medium importance-73*

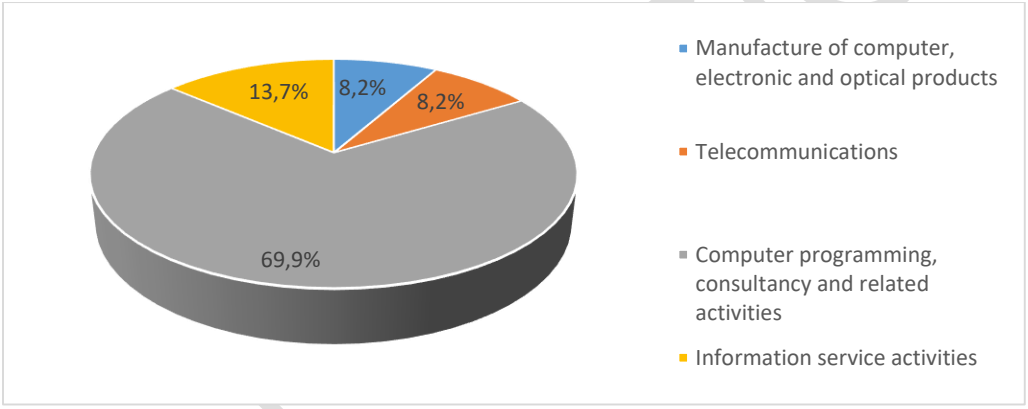


*Figure 224 for distribution by ICT sub-sector of Enterprises where 'low demand for innovations in the market' was a reason not to conduct innovation of high or medium importance-73*

### *No need to innovate due to previous innovations*

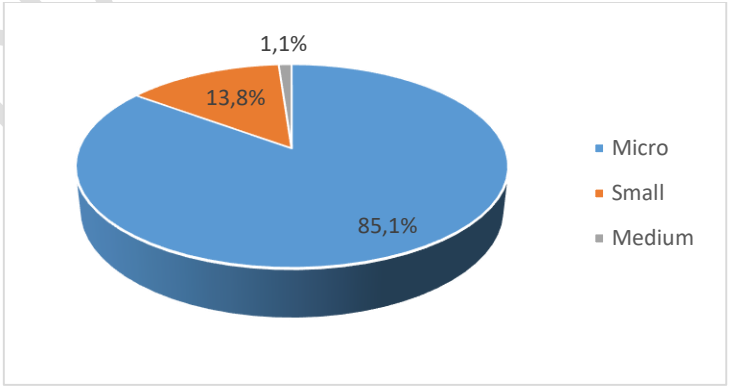


*Figure 225 for distribution by size of ICT of Enterprises where 'no need to innovate due to previous innovations' was a reason not to conduct innovation of high or medium importance -87*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

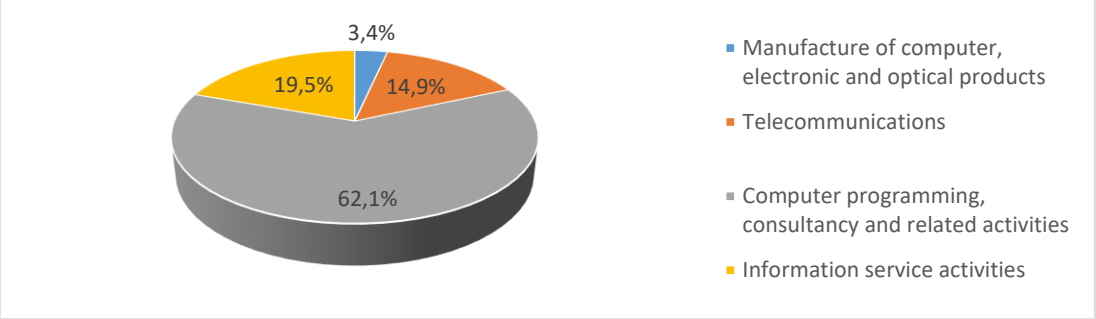


*Figure 226 for distribution by ICT sub-sector of Enterprises where 'no need to innovate due to previous innovations' was a reason not to conduct innovation of high or medium importance -87*

***No need to innovate due to very little competition in the enterprise's market***

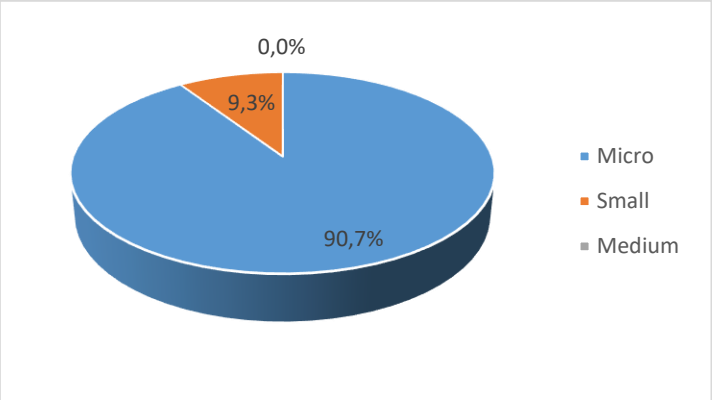


*Figure 227 for distribution by size of ICT of Enterprises where 'no need to innovate due to very little competition in the enterprise's market' was a reason not to conduct innovation of high or medium importance-75*

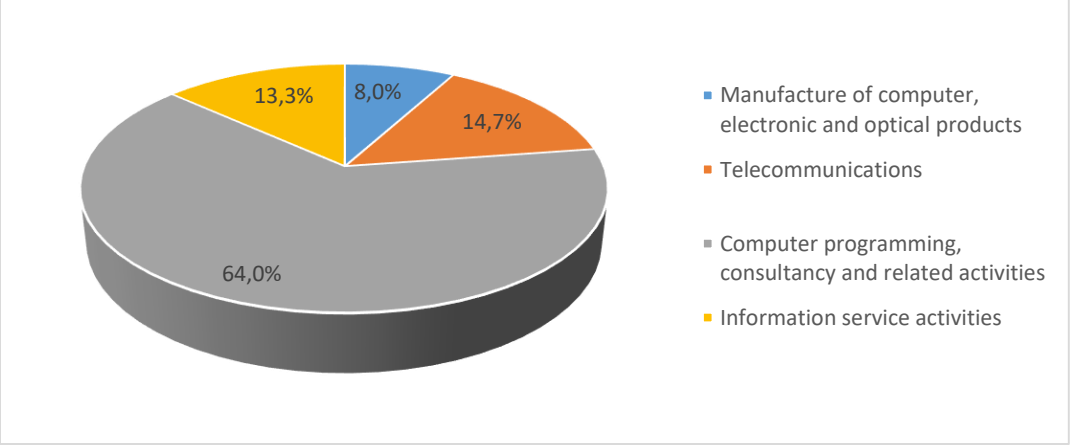


*Figure 228 for distribution by ICT sub-sector of Enterprises where 'no need to innovate due to very little competition in the enterprise's market' was a reason not to conduct innovation of high or medium importance-75*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

***Lack of good ideas for innovation***

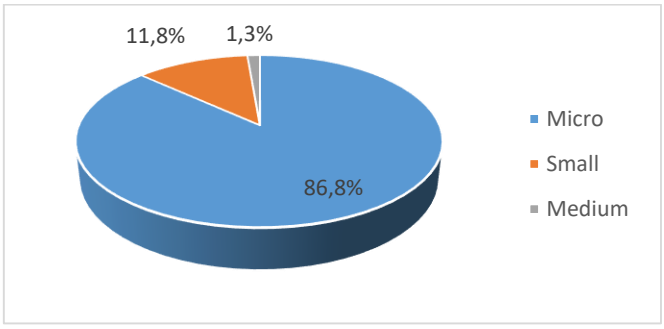


*Figure 229 for distribution by size of ICT of Enterprises where 'lack of good ideas for innovations' was a reason not to conduct innovation of high or medium importance-76*

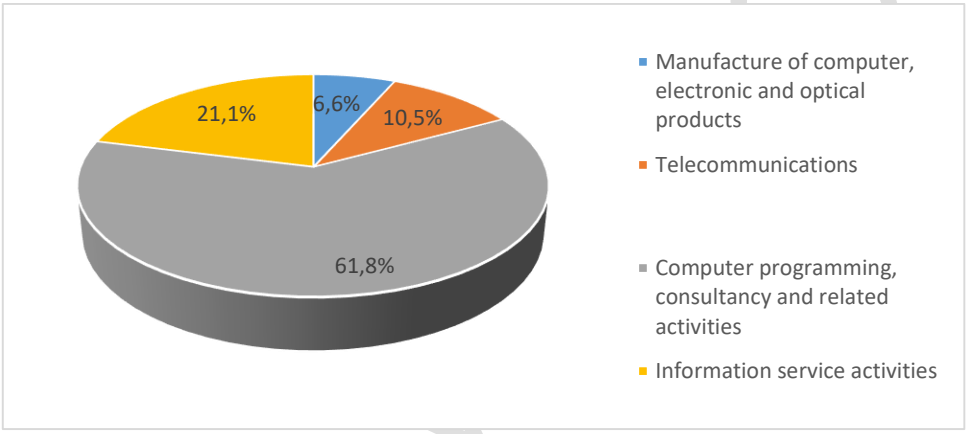


*Figure 230 for distribution by ICT sub-sector of Enterprises where 'lack of good ideas for innovations' was a reason not to conduct innovation of high or medium importance-76*

## FACTORS PREVENTING INNOVATION ACTIVITIES

***Lack of finance for innovation***

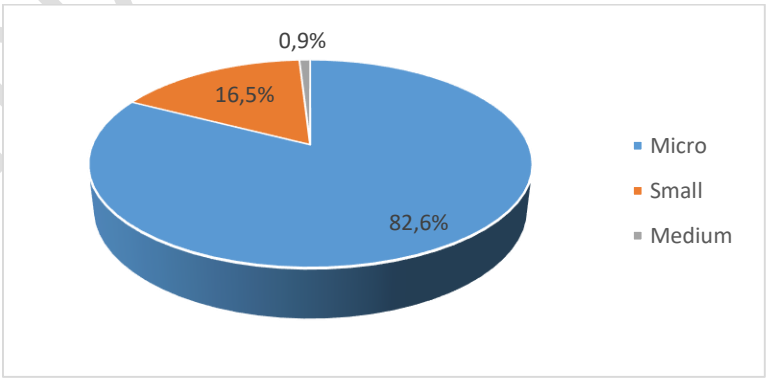


*Figure 231 - for distribution by size of ICT of Enterprises where 'lack of internal finance for innovation' was a factor preventing innovation activities of high or medium importance-425*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

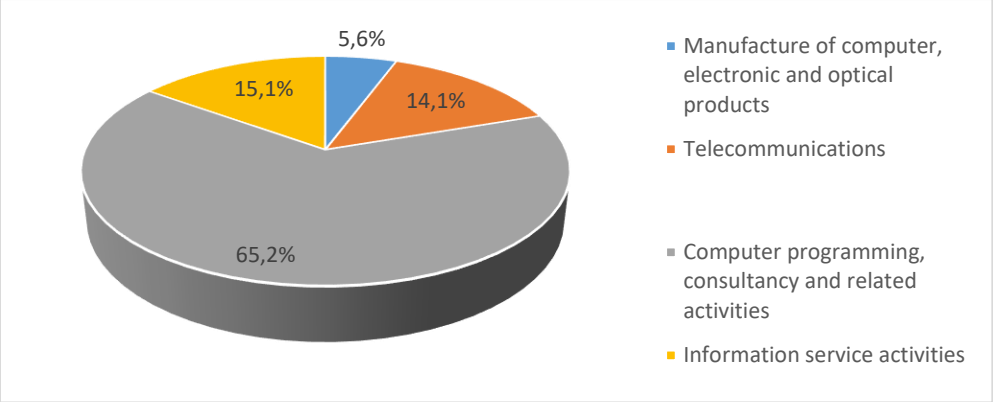


*Figure 232 for distribution by ICT sub-sector of Enterprises where 'lack of internal finance for innovation' was a factor preventing innovation activities of high or medium importance-425*

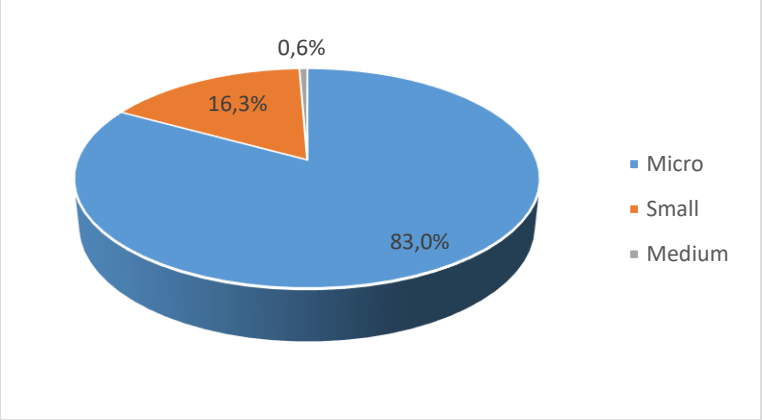


*Figure 233 for distribution by size of ICT of Enterprises where 'lack of credit or private equity' was a factor preventing innovation activities of high or medium importance-312*

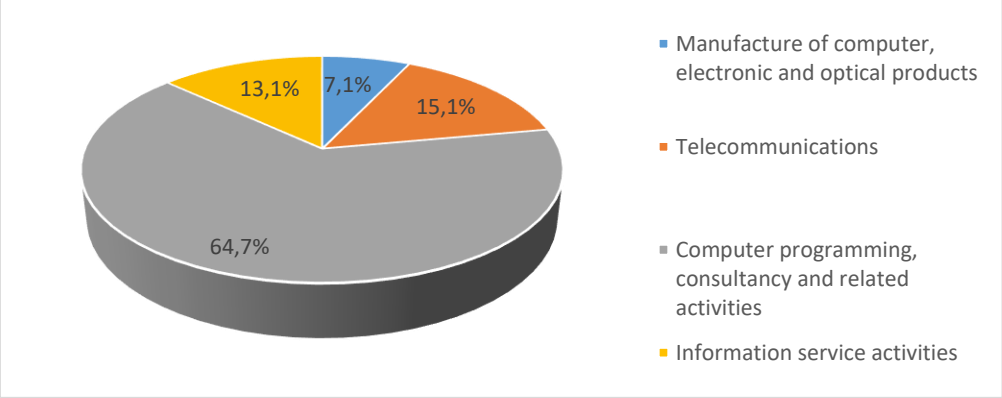


*Figure 234 for distribution by ICT sub-sector of Enterprises where 'lack of credit or private equity' was a factor preventing innovation activities of high or medium importance-312*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

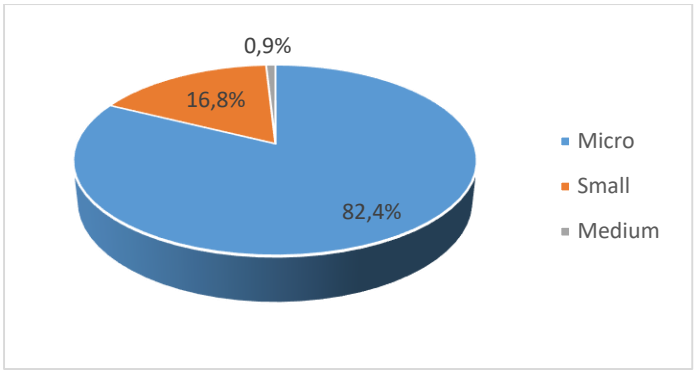


*Figure 235 for distribution by size of ICT of Enterprises where 'difficulties in obtaining government grants or subsidies for innovation' was a factor preventing innovation activities of high or medium importance-360*

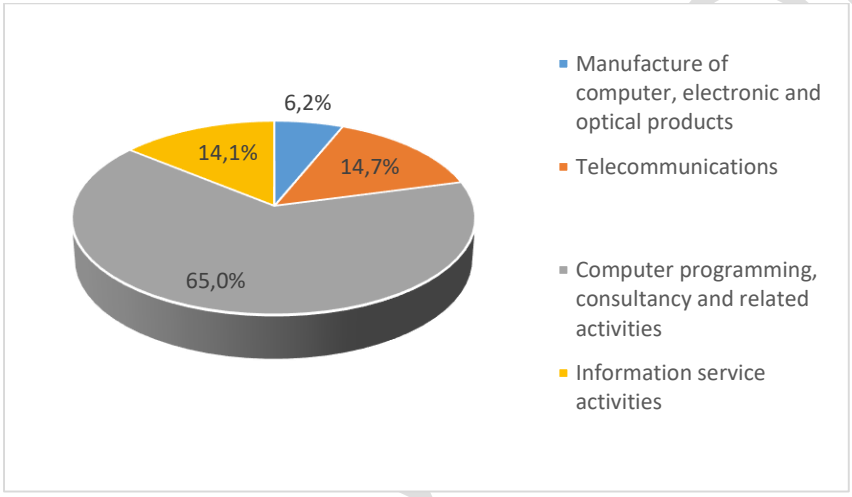


*Figure 236 for distribution by ICT sub-sector of Enterprises where 'difficulties in obtaining government grants or subsidies for innovation' was a factor preventing innovation activities of high or medium importance-360*

### *Too high innovation costs*

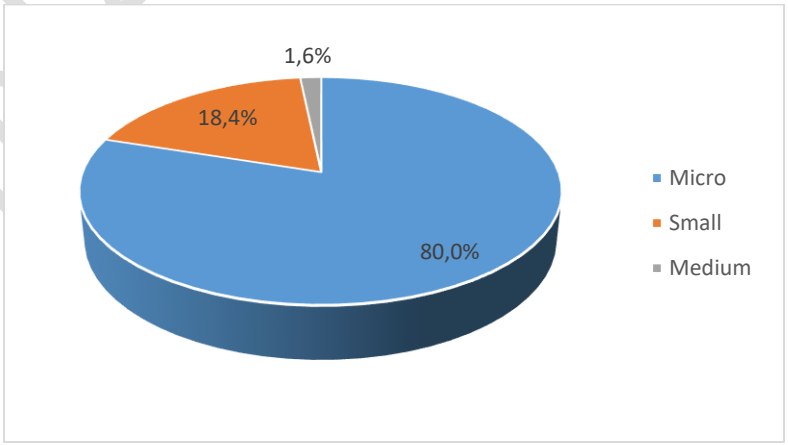


*Figure 237 for distribution by size of ICT of Enterprises where 'too high innovation costs' was a factor preventing innovation activities of high or medium importance-425*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

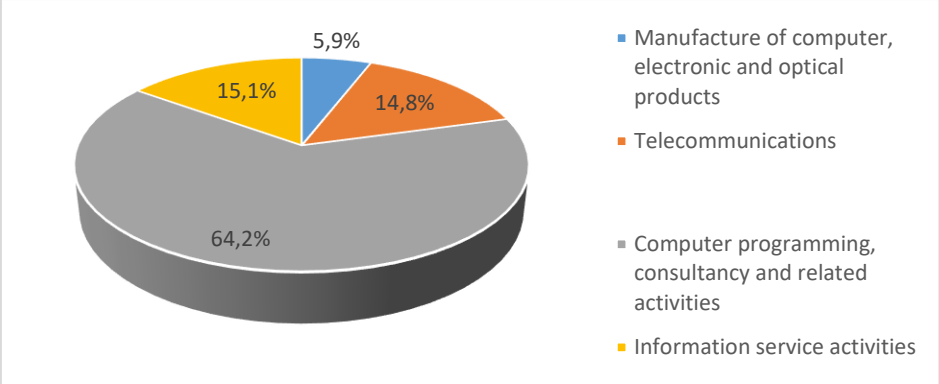


*Figure 238 for distribution by ICT sub-sector of Enterprises where 'too high innovation costs' was a factor preventing innovation activities of high or medium importance-425*

### *Lack of skilled employees within your enterprise*

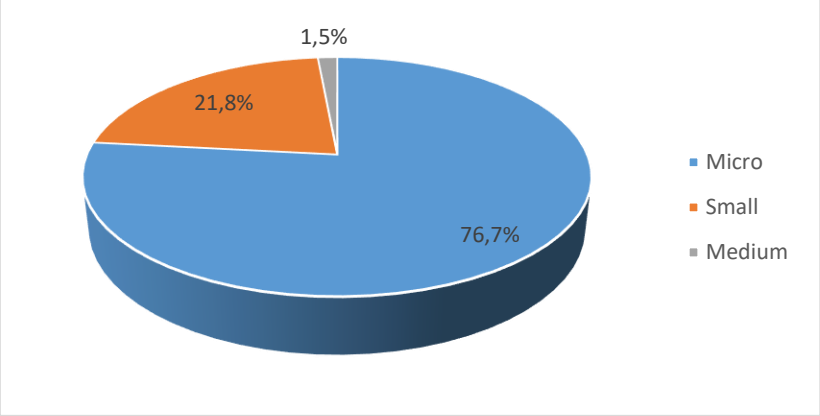


*Figure 239 for distribution by size of ICT of Enterprises where 'lack of skilled employees within your enterprise' was a factor preventing innovation activities of high or medium importance-339*

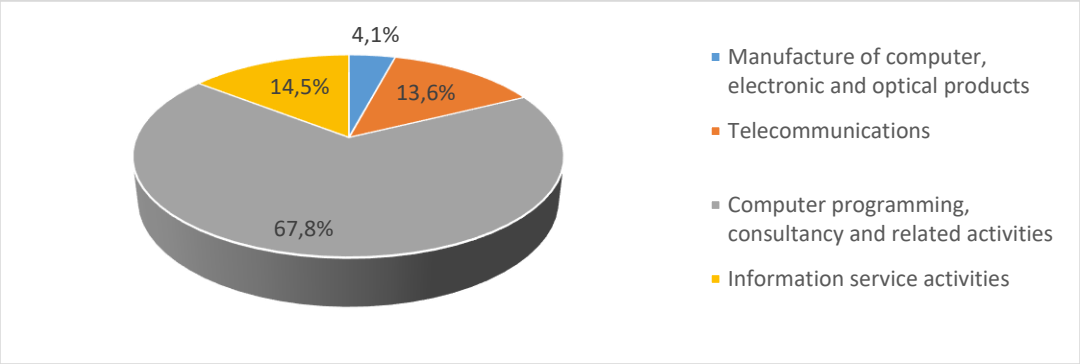


*Figure 240 for distribution by ICT sub-sector of Enterprises where 'lack of skilled employees within your enterprise' was a factor preventing innovation activities of high or medium importance-339*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

### *Lack of collaboration partners*

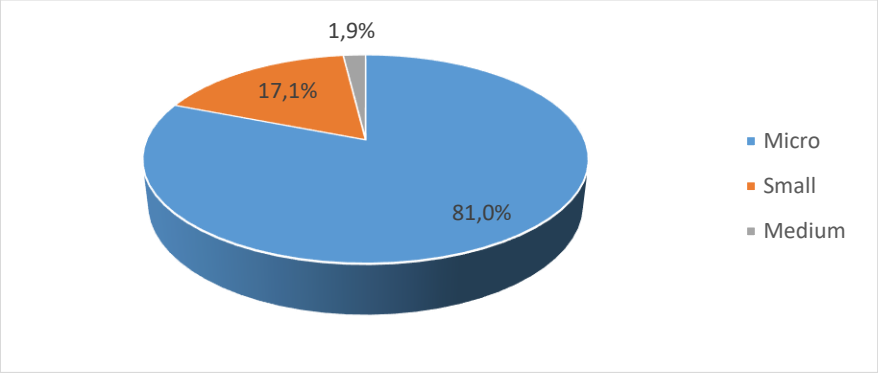


*Figure 241 for distribution by size of ICT of Enterprises where 'lack of collaboration partners' was a factor preventing innovation activities of high or medium importance-310*

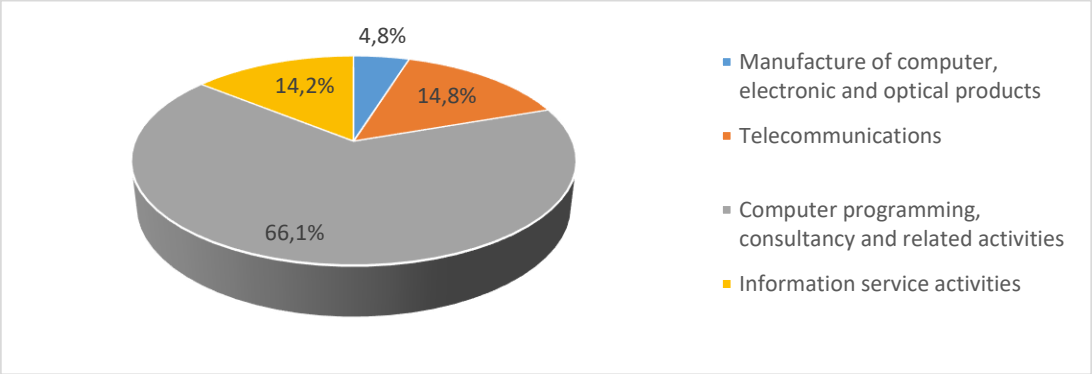


*Figure 242 for distribution by ICT sub-sector of Enterprises where 'lack of collaboration partners' was a factor preventing innovation activities of high or medium importance-310*

### *Unceratin market demnad*

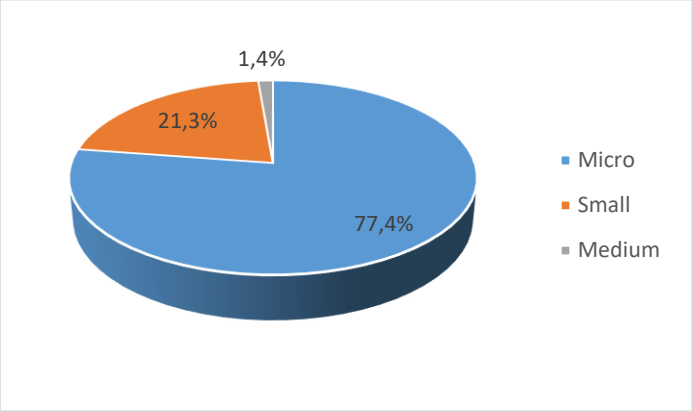


*Figure 243 for distribution by size of ICT of Enterprises where 'uncertain market demand for ideas for innovations' was a factor preventing innovation activities of high or medium importance-296*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

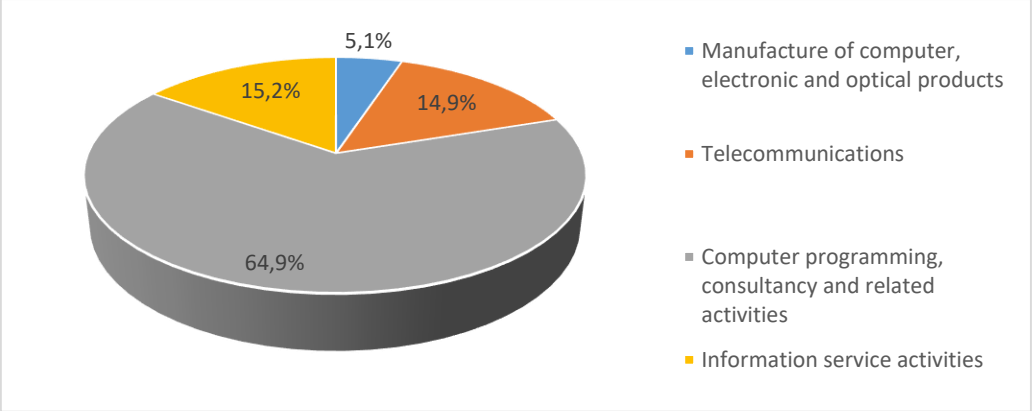


*Figure 244 for distribution by ICT sub-sector of Enterprises where 'uncertain market demand for ideas for innovations' was a factor preventing innovation activities of high or medium importance-296*

### *Too much competition in the market*

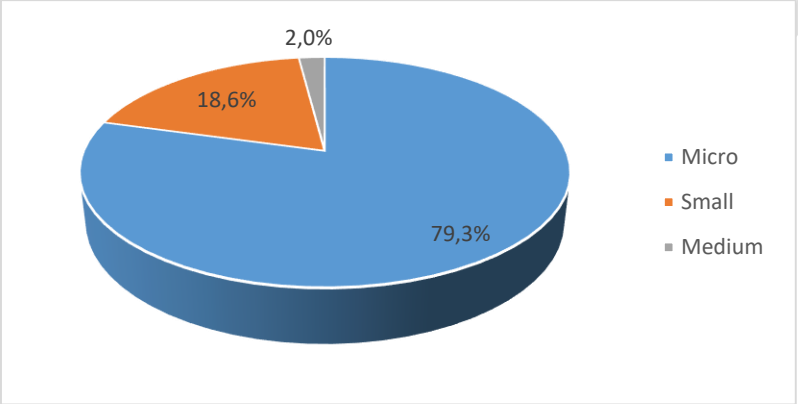


*Figure 245 for distribution by size of ICT of Enterprises where 'too much competition in the market' was a factor preventing innovation activities of high or medium importance-298*

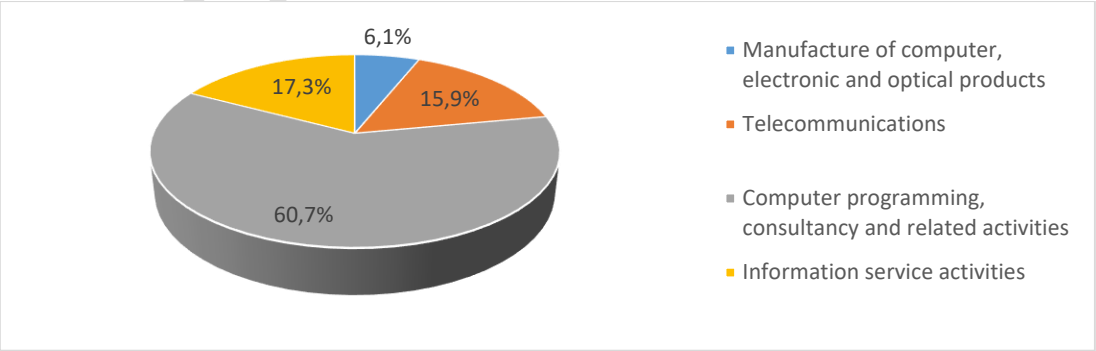


*Figure 246 for distribution by ICT sub-sector of Enterprises where 'too much competition in the market' was a factor preventing innovation activities of high or medium importance-298*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

### CONCLUSIONS

(1) The most frequant reason for no innovation activities is did not compel to innovate (175) and other are with same frequancy, no need to innovate due to previous innovations ( 87), and due to previous innovations (87) and due to little competition in the enterpise\s market (75), lack of good ideas for innovations (76) and low demand for innovation in the market (73)

(2) The most important factors preventing innovation activities are lack of internal finance for innovation and *too high innovation costs' (425) lack of skilled employees within your enterprise (339) lack of collaboration partners* (310*) uncertain market demand for ideas for innovations (296).*

(3) Distribution by size of ICT enterprises and sub-sectors are the same in terms of importance of factors enabling innovation.

## 10. INNOVATION ACTIVE ENTERPRISES BY HAMPERING FACTOR FOR INNOVATION ACTIVITIES, LEVEL OF IMPORTANCE OF THE HAMPERING FACTOR

The same factors prevenitng innovation activities of no innovation active enterpises are considered as hambering factors for innovtion activities of innovation active neterpises.

### LACK OF FINANCE

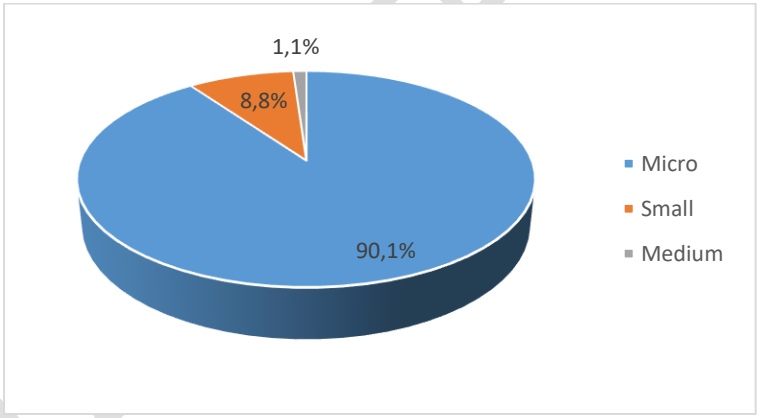


*Figure 247 for distribution by size of ICT of Enterprises where 'lack of internal finance for innovation' was a factor hampering innovation activities of high or medium importance-91*

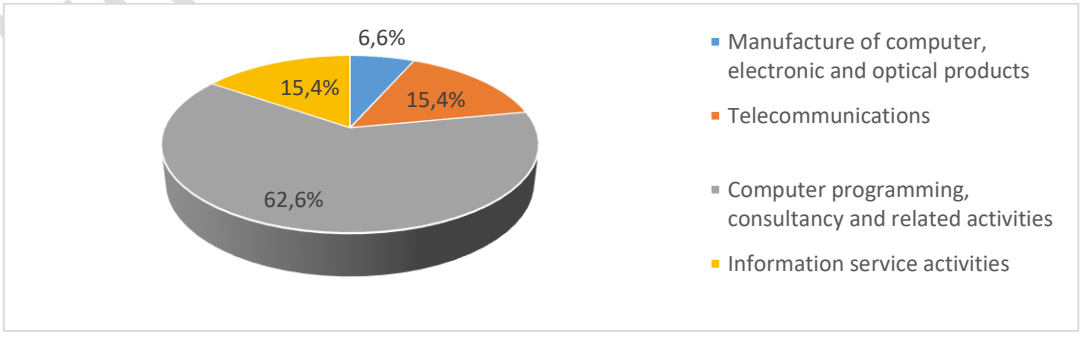


*Figure 248 for distribution by ICT sub-sector of Enterprises where 'lack of internal finance for innovation' was a factor hampering innovation activities of high or medium importance-91*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

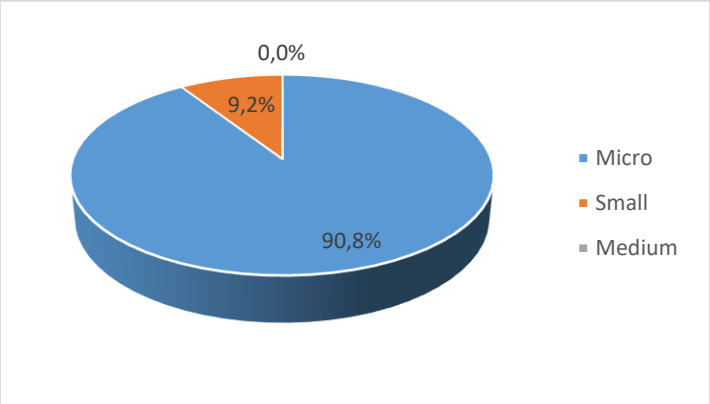


*Figure 249 for distribution by size of ICT of Enterprises where 'lack of credit or private equity' was a factor hampering innovation activities of high or medium importance-76*

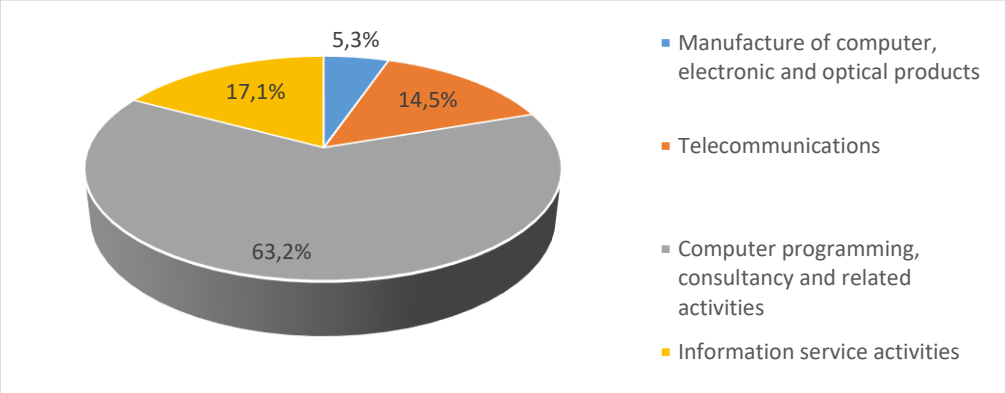


*Figure 250 for distribution by ICT sub-sector of Enterprises where 'lack of credit or private equity' was a factor hampering innovation activities of high or medium importance-76*

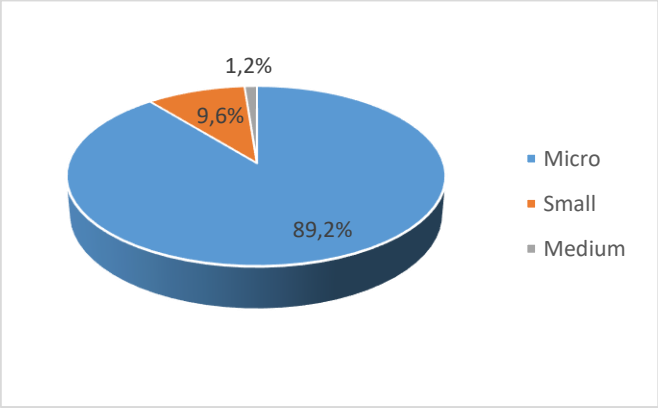


*Figure 251 for distribution by size of ICT of Enterprises where 'difficulties in obtaining government grants or subsidies for innovation' was a factor hampering innovation activities of high or medium importance-83*



*SMEInnoBoost Project is funded by Balkan Mediterranean Programme 2014-2020 and co-financed by partners' countries public funds.*

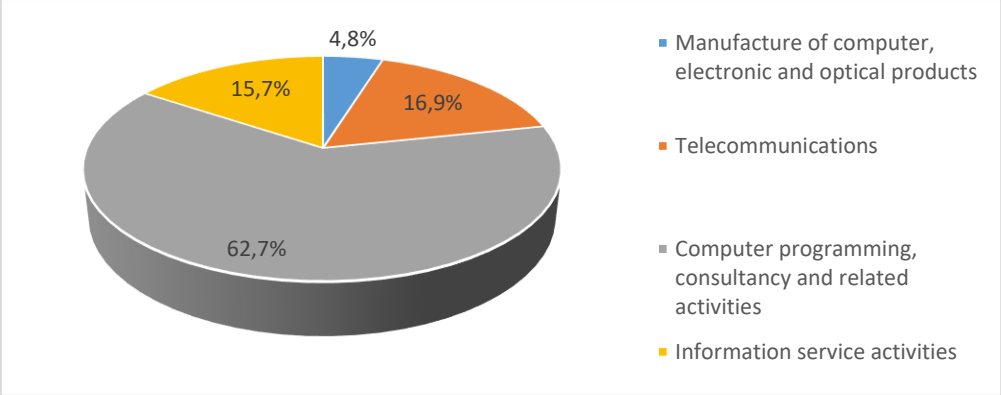


*Figure 252 for distribution by ICT sub-sector of Enterprises where 'difficulties in obtaining government grants or subsidies for innovation' was a factor hampering innovation activities of high or medium importance-83*

### TOO HIGH INNOVATION COSTS

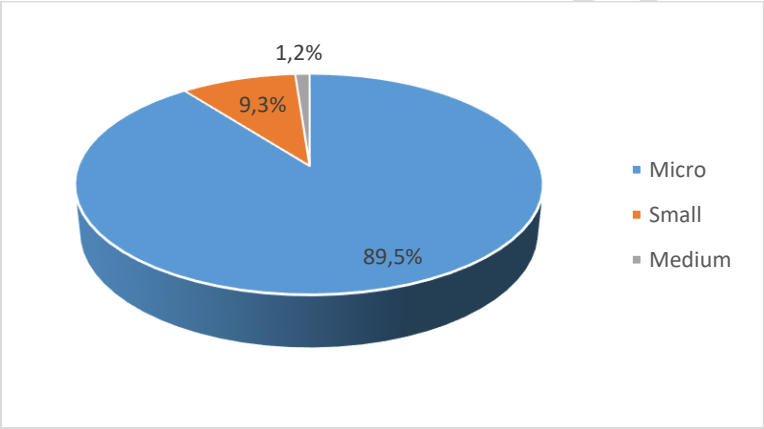


*Figure 253 for distribution by size of ICT of Enterprises where 'too high innovation costs' was a factor hampering innovation activities of high or medium importance-86*

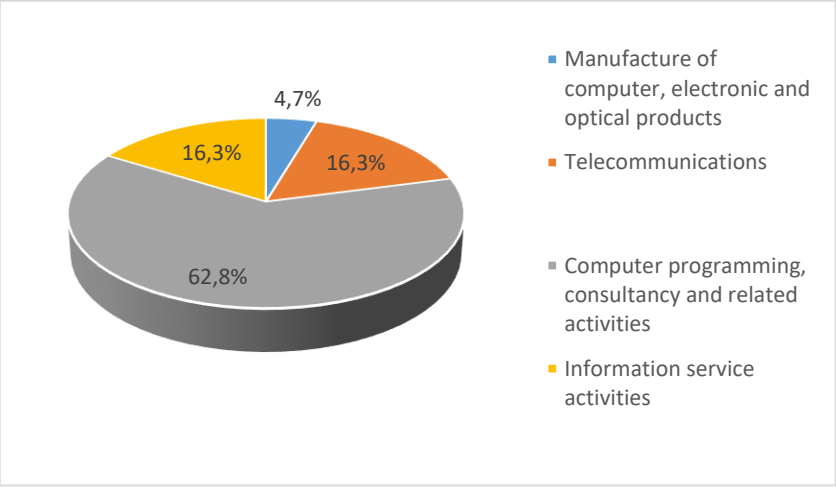


*Figure 254 for distribution by ICT sub-sector of Enterprises where 'too high innovation costs' was a factor hampering innovation activities of high or medium importance -86*



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### LACK OF SKILLED EMPLOYEES IN YOUR ENTERPRISE

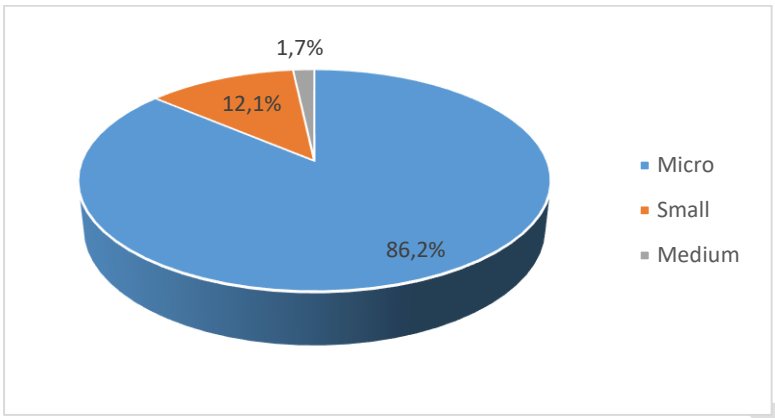


*Figure 255 for distribution by size of ICT of Enterprises where 'lack of skilled employees within your enterprise' was a factor hampering innovation activities of high or medium importance-58*

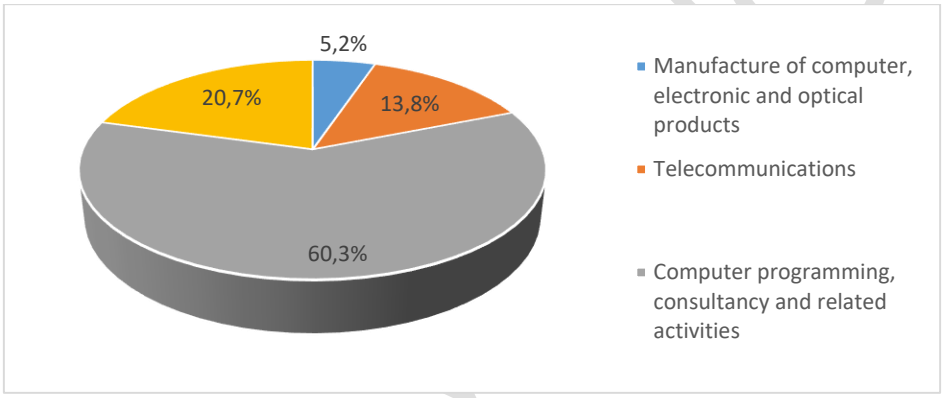


*Figure 256 for distribution by ICT sub-sector of Enterprises where 'lack of skilled employees within your enterprise' was a factor hampering innovation activities of high or medium importance-58*

### LACK OF COLLABORATION PARTNER

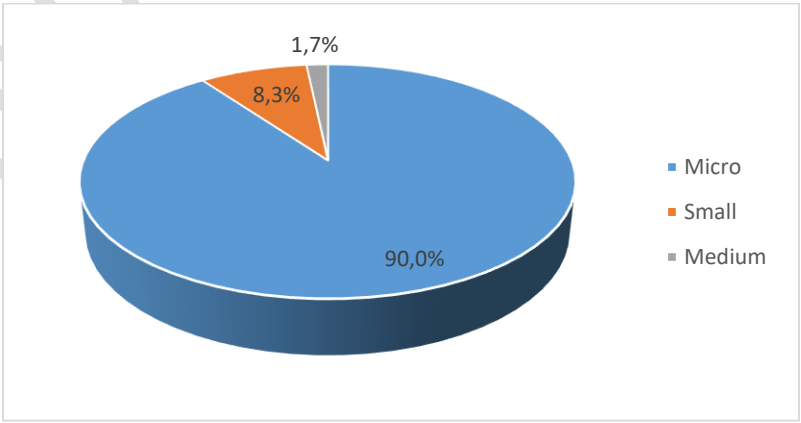


*Figure 257 for distribution by size of ICT of Enterprises where 'lack of collaboration partners' was a factor hampering innovation activities of high or medium importance-60*



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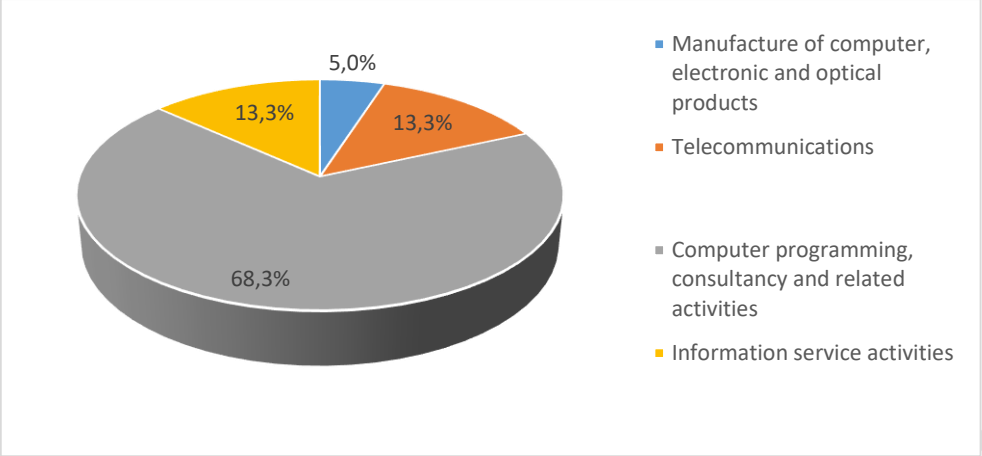


*Figure 258 for distribution by ICT sub-sector of Enterprises where 'lack of collaboration partners' was a factor hampering innovation activities of high or medium importance-60*

### UNCERATIN MARKET DEMAND FOR IDEAS FOR INNOVATIONS

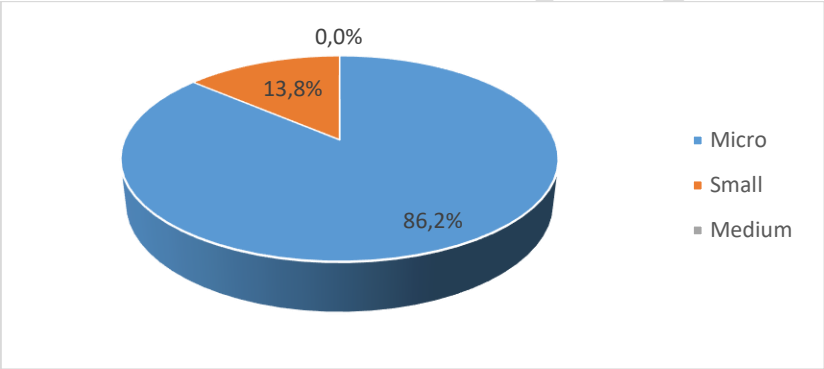


*Figure 259 for distribution by size of ICT of Enterprises where 'uncertain market demand for ideas for innovations' was a factor hampering innovation activities of high or medium importance-58*

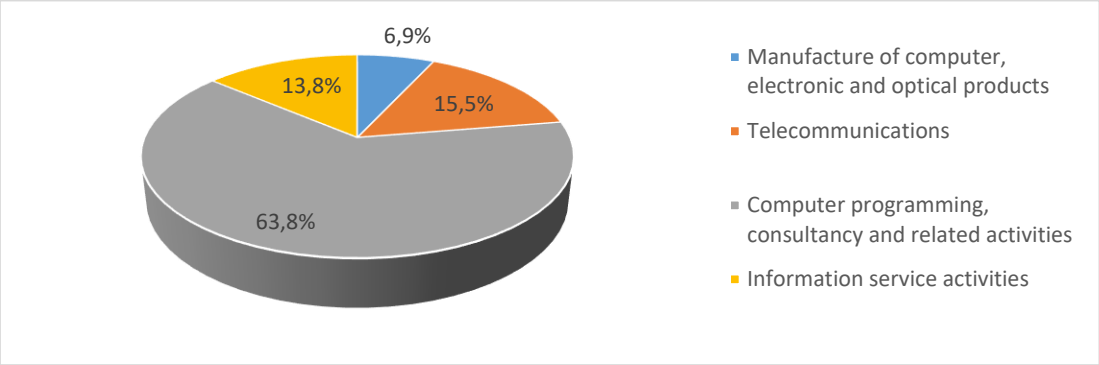


*Figure 260 for distribution by ICT sub-sector of Enterprises where 'uncertain market demand for ideas for innovations' was a factor hampering innovation activities of high or medium importance-58*



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### TOO MUCH COMPETITION IN THE MARKET

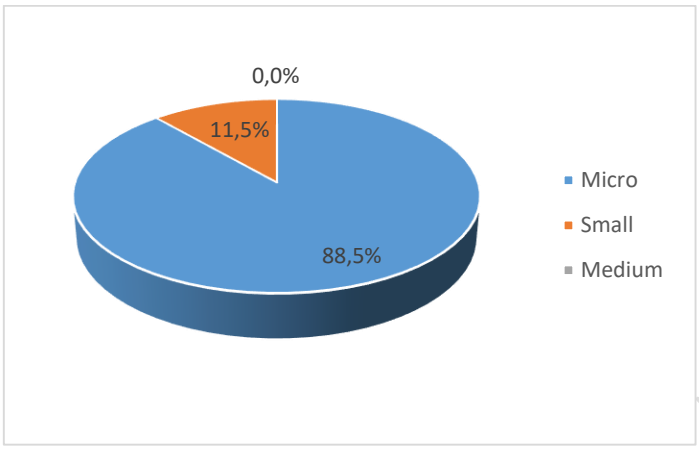


*Figure 261 for distribution by size of ICT of Enterprises where 'too much competition in the market' was a factor hampering innovation activities of high or medium importance-61*

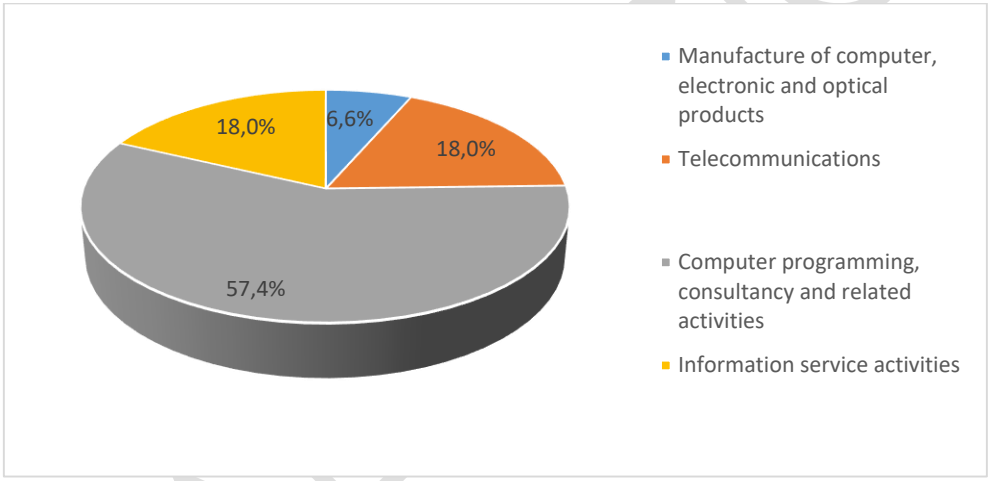


*Figure 262 for distribution by ICT sub-sector of Enterprises where 'too much competition in the market' was a factor hampering innovation activities of high or medium importance-61*

### CONCLUSIONS

(1) The most important factors hampering innovation activities of micro enterpises are lack of internal finance for innovation activities (90,8% from total population of innovation active enterpises-91), too higher innovation costs (89,5%) and too much competition in the market. For small enterpises with high or medium importance are uncertion demand for ideas for innovation (13,8 % from total population-58), lack of skilled employees within enterprise (12,1 % from total population – 58), too much competition in the market (11,% from 61) and difficulties in obtaining governements grants or subsidies for innovation (9,6% form 83 respondents). The less important factor hampering innovation activities of medium active enterpises ir too much competition in the market (0%)

(2) Distribution by sub-sectors of ICT SMEs are the same in terms of importance of factors enabling innovation.



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## 11. ENTERPRISES WHOSE INNOVATION ACTIVITIES HAVE BEEN AFFECTED OR NOT BY LEGISLATION OR REGULATIONS BY TYPE OF EFFECT, SUBJECT OF THE REGULATION/LEGISLATION

Legislation and regulations are considered in terms of product safety and consumer protection, environment, Intellectual property, Taxation and Employment, worker safety or social affairs.

### PRODUCT SAFETY AND CONSUMER PROTECTION

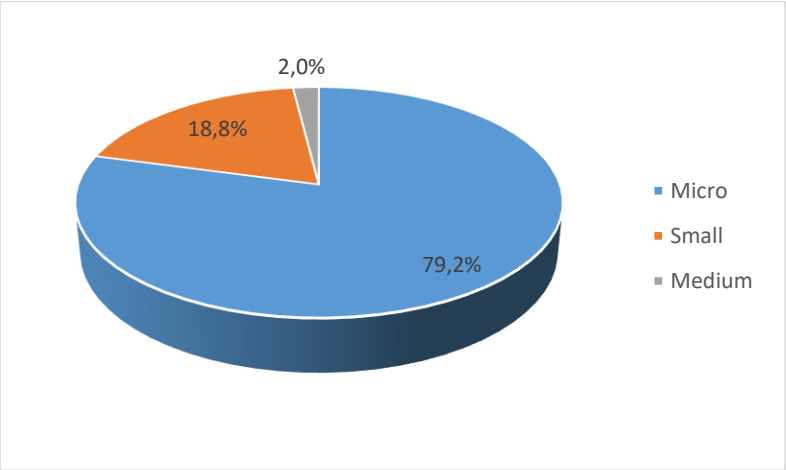


*Figure 263 for distribution by size of ICT of Enterprises that reported that innovation activities were initiated or facilitated by legislation or regulations on Innovation active enterprises -Product safety and consumer protection-101*

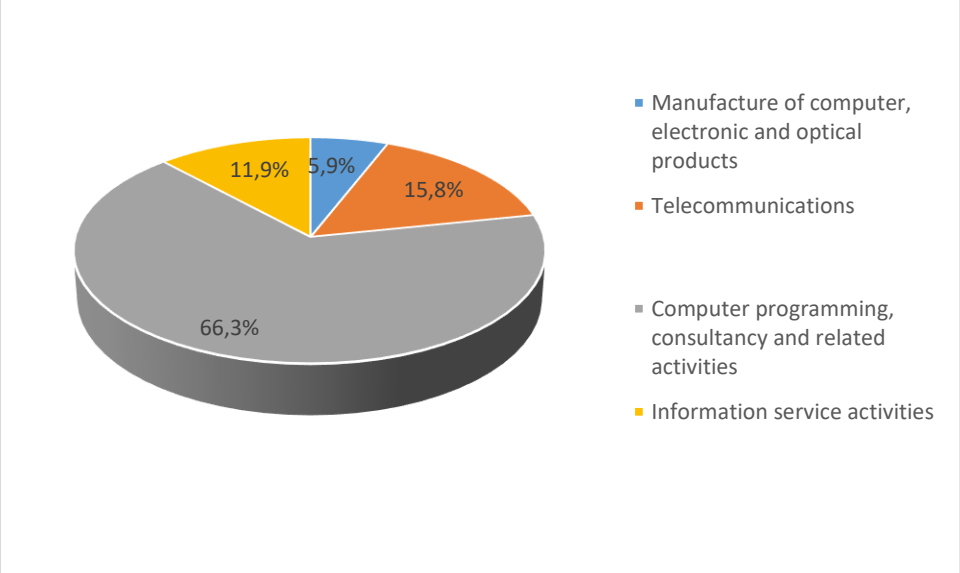


*Figure 264 for distribution by ICT sub-sector of Enterprises that reported that innovation activities were initiated or facilitated by legislation or regulations on Innovation active enterprises -Product safety and consumer protection-101*



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### ENVIRONMENT

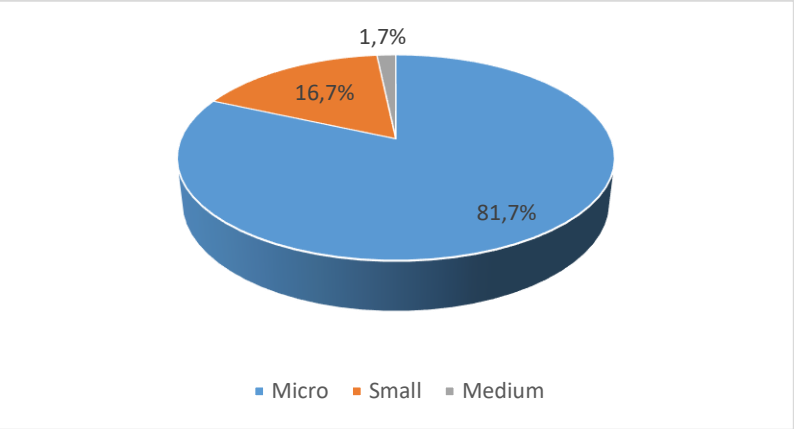


*Figure 265 for distribution by size of ICT of Enterprises that reported that innovation activities were initiated or facilitated by legislation or regulations on Innovation active enterprises the environment-60*

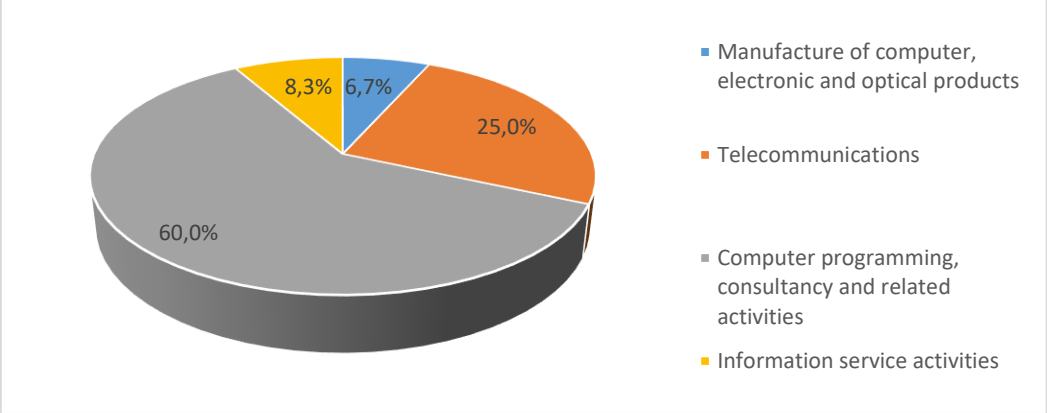


*Figure 266 for distribution by ICT sub-sector of of Enterprises that reported that innovation activities were initiated or facilitated by legislation or regulations on Innovation active enterprises the environment-60*

### INTELLECTUAL PROPERTY

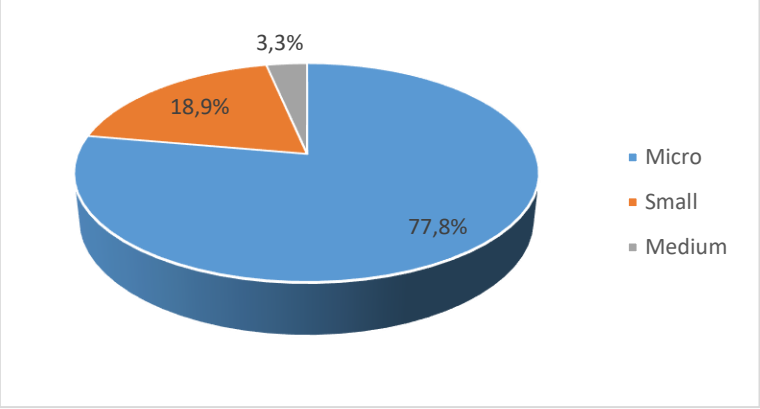


*Figure 267 for distribution by size of ICT of Enterprises that reported that innovation activities were initiated or facilitated by legislation or regulations on Innovation active enterprises -Intellectual property-180*



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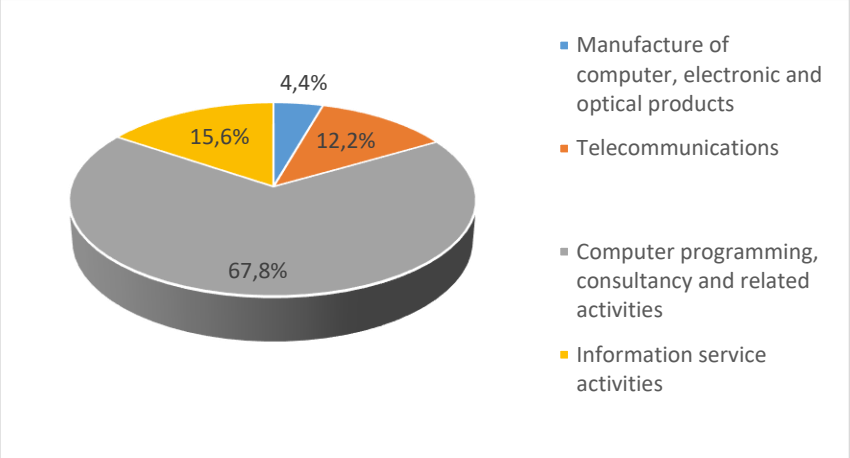


*Figure 268 for distribution by ICT sub-sector of of Enterprises that reported that innovation activities were initiated or facilitated by legislation or regulations on Innovation active enterprises -Intellectual property-180*

## TAXATION

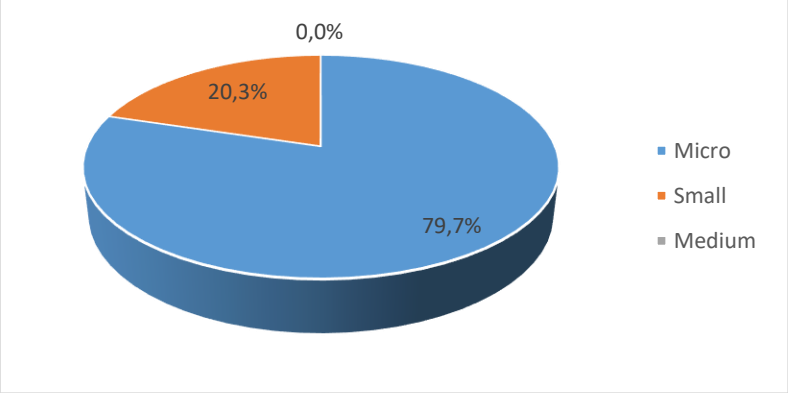


*Figure 269 for distribution by size of ICT of Enterprises that reported that innovation activities were initiated or facilitated by legislation or regulations on Innovation active enterprises- Taxation-69*

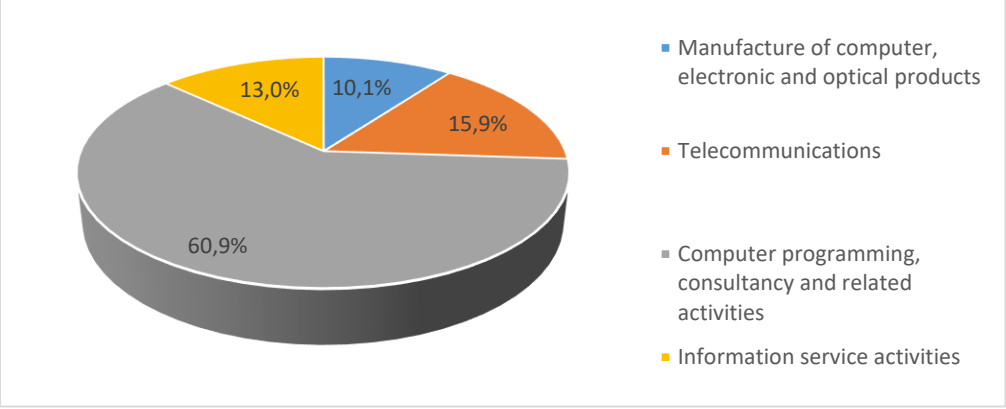


*Figure 270 for distribution by ICT sub-sector of of Enterprises that reported that innovation activities were initiated or facilitated by legislation or regulations on Innovation active enterprises- Taxation-69*



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### EMPLOYMENT, WORKER SAFETY OR SOCIAL AFFAIRS

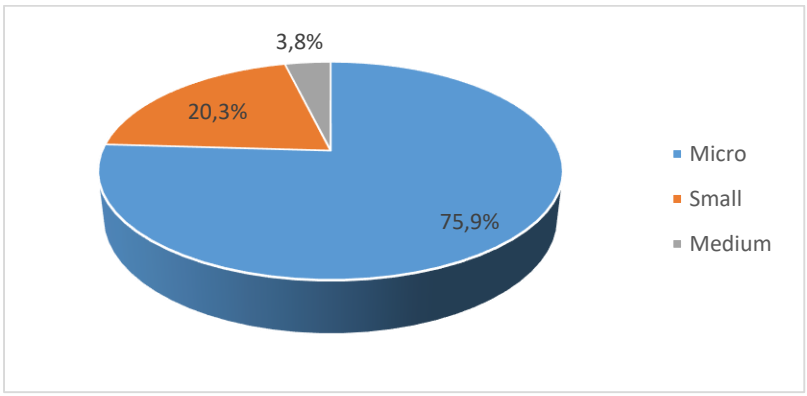


*Figure 271 for distribution by size of ICT of Enterprises that reported that innovation activities were initiated or facilitated by legislation or regulations on Innovation active enterprises- Employment, worker safety or social affairs-79*

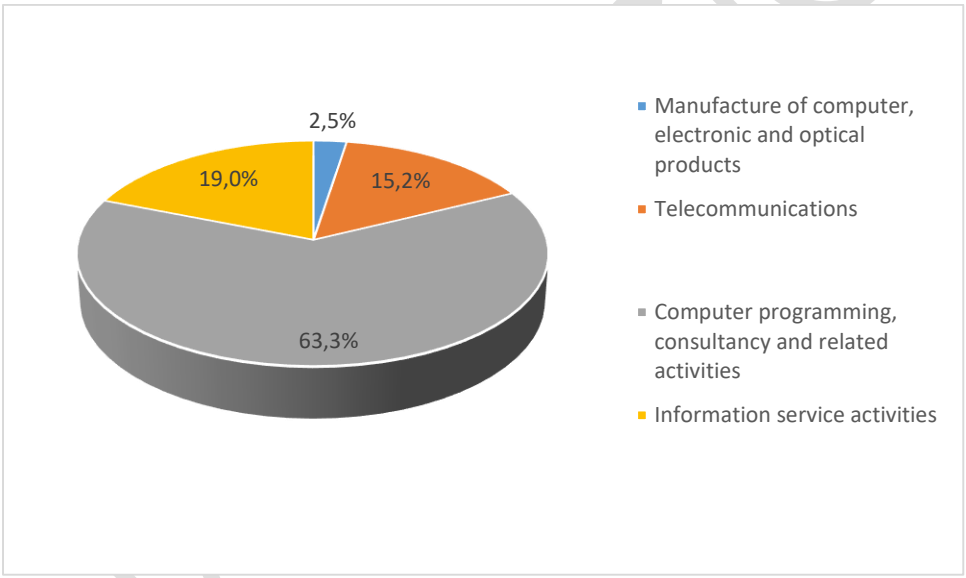


*Figure 272 for distribution by ICT sub-sector of of Enterprises that reported that innovation activities were initiated or facilitated by legislation or regulations on Innovation active enterprises- Employment, worker safety or social affairs-79*

### CONSLUSIONS

(1) The most important legislation and regulations have been affected innovation activities of micro enteprises is the environment (81% share of respondents). For small enterpises it is employment, worker safety or social affaires (20,3% share of respondents), while for medium it is intelectual proprety (3,3 % share od respondents.

(2) The legislation and regulations were initiated or facilitated intellectual proprety and product safety and consumer protection have bee affected the most dominant sub-sector Computer programming, consultancy and related



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activities (67,8% and 66,3 % of respondents, respectively). For Information services activities it is employment, worker safety or social afaires ( 20,3%), telecommunications is affected by regulations on the environment (25,0%), while Manufacture of computer, electronic and optical by taxation ( 10,1% of respondents)

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## FIGURES







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