3.3 ORGANIZATIONAL MECHANISM PUBLIC-PRIVATE PARTNERSHIP IN WASTE MANAGEMENT BUSINESS

Economic advantage of the European Union (EU) is directly connected to scarcity of resources. Waste management business plays a crucial role in providing advanced manufacturing companies in EU with cheap resources. Recycling community in the Union is a really important business factor in maintaining the environment and living area in a modernity of the 21st century and in addition, it provides waste management business with separately waste collection systems. In the EU there are a lot of waste management companies from excellent developed companies to low developed ones that need innovative business mechanism.

However, crowd funding business strategy was introduced in a wide business area, where a lot of people are involved directly in project development process. Presence of the crowd funding strategy in our economy gives an opportunity to be developed waste management by means of business model public-private partnership (PPP) and community to be the core business element.

In the current inquiring paper is created organizational mechanism public-private partnership in waste management business, it includes principle community-to-community.

The main purpose of the monograph is to be resolved the problem about low effective waste treatment on a households’ level, annual waste fees inter alia and creation of high competitiveness level for Bulgarian and EU small and medium sized enterprises (SMEs) as well as waste management companies.

The subject of the monograph is organizational mechanism PPP in waste management business and the object is "Bulecopack" JSC.

Economic growth in the EU depends on the creation of innovative business approaches embraces the effectiveness from inclusion of the recycled resources in manufacturing business. Waste management business can effectively underpin profitability of the SMEs. We know that separately collected wastes possess value and it could be back again into economy. In sum this is well known circular economy [192]. Business model PPP is an instrument for providing the highest quality public services. The waste treatment processes are well known in energy projects, by incineration process inter alia are practically applicable is composting, recycling and reuse.

Waste management strategic policy in EU origins from Lansink Ledger [189]. Waste management strategy includes waste management hierarchy in accordance to Directive 2008/98/EC as follows: prevention or reduce by means lowering the amount of waste produced, using less material in design and manufacture, designing products for a longer life, preparing for reuse by means using materials repeatedly, cleaning, repairing, refurbishing whole items or spare parts, recycling by means using materials to make new products, recovery by means energy from waste, anaerobic digestion, incineration with energy recovery, gasification and pyrolysis which produce energy/fuels, some backfilling and landfill by means safe disposal waste to landfill and incineration without energy recovery.

In accordance to Environment Directorate General in EC, the economy of the EU should be transformed in sustainable one to 2050 with a high competitive manufacturing level based on green economy. Another important document is "the Roadmap to a Resource efficient Europe" [195] it notes the requirements for modern and innovative waste recycling equipment in every one member states (MS) and to be prevent landfills. As an end effect is predicted to be opened 580,000 work places, increase of the competitiveness and to be confined expensive resources in manufacturing business. In accordance to the author of the monograph the organizational mechanism PPP as well as the principal community-to-community will contribute for reaching EU purposes and to be established EU added value in waste management. By 2030 the recycling level is forecasted to be 70% from households waste and 80% from packaging waste.
In accordance to Environment Directorate-General, EC [196], in 2010 the non-treated wastes in EU amount to 600 m. tones from all generated 2.5 billion tones or 24% of wastes are ready for innovative and productive waste treatment. In household’s conditions each person is a manufacturer of wastes at about half of tone. Only 40% of it is reused and recycled. The turning of wastes into resources is possibility for development of the manufacturing business based on a circular economy in the EU. In accordance to the author of the monograph organizational mechanism PPP gives a real chance for development of the competitive manufacturing in EU based on a recycling community and circular economy.

The waste recycling process is based on Directive 2006/12/EC. So, in accordance with European environment agency [197] increasing consumption and economy development continue to generate great volume of wastes. The "Zero Waste" strategy gives importance across the MS in the EU for reaching 70% recycling level of all generated wastes. The scientific viewpoint of the author endorses the above mentioned numbers waste recycling levels. Moreover, in this way the principle community-to-community would be a leading part in the creation of innovation in productivity of the circular economy and recycling community.

Waste recycling community is established firstly in France as well as in a lot of MS in the Union [198]. Recycling community in the EU is based on a three levels of developed MS in accordance to "Thematic strategy on prevention of wastes and increasing of recycling". Firstly, the community is connected to highly developed MS like Germany, Belgium, Nederland, Austria, Sweden and Denmark. Secondly, the MS in transmission to recycling community are Ireland, Czech Republic, UK, France, Slovenia, Luxembourg, Estonia, Finland, Italy, and Lithuania. Thirdly, the lowest developed MS are Bulgaria, Romania, Poland, Spain, Malta, Slovak, Hungary, Portugal, and Latvia. In accordance to the authors' viewpoint the organizational mechanism PPP is appropriate for developing of the lowest developed and the MS in transmission in the EU to the top waste management level. Innovation in waste business is created to a lot of leading companies in the Union.

In the Netherlands, the company AEB Amsterdam is one of the most productive and innovative one with its 99% level of waste treatment. Since 2014 the company is property of the municipality of Amsterdam [199]. Again in the Netherlands, the company Orgaworld is a private property and plays a crucial role in energy power business [200]. The company uses the strategic model DFBM (design-finance-build-management) and the treatment level is 96% from the whole generated organic wastes. The company maintains a business connection with supermarkets Albert Heijn, based on composting of the compostibles with expired dates. In comparison to the above mentioned companies, in 2015, in the capital of Bulgaria in Sofia, was opened a new waste management factory funded by Operational program Environment 2007-2013 [201]. The capacity of the waste factory is manufacturing of Refuse derived Fuel (RDF), composting and recycling inter alia the non-treated wastes filling in landfills are 27.80%. Consequently, the competitiveness level is not competitive. In Sofia, the separate waste collection practice is not populated. Waste recycling process is very important for the SMEs in Bulgaria. In connection to the issued Order by the Ministry of Environment and Water [202] is prepared mathematical analyses, including 4 Bulgarian JSC. The companies treat packages of wastes from plastic, paper and cardboard, glass, metal, wood, and compost.

Table 3.3.1

<table>
<thead>
<tr>
<th>Company</th>
<th>Packages placed on a market</th>
<th>Recycled waste packages</th>
<th>Recycle level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulekopack</td>
<td>44 841.88 (13%)</td>
<td>29 257.70 (14%)</td>
<td>65.25%</td>
</tr>
<tr>
<td>Ecocollect</td>
<td>52 835.85 (16%)</td>
<td>32 513.18 (15%)</td>
<td>61.54%</td>
</tr>
<tr>
<td>Eczobulpak</td>
<td>93 312.41 (28%)</td>
<td>62 822.35 (30%)</td>
<td>67.32%</td>
</tr>
<tr>
<td>Ecopack</td>
<td>142 680.01 (43%)</td>
<td>87 144.07 (41%)</td>
<td>61.08%</td>
</tr>
<tr>
<td>Sum</td>
<td>333 670.15</td>
<td>211 737.30</td>
<td></td>
</tr>
</tbody>
</table>

Source: Ministry of environment and water, Bulgaria
From the tabulated information we can see that "Bulecopack" JSC holds the lowest packages recycling level, hence this leads to the lowest competitive level and market share. The solving the problem is connected to inclusion of great volume of treated and simultaneously and different kinds of wastes such as: out of order equipment, clothes, shoes, rubber, and the like. In all MS in the EU, waste recycling business should be expanded on a maximum possible level. That would happen by creation of the organizational mechanism PPP. The idea encompasses the manufacturing SMEs, community and waste management business in the establishment of the circular economy on wide spread EU level.

In accordance to the National Statistical Institute of Bulgaria the common waste treatment level is about 30%, hence 70% of them fall into landfills. There are great omission between waste recycling strategy in Bulgaria and the leading MS one. What does the organizational mechanism PPP need to resolve? The recycling community provides added value to the community, by environmentally maintained living areas, low price level of recycled products and increase the competitiveness of the manufacturing and waste management companies.

In Bulgaria, in 2003 was issued Waste management Act, in 2012 was issued Public-private partnership Act as well as in 2013 was enacted the Waste management National plan 2014-2020. In the Plan are noted the possibilities for inclusion of the PPP in waste management business. Consequently, this is a great opportunity for the development of "Bulecopack" JSC by means of business model PPP.

**Creation of the organizational mechanism PPP**

For the establishment of the sustainable organizational mechanism PPP is considered, as follows:

1. **Acceptance of the principles for management of the PPP [203].**

   The principles are issued by the Organization of economic cooperation and development (OECD). The principles are as follows:
   - Policy leadership by proliferation of the PPP idea, community benefits and expenditures. The information should be provided for private sector and community;
   - Defining of the clear, predictable and sustainable legislation framework;
   - Ensuring of qualified and skilled institutional role and administrative capacity provided by the public sector;
   - Investment decisions of the private partner should be based on fully government perspective inter alia and the funding method;
   - Eligible project and transparency budget process;
   - Research and acceptance of the most appropriate income-investment methods will contribute for more value for money;
   - Risk transferring to the best able partner in the business partnership;
   - Inclusion of the customers in the project designing and monitoring process of the PPP project, that will increase the value for money;
   - Maintaining the value for money level by operating, renegotiation and evasion of possible project fail;
   - Ensuring of the competition and integration of the public procurement process.

2. **Motivation and terms for successful realization of the PPP [204].**

   - Business model PPP, like an instrument and betterment of the effectiveness, includes: inclusive development and accessibility, cooperation and credibility, stability and predictability, accounting and risk management, financial optimization of the project infrastructure, effective management, stakeholders in PPP;
   - Building up of government PPP units provides the business model with base of knowledge, professional guidelines, standardization, approval of eligible bargain and experience. In Germany is created PPP Task Force [205]. In Czech Republic and France the PPP units are situated in Ministry of finance, in Hungary it is in ministry of economy and
transport, in Italy it is in Ministry of Economy and Finance, and in Lithuania the PPP unit is situated in development and investment agency in Ministry of Economy. In Bulgaria does not exist PPP unit, but in Ministry of Finance in State aid and real sector directorate the unit "Public investments, participations and concessions" carries out tasks including PPP.

3. **Prerequisites for development and impediments in front of PPP in Bulgaria.**

In 2006 is entered into force the Concession Law, as well as National concession register [206]. In 2000 Sofia Municipality concluded a concession contract for water supply and solid water with the "Veolia water Bulgaria". The contract duration is 25 years and the investment amounts of 150 million US dollars. Other achievements are both contracts concluded for concession of the airports in Burgas and Varna city. The contract duration is 35 years amounting of 1.5 billion Euros. In waste management business are no PPP projects, but the laws needed for the business are available. In 2013 was enacted PPP law, in 2003 Waste management Law as well as National waste management plan 2015-2020. In Bulgaria are available a lot of PPP plans on a municipal level. According to monograph's author, the great problem is the missing central PPP strategy and the connection between central government, regional administrations and municipal authorities and the business branches from different sectors. The author is proposed possible national strategic plan for PPP development.

![Figure 3.3.1: National strategic development PPP plan](source: created by author)

Connections between central, regional and local administrations by means of inclusion of branches organizations respectively from central, regional and local level, is a main factor for sustainable development of the business model PPP.

**Development of the “Bulecopack” JSC**

The author researches the possibility for acquiring "Bulecopack" JSC through the manufacturing SMEs by means of building up of the author's PPP model. The model includes private prosperity, creation of Special Purpose Vehicle (SPV), and invention of the principal community-to-community.

**Theoretic scientifically realization of the organizational mechanism PPP**

Step 1: Creation of the author's business model BLoOOM (Build-operational Leasing-Own-Operation-Management) based on PPP. For the establishment of the model many literature sources have been analyzed. [207, 208, 209, 210].

*The wording* new PPP model aims to create a greater market share for "Bulecopack" JSC, following the next steps:

- **Build:** construction of the new build for treatment of a greater volume wastes, not only packages wastes. The process is being fulfilled by Special Purpose Vehicle, which is created in stage 3.

  Operational leasing: this is an opportunity for buying new equipment for waste treatment process, in every ten years. Operation: treating of the separate waste collection from the households and its processing for the manufacturing purpose and third parties.
Own: the SPV is 100% owner of the waste management business and is not possible to be transferred to the public partner at the end of the contract duration.

Management: supplying of the manufacturing SMEs with recycled resources, as well as the processes of incineration, composting, reuse and business with third parties.

**Figure 3.3.2: New PPP business model BLoOOM**

*Source: created by author*

**Step 2:** Test for applicability of the SPV
- High prosperity of the SPV is settled on the partnership between manufacturing SMEs and "Bulecopol" JSC;
- Long contract duration with the public party, 30 years;
- Assuming of risks by construction, exploitation, management of the waste treatment, demand of services, risk availability, market risk with third parties;
- Long perspectives, expenditures assessment, analyses of the trade and ecological forecasts.

**Step 3:** Creation of the SPV
For the phenomena realization is assumed that "Bulecopol" JSC is acquired by the manufacturing SMEs, consequently it is a financial strategy between two private partners. In the SPV every one SME is a shareholder. The public sector is introduced by the municipal unit, which is the owner of the land for disposal of the separate waste collection systems. In the SPV are included associated partners: innovation centre and technical university. In this way the value chain is changed by the inclusion of the recycled resources at lower prices in comparison to the supplier’s prices and resources extracted from the nature. In addition, the business synergy (shown in step 4) comes from the trade activities with third parties and the accessorrial profit could be realized from lower prime costs of the resources which come from the manufacturing business of the SMEs.

**Figure 3.3.3: Share acquiring process by the manufacturing companies**

*Sources: created by author*

Analyzing the provisions concerning competitiveness between undertakings:
In the research is assessed the new PPP business model BLoOOM on a legislative level by applying the Treaty on the Functioning of the EU (TFEU). As it is noted by the European commission, EU markets should work better ensuring that all companies compete equally and fairly on their merits. Hence, the benefits are for the consumers (tax payer), businesses and the European economy as a whole. In sum, the new PPP business model in the waste management business could be compatible with the internal market [211] because of the fact that prevention, distortion and restriction would not been impaired. In details, regarding to the Treaty of functioning on EU, article 101 will not be infringed because the
SMEs included in new PPP business model origin from different manufacturing sectors and the creation of cartel will not be possible. The case is the same with article 102; hence it will not be infringed because SMEs in the waste management factory do not have a dominant market share. In fact the SPV will gain an additional profit by selling the recycled products on third parties. But the main business activity will be use of the recycled products in the manufacturing process at lower prices in comparison with the supplier prices. This is a backward integration in the sense of Igor Ansoff's matrix. The cooperation between SMEs would not limit the production and innovation process, because of the inclusion of the innovation centre and a university in the effectiveness improvement of the recycling equipment and facilities. Likewise, the responsibility to SMEs could be enhanced by applying Think Small First Act.

The process of concentration between SMEs is analyzed in accordance to the specification of the new PPP business model BLoOOM. In the current article is researched the Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (the EC Merger Regulation). The principle of an open market economy with a free competition must be maintained on a MS level. In accordance to the new PPP business model BLoOOM, the competitiveness of European industry will be increased, the conditions of growth will be improved and standard of living in the community will be raised by supporting the level of the recycling society. New PPP model could not be an impediment for an effective competition because SMEs in SPV do not have a dominant position on the Internal European Market.

In the research it is accepted that SMEs included in new PPP business model fall in article 1 titled Scope, from the Regulation (EC) No 139/2004. In article 2 titled Appraisal of concentration, of the Regulation, new PPP business model does not create an impediment for competitors to enter in the recycling business. And dominant position of the PPP model is not applicable. SMEs are independent in doing the business on a manufacturing level. Regarding article 3 titled Definition of concentration, the new PPP business model BLoOOM is created by the concentration of the SMEs. SMEs are independent in their manufacturing business, but the process of waste recycling is a common business activity. In accordance with article 5 titled Calculation of turnover, concentrated SMEs included in new PPP business model do not sell the recycled products between them or provision of services, because the recycled products will be used in line to the different specification of the SMEs.

<table>
<thead>
<tr>
<th>Recycled resources</th>
<th>Management body</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Ready for producing cycle)</td>
<td>SPV</td>
</tr>
</tbody>
</table>

**Company A - paper**
**Company B - glass**
**Company C - plastic**
**Company D - metal**
**Company E - gas**
**Company F - wood**
**Company G - cloths**
**Company K - electricians**
**Company L - shoes**

**Figure 3.3.4: SPV management body**

*Source: created by author*

The new PPP model provides a chance to SMEs to fulfil environmental changes by applying the waste management business strategy. In detail, they will create more European added value by increasing the capacity for new "green" markets and energy efficiency. This is supposed to be a new environment management system in SMEs business.

By applying the new business modes SMEs will enhance the competitive advantages in comparison with the large enterprises. In the manufacturing process SMEs will use recycled resources at lower prices which is a great opportunity for increasing the competitiveness. The new business could enable to use the environment management by Eco-
Management and Audit Scheme (EMAS). In this way the SPV will improve the environmental and financial situation. By using new PPP business model in the waste management business, SPV will also disseminate its environmental added value to stakeholders and to the recycling society.

Step 4: Creation of the SPVs management board

The SPV is predicted to have innovative managerial board including four functional units charged with recycling, incineration, composting and reuse activities. The Functional units' activities are connected to the business with the third parties.

![Diagram of SPV management board]

**Figure 3.3.5: Managerial process of the SPV - management Board**

*Source: Project Governance: a guidance note for public sector projects, November 2007. HM Treasury (the figure contains changes made by the author)*

The main purpose of the management board is the creation of resource balance between waste management activity and the needs of the manufacturing SMEs' as well as the business with third parties.

Step 5: Creation of the principal community-to-community

In the scholar inquiry is created the principle *community-to-community*. First, the principle encompasses connections between separate waste collection volume, the SPVs' profit and expenditure level, as well as households' annual waste fee. Second, the figure depicts the possibility of the development of Bulecopack JSC with interaction of the crowd funding strategy.

![Diagram of waste collection process]

**Figure 3.3.6: The effectiveness levels in the separate waste collection process**

*Source: created by author*

First, the separate waste collection system supports the private sector to receive sorted wastes for the management process, consequently the SPV expenditures will go down. That is explained by the movement from the curve from B to A.

On the next figure is continued the connection from the first one. The higher volume of separately waste collection leads to a lower household annual waste fee. This is a positive effect of the SPV management activity. The strategic masterpiece of the outcome is based on a prime cost of the waste recycling and placement of the manufacturing SMEs with the recycled
resources (Part of the SPV).

**Figure 3.3.7: Incentive household level for separate waste collection**

*Source: created by author*

Bearing in mind the logic of the scientific analyses is established the **Incentivize ratio** (*Ir*). **Incentive ratio** = “SWC” in tons / "HF" (money)

*The separate wastes collected by the households and the population (SWC) as the whole scale of separately generated waste on an annual base.*

*Households' annual waste fee (HF) as the whole household numbers in the metropolitan.*

Second, on the next figure is depicted the establishment of the SPV, it is provoked by the funding shortages of the Bulecopack JSC.

**Figure 3.3.8: Connection between crowd funding strategy and the SPV**

*Source: created by author*

In point C is the optimal outcome. It is assumed that 10% of the expenditures would be covered by crowd funding strategy. The crowd funding strategy [212] in waste management business creates the following end results:

- Purchasing of additional land, equipment and construction of the additional waste management build;
- Creation of the new monitoring level provided by the households;
- High social democracy level for private sector and society;
Part of the crowd will be awarded with watches made by the recycled wood.

The strategy is possible to be realized by crowd funding platform only for the amount of 10% of all additional funding, intended for the SPV creation, while the SMEs share is 90%. On the next part of the report is established the scientific research.

The scientific research is based on expertise assessment compound by two researching methodology. First was structured interview with six managers. The aim of the interview is to be extracted clarifications in elaboration of the questionnaire. Second, by application of the questionnaire survey aims is being purpose to be acknowledgement of the organizational mechanism PPP in waste management business. The questionnaire survey is conducted across 24 experts from public and private sector. In both scholars researching the respondents possesses knowledge and experience in waste management, PPP and manufacturing business.

In accordance to the popular researcher in management science Uma Sekaran [208] are suggested ten main steps in inquiry research as follows: Observation, Identification of problem area, Theoretical framework or Network of associations, hypotheses, Constructs-Concepts-Operational definitions, research design, data collection, analysis of data, interpretation of data and last refinement of theory (pure research) or implementation (applied research). Uma Sekaran defined induction as a process by which common assumptions based on viewed facts has been settled, and deduction as a process of preparation of conclusion based on interpretation of meaningful results of the data analyses.

In accordance to Karl Popper deduction finds its scientific application after fulfilling logical analyses [217]. He explained that induction is possible to create problems in accordance to validity or trust in defining of the scientific statement. This is possible to be overcome by "knowledge of experience". The English philosopher, writer and policy person Francis Bacon has analyzed the scientific research as a moment of induction in the process of knowledge. Bacon' introduction has been developed across scientific papers of the John Mil [214]. He defined the induction as "summarizing based on experience".

The scientific research in accordance to the author is based on the inductive approach. The author has chosen the most appropriate algorithm for conduction of the appropriate scholar researching. The inquiry research is build up in the seven main steps, as follows:

1. The wording of the scientific research;
2. Definition of the scientific hypothesis;
3. Framework of the variables in the research;
4. Choosing the research instrumentation;
5. Conduction of the scientific research;
6. Conduction of the analyses;
7. Interpretation of the results.

Stage one: Wording of the scientific research

The scientific approach is directly connected to conducting of the structured interview and questionnaire survey. The purpose of the interview is to be extracted answers from the experts and to be acknowledged key moments in creation of the author’s questionnaire. In the researching is used grading assessment in calculating the end results. The expertise assessment is not statistical method and there are no statistical means.

Stage two: Defining of the hypotheses

In the scientific research are defined null and alternative hypotheses. Null hypothesis, there is no connection between variables. Alternative hypothesis, there is a statement for existing the connection between two variables [213, 216].

1) \( H_0 \): The principles for management of the PPP issued by OECD do not give a positive effectiveness in sustainable realization of the organizational mechanism PPP.

1) \( H_1 \): Acceptance of the principles for management of the PPP issued by OECD gives a great added value for sustainable realization of the organizational mechanism PPP.

2) \( H_0 \): Impossible interaction between models PPP with manufacturing business by acceptance of the good practice in European Union.
2) H1: Creation of the business model PPP in the sphere of waste management business in accordance to the manufacturing SMEs and applicable good practice in European Union.

3) H0: Useless inclusion of all treated volume of non-hazardous wastes in manufacturing process of SMEs because it will decrease the competitiveness level and market share.

3) H1: Inclusion of all possible non-hazardous treated wastes from "Bulecopack" JSC will provide the manufacturing SMEs with increased competitiveness level and market share.

4) H0: Impossible creation of the incentives for the community by inclusion of the separate waste collection system aiming to decrease an annual waste fee, because of the fact that SPV will raise profit and the innovative principal "community-to-community" will be created.

4) H1: Building up the new principal “community-to-community” through creation of the incentives for the community in separate waste collection process by decreasing the annual waste fee and enlargement of the profit of the SPV.

5) H0: Impossible creation of the business synergy and high competitive level for the SPV.

5) H1: Creation of the SPV provides business synergy and high competitive level.

6) H0: Negative effect and managerial added value by creation of the SPV with one managerial board with four functional units.

6) H1: Positive effect and managerial added value by the creation of SPV with one managerial board with four functional units, concerning recycling, incineration and composting process, as well as reuse of wastes.

Stage three: Framework of the variables in the research

In the current paper are included dependent, independent, modelling and intervening variables.

<table>
<thead>
<tr>
<th>Period</th>
<th>t1</th>
<th>t2</th>
<th>t3</th>
</tr>
</thead>
</table>

Independent variables:
1. Creation of the SPV between "Bulecopack" JSC and SMEs
2. Inclusion of the business model PPP
3. Increase of the waste treatment share
4. New recycled resources

Intervening variables:
1. Creation of the trade networks with third parties
2. Product green advantage

Depending variables:
1. Profit and synergy level
2. Market share level
3. Competitiveness level

Modelling variables:
1. Innovative management structure
2. Creation of the principle community-to-community in waste management business

Figure 3.3.9: Variables in the scholar inquiry

Source: created by author

Stage four: Choosing of the research instrumentation
Research instrumentation includes interview and questionnaire survey along with experts from the public and private sector. The experts are predicted to take part in the scholar research, to possess professional experience more than five years, to have bachelor degree and knowledge in PPP, and waste management in Bulgaria and in EU.

Stage five: Conducting of the research
The scientific research is being conducted in January 2016. First, with five experts by
conducting interviews, and second, by a questionnaire survey with 12 experts from public sector and 12 from private sector. The questionnaire survey is carried out by means of www.linkedin.bg as a professional platform and by emails. The purpose of the interview is to be set up clear and professional questionnaire and inter alia to be tested the creation of the organizational mechanism PPP in waste management business. The questionnaire survey aims rejection or confirmation of the hypotheses.

Conduction of the interview; the respondents were asked five key dichotomous questions, as follows:

1. Does the business model PPP create added value in the waste management process? Marked Yes;
2. Is the private sector engaged enough in the process of waste management business? Marked No;
3. Is it possible an implication of the business model PPP in Bulgaria? Marked Yes;
4. Could waste management business underpin the increase of the competitiveness of the SMEs? Marked Yes;
5. Is it possible a creation of the social effect for the households in relation to annual waste tax fee? Marked Yes;

As a result from the received responds is found fully acceptance of the posted key moments in the creation of the linkages between business model PPP and waste management business. Thus, the questionnaire is elaborated with five detailed questions intended for public and private experts.

Conducting of the questionnaire survey:
The respondents included in the survey were asked to answer six detailed questions, which were the same for the public and private experts. The questionnaire survey is settled on a grading assessment from 1 to 5, one is the lowest level of significant and five presents the highest level of significant.

Focus group (24 experts)

Public sector

Private sector

Scientific analyses

Figure 3.3.10: Conduction of the questionnaire survey

Source: created by author

Results from the conducted questionnaire survey:
2. Is it possible a creation of the business model PPP, which is applicable in waste management business and simultaneously in the manufacturing SMEs by inclusion of the good European practise? Public experts: 4.83; Private experts: 5.
3. Will the inclusion of all non-hazardous wastes in "Bulecopack" JSC business provides the manufacturing SMEs with grater competitiveness level and market share? Public experts: 5; Private experts: 5.
4. Is it possible the connection between separate waste collection systems, annual waste fee and crowd funding strategy to be set as a new "community-to-community" principal? Public experts: 4.92; Private experts: 4.92.
5. Does the establishment of the SPV provide a synergy and high competitive level? Public experts: 5; Private experts: 5.
6. Is it effective, on a managerial view point, the SPV to be managed by a managerial board with three functional units? Public experts: 4.83; Private experts: 4.83.

**Conducting of the analyses**

In the current stage are included results from the questionnaire survey as well as the hypothesis analyses. The extracted results from the private experts are in amount to 4.94 and the results from the public experts are in amount to 4.90, hence the hypotheses confirmation give fully positive outcomes. Every one question confirms the postulated hypothesis in chronological terms.

Consequently the final balance assessment is in amount of 4.92, namely the highest level of significant. Hence the creation of the organizational mechanism PPP in waste management business is accepted.

![Figure 3.3.11: Common results from public and private sector](image)

*Source: created by author*

**Interpretation of the results**

The conducted inquiry scientific research argues the organizational mechanism PPP as well as possibility for competitive development of the "Bulecopack" JSC. The newly invented principle community-to-community possesses high level of business synergy turning the community green thinking into business opportunity inter alia and decreasing of the annual waste fees. Organizational mechanism is a complicated strategic element in the EU economy life and it needs from strictly adherence to consecutive steps, already mentioned above.

The EU future is obligated to take a way in environmentally oriented manufacturing business and the organizational mechanism is the answer for stable and competitive economic sectors. The innovative business partnership between "Bulecopack" JSC and the manufacturing SMEs gives opportunity for sustainable creation of the circular economy in our agenda. The organizational mechanism PPP in waste management business shows us, how the wastes could be managed effectively and to be developed an environmentally based production. The entering of the crowd funding strategy in the SPV establishment leads to inclusion of the society in providing the community services by a modern private business strategy. The innovative principal community-to-community possesses a high level of fairness for the society and the manufacturing business.

It also provides sustainability in the creation of the organizational mechanism PPP in waste management business in Bulgaria and European Union, as a whole.

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