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# **Application of the elements of marketing mix by business start-ups during incubation: A case of Makerere University in Uganda**

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**Firm incubation and marketing mix are not new concepts in the business world. They have been existing for decades and their meaning has been explained in real business sense. Despite being in existence for long, little is known about how marketing mix elements (popularly referred to as the “Seven P’s”) are used by business start-ups during incubation. Data were collected from owners of start-up businesses in the incubation centres at Makerere University, Kampala Uganda. The study adopted a qualitative research method because owners of start-ups see the application of marketing mix elements as paramount. Data were analysed with Nvivo 10 software. The findings show that the critical marketing mixes used for start-ups are people, price, product, and place. However, it was revealed that the way the marketing mixes were applied in start-ups is not clear. The majority did not know how to apply the marketing mix in running their businesses. It is recommended that incubation centres should put more emphasis on applying the marketing mix during the mentoring and coaching processes. This should become a policy in all incubation centres for start-ups to be successful.**

**Key words:** Business, incubation centre, marketing mix, start-ups.

## **INTRODUCTION**

Globally in the recent years, several academic and business practitioners have switched to the use of business incubation model to develop and stimulate the growth of their businesses (M'Chirgui, 2012). This dramatic change in the model has been brought about by the emergence of the Silicon Valley and the Boston Route 128 in the USA and Cambridge's Silicon Fen in the UK (Mian, 2011). Although this is an era of economic globalization, both developed and emerging economies are grappling with high rates of unemployment especially

among the youths (M'Chirgui, 2012). In Uganda, the majority (78%) of the population are young below 30 years and are employed in small businesses due to lack of jobs (Kristensen et al., 2016). As a result, they start businesses with limited and sometimes without skills to run them (Gough et al., 2013). This partly demonstrates the high failure rate of start-ups and the need for incubation (M'Chirgui, 2012; Tushabomwe-Kazooba, 2006). In search for solutions to end the rampant unemployment, incubation of firms was started as an

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important instrument to steer growth of start-ups in both developed and underdeveloped countries (Kepenek and Eser, 2018; M'Chirgui, 2012). The aim of incubation is to create a platform to facilitate growth and development of start-ups (Chandra and Fealey, 2009; Hong and Lu, 2016; Jamil et al., 2016; Mutambi et al., 2010; Xiao and North, 2018). A number of researchers have argued that incubation centres are a fulcrum for business firms' growth and development (Bruneel et al., 2012; Ganamotse et al., 2017; Hackett and Dilts, 2004; Mian, 2011; Van et al., 2018), and a nexus of new venture development and formation (Van Fossen et al., 2018). Thus, incubation centres have emerged to provide shared office space facility with a strategic value-adding intervention system of mentoring and business assistance (Hackett and Dilts, 2004; Van Fossen et al., 2018). Therefore, the rationale behind incubation is to reduce business failure (Abaho and Nkambwe, 2017). In the process, start-up firms are given skills that are important to enable them to succeed in business venturing in order to limit the failure rate of incubation (Mamabolo et al., 2017).

In Uganda, such infrastructure provides a breeding ground for the growth of start-ups because inadequate business development services preclude entrepreneur activity (Mpeera et al., 2013). In Uganda, entrepreneurship is seen as a source of economic transformation. Hence, their success would imply the growth of the economy (Baluku et al., 2016). As a result, the Ugandan Government strongly supports entrepreneurial growth due to its strategic role of economic growth and development while simultaneously eradicating poverty through wealth creation, employment and income generation among the youths (Abaho and Nkambwe, 2017). Nonetheless, many start-ups in Uganda still fail, which explains why a study on incubation and marketing in particular is paramount since incubation is known for supporting start-ups globally (Hackett and Dilts, 2004).

Start-ups owners need to develop knowledge to help them identify opportunities and take advantage of them. One of the key skills passed on to start-ups in incubation centres is marketing. Broadly, marketing is a process of creating value for exchange with customers and building a strong relationship to get value from customers (Inanloo et al., 2018). It enables start-ups to sell their products or services. Thus, grasping marketing skills help start-ups to deal with a number of key issues such as how much to produce, at what price, where and how to distribute the products or services and how to communicate to the target audience (Mamabolo et al., 2017).

These skills in business language are compressed into a marketing mix, which is a popular tool used in selling goods and services (Ashraf and Bhalla, 2018; Loo and Leung, 2018; Constantinides, 2002). Using marketing mix elements in start-ups is a strategy that can fairly reduce chances of failure in businesses and may scale up start-

up enterprises. As noted by Ashraf and Bhalla (2018) marketing mix influences the demand for products and services. Also, Mohammadi et al. (2017) have argued that appropriate marketing mix is a vital marketing strategy that increases sales and profitability of businesses. Moreover, Festa et al. (2016) contend that every sector and business can actually use the marketing mix.

Marketing mix is a means to an end through which business firms achieve their objectives and goals through proper planning (Hanachor and Olumati, 2018; Mohammad, 2015; Van Waterschoot and Van den Bulte, 1992). Marketing mix is a strategy marketers use to sell their goods and services (Hanachor and Olumati, 2018; Stead and Stead, 2010). Thus, a marketing mix is a recognised strategy used to perform marketing activities (Hanachor and Olumati, 2018; Henley et al., 2011). Jerome McCarthy (1960), a marketing expert, introduced the four P's in business as a theoretical framework to implement marketing processes (Festa et al., 2016). This classification/model has been used globally and is considered a critical means for translating marketing plans into business operations (Gordon, 2012; Wu and Li, 2018). Subsequently, Borden (1964) based on McCarthy's earlier work increased the P's to twelve elements in manufacturing firms. Later, Booms and Bitner (1981) made an extension of Jerome McCarthy (1960)'s four P's to propose the seven P's of marketing mix elements due to the introduction of service as a business which attracts people, process and physical evidence (Loo and Leung, 2018).

Accordingly, marketing mix has since evolved and today they are seven Ps (Hashim and Hamzah, 2014; Londhe, 2014). The four P's are used mainly for products and the additional three Ps are process, people and physical evidence used for services. The marketing mix elements include product, place, promotion, price, physical evidence, process, and people. The seven "Ps" were found to increase the strength of start-ups due to comprehensive accommodation of details (Loo and Leung, 2018). Therefore, start-ups need to have a thorough understanding of the mix application because of the value adduced (Loo and Leung, 2018). The seven "Ps" are basic concepts used to understand the nature of marketing to enable start-ups meet customers' needs profitably (Hashim and Hamzah, 2014). In fact, the success of business firms is juxtaposed to proper application of the marketing mix elements because it is capable of forecasting the needs of potential customers (Garusing, 2002). Start-ups, specifically in emerging economies, should adequately implement the marketing mix, because it can result in sound business profitability if properly applied (Constantinides, 2006).

Marketing mix is a set of controllable, tactical marketing tools that a firm blends to achieve its aims in a given target market (Kazmi and Batra, 2009; Wahab et al., 2016; Mohammad, 2015). In addition, marketing mix can

be seen as a process or device used to create customers' satisfaction provided by the marketer (Garusing, 2002). Hence, it is a combination of elements required for the formulation and implementation of all marketing strategies (Inanloo et al., 2018). Simply put, this means having a product at the right place, at the right price and informing customers of how the product will satisfy their needs. In a broader perspective, marketing mix implies a mixture of elements useful in pursuing a certain market response (Van Waterschoot and Van den Bulte, 1992). Given the diverse views of the marketing mix from the various authors there is a glaring evidence of no single definition and understanding of the mix. Hence, the multiplicity of the definitions possibly yields confusion in application (O'Connor, 2013). However, this study adapts the definition given by Kazmi and Batra, (2009), Wahab et al., (2016) and Mohammad (2015): a mix is a set of controllable and tactical marketing tool a firm uses in a given market. Therefore, the contribution to knowledge from this study is the provision of a clear understanding of the use of marketing mix by start-ups.

Start-ups are businesses that are beginning operations to create products or offer services to the public for exchange of value (Gough et al., 2013). Start-ups struggle to exploit immediate business opportunities often with little or no operating skills (Kristensen et al., 2016). In the context of many developing economies another critical "P" that needs to be added on the list and probably interrogated further is "Politics". This interrogation is very important because it does not only determine many selling and buying deals, but sets the rules by which business is conducted as well as increases the attention of governments to support entrepreneurship (O'Connor, 2013).

It is a business practice to produce goods and services (Product), persuade potential buyers to buy (promotion), distribute the products to where consumers can easily access them (Place), determine the value of goods and services (Price), get workers to effect transactions (People), create and manage transaction (Process) and have goods and services in the most suitable environment (Physical Evidence). Moreover, businesses exist to sell goods and services sometimes with the same customers. Thus, the one who is able to do it better attracts and retains the customer. Since start-ups face competition among themselves, survival in an industry hinges on how well to implement the mix carefully (Wahab et al., 2016). Accordingly, the marketing mix elements are the wheels that drive successful business operations (Hanachor and Olumati, 2018). Hence, the marketing mix elements lie at the core of the selling of the start-up goods and services (Tomczak et al., 2018).

Although extant literature (Van Waterschoot and Van den Bulte, 1992; Constantinides, 2006; Kazmi and Batra, 2009; Hashim and Hamzah, 2014; Londhe, 2014) shows that since the 1980s there are seven P's used in the business realm, little is known on how start-ups in

Uganda are embracing and applying the marketing mix elements. Moreover, using the marketing mix elements helps businesses to effectively communicate and sell their products to end users (customers). The use of marketing mix element emphasizes aggregation because application of all mix elements brings about better economies-of-scale (Larimo et al., 2018). Although marketing mix elements have been studied by variously authors (Sanclemente-Téllez, 2017; Abril and Rodriguez-Cánovas, 2016; Londhe, 2014; Hashim and Hamzah, 2014), no study has assessed the marketing mix application in start-ups in Uganda. Moreover, where businesses apply marketing mix elements, the results show it helps them to increase sales and profits (Wahab et al., 2016). Thus this study is a rare contribution to the domain of marketing mix application literature. Due to the wide acceptance of marketing mix element use in business there is need to understand how such elements are applied in start-ups. The objective of this study therefore is to explore the application of marketing mix by start-ups, so as to understand the value of these marketing mix elements to start-up businesses. The novelty of the proposed study lies in the exploration of application of marketing mix elements in start-ups which have remained silent.

## LITERATURE REVIEW

The two main concepts that form the point of the literature are "firm incubation" and "elements of marketing mix". Druker (1958) once noted that marketing is a key driver of economic development due to its ability to support managerial and entrepreneurial development (Sanclemente-Téllez, 2017). It is a tool used to effectively market goods and services to prospective customers by communicating value (Ashraf and Bhalla, 2018). This increases the marketers' understanding of the strategies available to market their offering to the target audience (Larimo et al., 2018). McCarthy (1964) referred to marketing as a means of translating marketing planning into practice. It is essential in the development of marketing theory and practice (Londhe, 2014). Wahab et al. (2016) argue that the marketing mix is critical for the survival of start-ups.

Although the order of the elements of the marketing mix is not described in the literature (Abril and Rodriguez-Cánovas, 2016; Hashim and Hamzah, 2014; Londhe, 2014; Constantinides, 2006), it is arguable that "product" should come as the first mix because price cannot be set, and a product cannot be distributed or promoted when none exists. Thus, the argument about the application of a marketing mix supports the assertion that it creates good performance (Hashim and Hamzah, 2014). In addition, the elements of the marketing mix are regarded as a toolkit for solving marketing challenges (Constantinides, 2006).



## The P's of a marketing mix

This section reviews the P's of a marketing mix, namely; product, place, price, promotion, people, process, and physical evidence. Each element will be reviewed in turn.

### **Product**

Product refers to tangible objects or intangible services produced to satisfy the needs of customers (Gordon, 2012). The failure of start-ups to manage this mix element will make the product or service inappropriate for consumers and may not be purchased (Loo and Leung, 2018). It is a tangible object or intangible service that is produced or manufactured and offered to consumers in the market (Gordon, 2012). The product mix needs to be consistent with the prospective customers in order to attract attention and be bought (Loo and Leung, 2018; Gordon, 2012). Product consists of core and supplementary value (Hashim and Hamzah, 2014). Start-ups must understand the value of their products and communicate it to consumers. It is those services and values that create a relationship with customers. In other words, these are tangible and intangible benefits that are purchased for consumption (Hanachor and Olumati, 2018). It is anything that is offered to the market to satisfy needs and wants of potential customers. Customers prefer products that can easily be adapted to their changing conditions and start-ups should be able to respond to the needs of their customers; in some situations they should be personalised (Constantinides, 2002).

In business, products are of two categories: consumer and industrial. Consumers' products are used for final consumption, while industrial products are raw materials used in the production of other goods (Garusing, 2002). The application of the marketing mix helps the start-up business in developing a product or service that satisfies the needs of the potential clients. The needs must be identified prior to product development. It is, therefore, the main tool that combines marketing elements and represents the main activities of each enterprise (Inanloo et al., 2018). Start-ups without good products cannot survive because they will be devoid of competitive offer. Indeed, a poor product can and does fail enterprises. Primarily, products are ideas that start-ups come up with to satisfy the needs of the target audience (Henley et al., 2011).

### **Place**

Place or distribution aims at creating convenience to consumers by putting the product into the hands of consumers at an appropriate time (Loo and Leung, 2018; Abril and Rodriguez-Cánovas, 2016). Place is known for

encouraging local and export performance because it aids the distribution of goods and services (Erdil and Özdemir, 2016). Thus, for start-ups to sell their product they need to understand the best way their products can reach the target consumers otherwise they will never sell (Loo and Leung, 2018). Place plays two distinctive roles for start-ups that is making the products or services conveniently available and managing intermediaries (Henley et al., 2011).

Place represents the various channels used to deliver the products or services to the users (Garusing, 2002). This includes everything that start-ups do to make their products or services available to the target audience (Inanloo et al., 2018; Henley et al., 2011). Thus, start-ups need to know how best they can reach their target audience. Accordingly, 'place' represents the location where a product or service can be purchased, and can often be referred to as the distribution channel (Gordon, 2012). Until such knowledge is clear to start-ups they will struggle to sell (Inanloo et al., 2018; Loo and Leung, 2018; Abril and Rodriguez-Cánovas, 2016).

### **Price**

Price is a marketing mix used to differentiate and position products or services (Sanclemente-Téllez, 2017; Abril and Rodriguez-Cánovas, 2016). Price is critical in attracting attention and determining the profitability of start-ups and should be arrived at meticulously (Loo and Leung, 2018). Price is therefore the amount a consumer pays for the product or service normally expressed in economic cost (Gordon, 2012; Henley et al., 2011). The price mix helps start-ups in generating revenue since it directly translates in the amount paid for goods and services (Johnston and Cortez, 2018). It is used to communicate the value of the service to customers, because it is the amount of money customers sacrifice to obtain a product (Mohammad, 2015). The price mix is used to stimulate the sale of a product or service and is a tool used by customers to assess product quality (Erdil and Özdemir, 2016; Johnston and Cortez, 2018). Since start-ups are formed for profit, price determines the profits obtained by the start-ups (Hashim and Hamzah, 2014). Price is the only element of the marketing mix that brings money to the start-ups. Yet it is the most poorly attended to element by entrepreneurs. Price is flexible and influential because it determines the revenue and profitability of the start-up enterprise. On the other hand, according to Garusing (2002), price has many terminologies, namely: in schools price is called tuition fees; in banks it is called interest for the loan acquired; in insurance it is known as a premium; and in places of worship it is called tithe.

Finally, price is actually the cost paid by the consumer to acquire a product or service expressed in monetary terms or value (Hanachor and Olumati, 2018). The price

mix has a strong financial impact on start-ups. On average 5% increase may lead to 22% yield in operating profit. Although price is recognised as a critical mix for businesses only 12% of business firms conduct serious pricing research (Johnston and Cortez, 2018).

### **Promotion**

Promotion represents the communication that marketers use in the marketplace including advertising, public relations, personal selling, sales promotion and direct marketing (Hanachor and Olumati, 2018; Garusing, 2002; Gordon, 2012; Henley et al., 2011). It is concerned with dissemination of product information to customers to educate them on the benefits derived from the use of the product or service (Hashim and Hamzah, 2014). This is about the processes taken by the producer of goods and services to inform or remind or persuade the customers to buy the company's products (Henley et al., 2011). As a result, start-ups need to be familiar with the modality of how to communicate and deliver their products (Loo and Leung, 2018; Abril and Rodriguez-Cánovas, 2016). It is through this that potential and actual customers will get to know about the characteristics of their products and what they can satisfy (Hanachor and Olumati, 2018). During promotion, start-ups identify both the target audience and promotion objectives and then design the appropriate message for delivery. The message must be designed carefully to attract attention, arouse desire and cause customers to buy.

Although marketing is done for both products and services, there is a widely accepted view that the application of marketing mix varies in products and services (Mohammadi et al., 2017). This is why, the marketing of services compels marketers to extend the marketing mix to 7P's by adding another three P's: people, process and physical evidence.

### **People**

Start-ups must be clear on how the people they employ will impact their businesses (Loo and Leung, 2018). People consist of human beings involved in service delivery and peer support harmonised to build lasting relationships with clients (Hashim and Hamzah, 2014; Mohammad, 2015). These are personnel in the various processes who play a significant part in service delivery by influencing the perceptions of the potential and actual customers, for example, the workers, customers and suppliers (Stead and Stead, 2010). This is so because service satisfaction is sometimes reflected on how the people interact with customers. Accordingly, start-ups must understand the people marketing mix in value delivery (Loo and Leung, 2018; Mahajan and Golahit, 2017; Mohammad, 2015; Hashim and Hamzah, 2014).

In addition, customers can also influence their fellow customers about the choice of service. Therefore, the reputation of the company's brand rests in people's hands, which requires them to be highly trained, well-motivated and with good attitude (Hanachor and Olumati, 2018). Accordingly, the element of the people mix is critical in start-ups because most activities are performed by people to satisfy the people's demands. Hence, their motivation and behavioural characteristics make a huge difference in customer satisfaction because customers expect helpful and friendly people (Mahajan and Golahit, 2017).

### **Process**

Process is about mechanisms and procedures set in place to assist in the delivery of services. It encompasses the delivery steps that customers go through in order to receive the services. This includes all the procedures and mechanisms which lead to exchange of value (Mahajan and Golahit, 2017). In other words, it includes all the activities that occur during the consumption of the service (Stead and Stead, 2010). Start-ups need training to understand how such processes affect their businesses. Customers normally make their judgement of the services based on these processes, for example, the length and duration of the services (Stead and Stead, 2010). Once the processes are considered bad then the services will certainly be poor. Thus, the process of giving a service and the behaviour of those who deliver are crucial to customer satisfaction. Processes should be known by service providers and consumers (Stead and Stead, 2010).

### **Physical evidence**

Physical evidence is critical for start-ups because services are intangible and have to be consumed when they are produced. Therefore, marketers design an environment that can influence customers to recall the company products/services when they are making purchases (Hashim and Hamzah, 2014). It is that environment in which the service is provided and embedded in those tangible representations of the services including the physical facilities. It includes appearance of buildings, staff members, materials and other visible cues which provide tangible evidence of a firm's service style and quality (Constantinides, 2006). Thus, it is critical that start-ups create an environment that will stimulate customers to derive satisfaction. Physical evidence plays a major role as proof for the service to be provided (Mahajan and Golahit, 2017).

The extant literature shows that many researches done on marketing mix concentrate on the four P's perhaps because of the profound exposure in many foundational

marketing classes (Constantinides, 2006). However, the three P's of people, process and physical evidence are hardly studied. There is need to study all the seven P's because they are pertinent in service provision and vary with product life cycle (Mohammadi et al., 2017). Applying the elements of the marketing mix is a critical aspect of any marketer because it stimulates the purchase of products and services. The mix is considered as toolkit and archetype for operational marketing (Constantinides, 2006). This works on both new and old products and services in the market. Accordingly, start-ups should know how to apply these elements of the marketing mix if their businesses are to succeed. Despite the immense attention to the use of start-ups as a strategy for business performance, no direct concern has been put to check the application of marketing mix in start-ups; yet its application is critical for their success (Mohammadi et al., 2017).

## METHODOLOGY

Exploratory research design was used in this study. This was a qualitative study with twelve respondents. The aim was to explore in detail the application of the elements of marketing mix in start-ups. Interview was used to collect data because the research aimed to gather insights into the application of the marketing mix. The respondents were purposively selected from three incubation labs found at Makerere University. The target respondents were owners of start-ups in incubation centres with at least six months of existence. The reason for choosing Makerere University is because it has a long history of teaching entrepreneurs, stretching over 94 years and the author is a staff. Since universities are known for generating knowledge globally, the researcher envisaged to find knowledgeable respondents from the university incubators. Besides, the incubators are coached and mentored by university staff. A list of start-up owners within the labs were obtained stating when they joined. The names of the proprietors were written down on a sheet of paper folded and put in a container. They were shaken to mix thoroughly well and then the researcher picked one at a time. Four names were picked in every container. The containers represented the different labs in Makerere University. The labs were software business incubation (SBI), Makerere Innovation and Incubation Center (MIIC), Food Science and Technology Incubation Center, and Imuka Ventures Incubation Center. The use of tins to selected respondents was done to avoid bias in selecting respondents. The researchers aimed to select proprietors of the start-ups which had been in the lab for at least six months.

After identifying the respondents, they were briefed about the study and appointments to meet them were secured. Face-to-face interviews were conducted in the incubation to allow the researcher observe the surroundings that were convenient for the interviewee. At the close of interviews, response data and field notes and observations were accurately transcribed and stored in word document for analysis. This being a qualitative study, interviews with respondents were recorded and transcribed for data analysis using Nvivo 10 software.

## FINDINGS

Incubators are taken as decisive steps to bolster start-ups and stimulate growth and development. Accordingly,

many universities have adopted it as an important instrument to support students' business ideas. The study explored the application of marketing mix by start-ups in incubation centres. It is widely accepted in marketing that the marketing mix is a tool used to effectively sell a company's products/services.

Thus, its application would encourage the sale of start-up goods and services. The respondents were purposively selected. To avoid gender bias, the researchers selected six male and six female respondents for the interview. Their average age was 22 with much enthusiasm to run their business. Given that they were all university students, there was no need for translation because they understood English very well. Interviews were organized in the lab board-room to avoid extraneous bias. Besides, there was limited inconvenience from their usual work. Appointments for interviews were made in advance to avoid disappointments. Where the owner was busy with another meeting, the researcher rescheduled another date. All the respondents had stayed in the lab for at least six and more months. Thus, they were in a good position to provide accurate and valuable information about the application of marketing mix elements.

Table 1 presents the findings from the exploratory study with the owners of the start-ups in four incubation centres at Makerere University. The majority of the proprietors of the start-ups unanimously agreed that they knew and were introduced to marketing mix, although its application was a challenge. They had received training on how to use the elements of the marketing mix but not all of them were being tried out and they did not occur in any agreed sequence. Respondents indicated that the elements of the marketing mix were viewed differently. For example, four of the respondents ranked price as the most critical, two respondents ranked product mix, one respondent ranked place mix and five respondents ranked people mix critical as shown in Table 1. Figure 1 gives the percentage distribution of the count in Table 1. The most critical elements described as a key are as follows:

*fx(People, product, price and place)*

The less critical elements described as weak are as follows:

*fx(promotion, place and physical)*

The ranking clearly demonstrates the ambiguity already discussed in the literature where no study has agreed on the order of the marketing mix to illustrate which one is the most critical for a start-up. In contrast, Loo and Leung (2018) and Ashraf and Bhalla (2018) argue that price and promotion are the two critical elements which form customers' perception of the service. In addition, during

**Table 1.** Response on application of marketing mix.

Question	Price	Product	Place	Promotion	Process	People	Physical evidence
Are you aware of these marketing mix element listed?	Yes Count 12	Yes Count 12	Yes Count 12	Yes Count 12	Yes Count 12	Yes Count 12	Yes Count 12
Which marketing mix elements do you use in your business?	Count 5	Count 4	Count 6	Count 2	Count 1	Count 7	Count 3
Which of the marketing mix elements is critical (rank in order of importance)	Price	Product	Place	Promotion	Process	People	Physical evidence
	Count 4	Count 2	Count 1	Count 0	Count 0	Count 5	Count 0
Give reasons for your ranking	It determines profits	It is what we have to sale to get money	It is the basis for start-up	No reason given	No reason given	They owners are and consumers	No reason given
How do you use the marketing mix in your business?	It is used to create market for our products and services. We are able to find customers, people help us to produce and sale the products that we produce. We are able to make the market aware of the products and services produced.						
What kind of services do you receive from the incubation center?	The incubation center gives training in marketing which helps us to sale our products and services. We are able to find a platform of people with similar challenges thus sharing is done easily and sometimes we also become customers of other companies in the incubation.						
Do you regard incubation as a strategy to support start-up growth?	Yes, because it provides support to start-up, for example, the place where we can meet and place is one of the P's that are emphasized in marketing. They provide training in various activities aimed at making our businesses to succeed, for example, we are given opportunity to network with the wider community where we can obtain customers.						

the study participants attached high regard to the hard to achieve. Those that were most important in the sale of the product were considered critical factors. This does not imply that where no proprietors indicated preference relegates the element as being not useful as it is for promotion, process and physical evidence (Table 1). The most applied element of the marketing mix was people. One of the male respondents aged 22 in MIIC Lab remarked that:

*“People are the most critical because they are both suppliers and consumers of the services or goods, thus without people you cannot even think about the products”.*

The importance of the people marketing mix is reflected in the ranking (Table 1) where five respondents ranked it as the most critical for their start-up. The respondents revealed that the reason for considering people as a critical mix element was: it determined the success or failure of the start-ups; people can talk and make the sales of a product or service; they drive customer satisfaction; and people are decision-makers and all other elements are implemented through people. However, another respondent argued that although people are critical they can be useless unless there is a product to be produced and purchased.

In addition, the other element of the marketing mix which ranked next to people was price. Respondents argued that price is critical in determining the profitability

of the start-up business. Besides, many customers are attracted by the price of the product or service before they check on the quality. Thus, if the start-up fails to effectively price their products or services they can hardly make profits and are therefore likely to die.

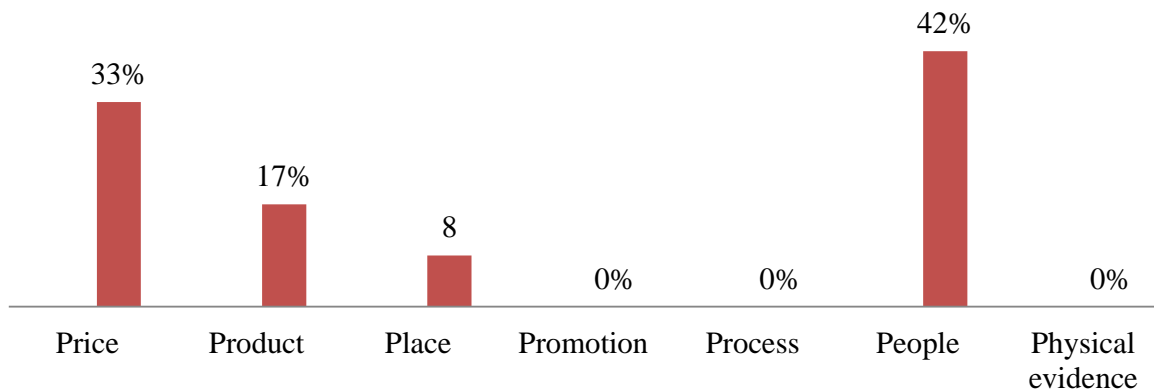
*“This however is a difficult mix to apply in the start-up business, as it involves calculating the cost of production of the functional requirement and adding up a percentage profit margin. Thus, it is sometimes arrived at arbitrarily or by comparing with competitors in the market”* (24 years start-up owner).

Product is a mix which brings all other mix elements into play. This was ranked by two respondents as the most critical marketing mix for start-ups. For example, it was argued that if you have no product to sell then you will have no business at all. This concurs with the position of Hanachor and Olumati (2018) and Wahab et al. (2016) that products determine business survival. Indeed, the concept of product determines how best the start-up will survive because a poor quality product with no value will not attract buyers.

One respondent said,

*“product is so important and has to be of good quality because quality attracts and retains buyers, after all consumers buy value not price; if the value is not seen in the products then they cannot buy and besides product is linked to other P's , that is price”* (20 years female start-

### Participant's response in ranking the critical marketing mix elements



**Figure 1.** Marketing mix elements used in start-ups.

up owner).

Place was ranked as critical by one respondent. Place in marketing hinges on how a product or service will be distributed to prospective buyers. This needs to be clearly articulated because poor distribution of products or services creates inconvenience and precludes purchase due to inaccessibility. Hence, a start-up must have a clear strategy on how to distribute the products and services. Moreover, some products are distributed online which requires meticulous display besides constant availability. Thus, a respondent had this to say:

*“Although I want to apply the place mix to distribute my service I am constrained by inadequate internet and also some of my clients have no access to internet; thus this P application to online service is still an uphill task for us start-ups”* (22 year owner of a software start-up).

However, promotion, process and physical evidence were not ranked by anyone as critical mixes. Some were of the view that these three mixes were more of complementary than the real thing of the start-ups. In addition, they were easy to adjust if they failed to conform to the desires of the prospective consumers. The general impression was once you have a better product or service, at the right price, with the right people and well distributed then customers will certainly look for it. On this issue a respondent said:

*“Good quality products can be promoted through word of mouth by referrals”* (26 years start-up owner commented).

This partly explains why there are limited sales among start-ups because all those interviewed were not too concerned about promoting their products. Moreover attracting potential customers to products is done through promotion (Garusing, 2002). The empirical analysis

reveals that despite the application of the mix in the start-ups there is a vague view of how the mix should be applied to maximise their usefulness. In addition, the use of marketing mix should be collective to produce positive results. This study found that start-up owners were not conversant with how to apply the marketing mix collectively. It was glaring that start-ups knew about the mix but hardly knew how to apply them in their business transactions with professionalism. This failure in application limits the performance of the start-ups as regards selling. Accordingly, failure to sell precludes profitability and hinders business growth.

In addition, majority of the start-ups were service-oriented businesses dealing in tech applications but did not regard process mix as critical. This is further demonstrated by failure to know how much it takes them to service a customer from when the customer contacts the business until the close of the deal. Service business satisfaction is rated on service dimension such as responsiveness; in other words, the speed with which a service provider responds to service request. This is much related to service process which we found inadequate among start-ups.

## DISCUSSION

The findings reveal that the study has far reaching implications in the management and training of start-ups in incubation centres. It will require marketing mix elements to be combined in appropriate proportion to achieve the marketing goals (Ashraf and Bhalla, 2018). The findings may influence the decisions of incubator managers in stressing the importance of marketing mix elements during incubation processes. Lessons drawn show that start-ups with marketing mix knowledge could apply and perform better. This is due to the skills acquired during incubation (M'Chirgui, 2012). They

however required extra emphasis on how to use them efficiently. This therefore supports the views of Baluku et al. (2016) who found a seven percent start-up success in developing countries. Many marketers argue that effective combination and utilization of the marketing mix enable the sales of goods and services.

However, the attack on the marketing mix and perhaps the motivation of this study is the vituperative criticisms of the mix in recent years and its application to complex goods and services (Gordon, 2012). The critiques argue that the mix focuses on the short-run and are devoid of what happens in the long-run. The static nature of the marketing P's also leaves a lot to be desired because the markets are changing. Thus, for start-ups to survive they need to be responsive to the needs of their target audience. Since early 1960s and up to the current times there is need to adjust or adapt to new marketing mix that matches the contemporary challenges faced by start-ups. Therefore, the emphasis is not to apply the Borden (1960)'s marketing mix but to adjust to rhyme with the needs of the current market challenges faced by start-ups. However, the application of the marketing mix is critical to start-ups because it shapes the thinking about resource utilization and influences consumer behaviour critical to buying the products and services of the start-ups.

The findings show that respondents did not identify a preferred element of the marketing mix. Besides, participants revealed that there was no deliberate effort from incubators directed towards marketing mix training for start-ups. In the ranking, respondents (company owners) gave different elements of marketing mix as critical to their business. It is clear that the majority were of the view that people are the most critical and some said product is the most important mix; while others argued that it is price. Therefore, there is need to carry out another study to validate the elements that are critical for start-ups. Moreover, standardizing and ranking of marketing mix has remained a challenge to both academia and practitioners (Larimo et al., 2018). Given that this study was qualitative in nature and that a limited number of start-up owners were interviewed, the findings are limited to the extent that they cannot be generalized.

## Conclusion

The importance of marketing mix in start-up business cannot be over-emphasized but its application is still rudimentary and poorly practiced in incubation centres in Uganda. The findings revealed that the majority of start-ups in university incubation in Uganda were exposed to the marketing mix during incubation but with less emphasis. Consequently, this affected the application and precluded selling and marketing of goods and services of the start-ups.

Moreover, the understanding of the terminology (marketing mix) was new to start-ups raising concerns

that the trainers, coaches and mentors in the incubators in Uganda may not necessarily be marketers or did not have enough knowledge on marketing. Although some start-ups had knowledge on the marketing mix there was no deliberate effort in the incubation centres in Uganda destined to making start-up owners to fully understand how the mix can be applied; it has remained a major challenge. Moreover, the application of the marketing mix yields results through increased sales (Ashraf and Bhalla, 2018; Loo and Leung, 2018). The analysis further shows that start-ups did not value promotion and yet it is the only way prospective customers get to know about their products and services (Loo and Leung, 2018). This explains why startup incubation centres in Uganda should emphasize marketing mix application because of its usefulness in developing and growing startups.

In addition, there is a need to have a syllabus for incubation centres to calibrate the training materials. The study therefore provides theoretical grounding upon which one can further the research in the application of marketing mix. This is critical for policy-making purposes as government strives to support business growth. In addition, owners/managers of the incubation centres can use this information to enliven on the services offered. Besides, start-ups require this information to understand the critical nature of marketing mix application.

## CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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*Full Length Research Paper*

# **Solidarity economy, social and cooperative enterprises: The view of citizens in Greece**

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**This paper investigated the factorial composition and the internal coherence of a questionnaire on Solidarity Economy (SE) and Social and Cooperative Enterprises (SCE) based on data gathered from a sample of 214 citizens region of Thessaly. The questionnaire consists of three categories of questions that refer to: a) citizens' statements related to Social and Cooperative Enterprises (scale A); b) barriers to the Development of the Social Entrepreneurship (scale B) and c) charm of a collective enterprise (scale C). Social economy includes all cooperatives, credit unions, non-profit and voluntary organizations, charities, municipal enterprises, and Social and Cooperative Enterprises that use the market mechanism for social benefit. It includes profit-making social organizations that they distribute to members. Social Economy is the only system aimed at the prosperity of society, equality and democracy. Solidarity economy is more a strategy and in this terms, works as an adding value to the social economy. The solidarity economy defines the roles of individuals who participate in organizations with a social purpose. Factor and cluster analysis identified 8 factors for scale A, 6 for scale B and 5 for scale C, which interpret 79.40, 77.78 and 85.20% of the total variance in the respective data sets. The variance analysis (ANOVA) showed that the most important factors of scale A can be considered: (1) Supporting a SCE with cash or voluntary work; 2) Voluntary work offer; 3) SCE are collective property companies and act democratically, and 4) SCE must be adequately funded by the state, because in any of the independent of scale B, the lack of knowledge and of scale C the sensitivity to environmental protection and creating a new culture with social sensitivity.**

**Key words:** Social and solidarity economy (SSE), social and cooperative enterprises (SCE), questionnaire, scale, factor analysis, cluster analysis.

## **INTRODUCTION**

The financial crisis that has come from Wall Street's excesses has influenced the middle class of the Western

World. The result of the crisis was to lose assets to both individuals and businesses. The economic elite (a small

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minority) increased its incomes, while wages either remained stagnant, either declined or diminished despite productivity gains. Social cohesion has thus been dismantled as poverty and unemployment have risen, labor relations have elasticized, hours of work have increased, and the number of insured persons has fallen (Speth, 2011). According to Galbraith (2010) the mobility of people, especially in the agricultural sector, in the industrial and service sectors, in line with global trade conditions, is the main cause of the existing inequality in global society.

## LITERATURE REVIEW

Capitalism creates inequality (Li, 2017). Capitalism aims to maximize profit and minimize costs, and with this reason it does not accept the redistribution of wealth, but corporate socialism (Shahrokhi, 2011). So the citizens (the middle and the low order) are too bad. Social automatism and the importance given to individual rather than systemic responsibility, result in austerity measures that will lead to growth in the next stage. This is the utopia of growth; Austerity raises unemployment, reduces incomes and brings terrible social changes (Borges et al., 2013). What solution can there be? Perhaps it is the creation of a society based mainly on the wider cooperation of citizens, in communication, in societies, in mutual aid, in the emergence of the capacities of every person, in morality, in the center of man and not in the maximization of profit. This creates a net of social security and creation, the third pillar of the economy, and the economy of solidarity.

On the other hand, the political and environmental crisis reflects the state's inability to enforce the laws that ensure the functioning of the democratic system. In the globalized economy of the demolition of the welfare state, they are "reinventing" the social economy enterprises (Jeantet, 2007; Polain et al., 2018). Countries that lend are wealthy countries, while borrowing countries are usually the poorer countries in economic recession, so the globalized market creates inequalities (Galbraith, 2010; Kanbur, 2015). These inequalities create the poverty and the need for another economy based on democracy, solidarity, respect for diversity, and moral with other human values. According to Signori and Forno (2016), people who belong to a group of solidarity are socially active, are interested in politics and collaborate with others for the good of society, feel more cooperative and trust others. Schifani and Migliore (2011) argue that man now knows his choices and with his behavior tries to contribute to the well-being of society. That is, solidarity characterizes the current consumer. It recognizes that the interests of others can go hand in hand with the pursuit of the same interest. The important thing is that the concepts of morality and solidarity can play a decisive role in the consumer decision-making process (Carrera,

2009). The word "solidarity" has a no-cost concept. It is usually a slogan. But a solidarity-based activity of people aims to redistribute scarce resources. The desire to contribute is influenced by the effectiveness of the aim of solidarity. This desire is reinforced by solidarity feelings (Kritikos et al., 2007).

The crisis in Greece created Social Welfare Centers that aimed at offering medical examinations and providing medication to people who did not have access to medical services because they lacked social security. If social doctors were not established by volunteer doctors and other people, many of the patients would be at risk of dying. The willingness to contribute is mainly influenced by the effectiveness of the goal of solidarity and is reinforced by the feelings of mutual exchange (solidarity) within a group. Solidarity is the generous support of weak people from a welfare state. But it can be set as a way of redistributing income, other than taxation (Arnsperger and Varoufakis, 2003).

While the distinctive role of the Social Economy has recently been recognized, it is nevertheless a very important part of Europe's political, social and economic history. It first appeared in Greece in the 18th century with the Cooperative in the Ambelakia of Thessaly in Greece and France in the 19th century. Its usefulness has had a great impact on the rest of Europe. In the United Kingdom, the foundations of the social and solidarity economy were laid in the United Kingdom in 1844 by Rochdale's pioneers. After many attempts and under very difficult conditions, they managed to establish a consumer cooperative that is a model until nowadays. Moolaert and Ailenet (2005) point out that Solidarity Economy appeared in ancient Greece by raising money for events and funeral ceremonies and in ancient Rome with the funding of craft associations. Over time, the concept of social economy has evolved and changed. Today, the concept of Social Economy is placed between the Public and the Private Sector. Its purpose is to meet social needs that are not covered by the private sector due to low profitability and the public sector is absent for financial and financial reasons.

According to Mertens (1999), the social economy is called the residual dimension of the other two forms of the economy: private and public. Westlund and Nilsson (2005), as a social economy, consider a number of alternative concepts, such as the third sector, the non-profit sector, the solidarity economy, the alternative economy and the non-profit economy. From a political point of view, the social economy brings people to work together with voluntary commitment for a purpose. For Defourny and Develteve (2009) from the economic point of view, the social economy is defined as the economic activities carried out by enterprises, cooperatively, with members and ethical values. The following can be focused on (WFTO, 2017):

1. Creating opportunities for economically disadvantaged

**Table 1.** Solidarity Economy in Greece 2012.

<b>Solidarity Economy in Greece 2012</b>	<b>Number of businesses</b>	<b>Number of working positions</b>	<b>Number of members</b>
Cooperatives and other similar businesses - TOTAL	7,197	14,983	1,052,179
Cooperative banks	25	1,238	196,179
Agricultural cooperative	6,376	11,300	713,714
Residential cooperatives	545	n/a	120,242
Cooperatives of electricians	23	200	600
Cooperatives of plumbers	33	200	2,500
Female agrotouristic cooperatives	130	100	2,000
Cooperatives of farmacist	41	1500	5,500
Limited Liability Social Cooperatives	16	400	2,000
Mutual Insurance Cooperatives	7	40	10,000
Mariners Mutual Insurance Cooperatives	1	5	50
Mutual insurance funds and other similar forms - TOTAL	11	1,140	180,000
Mutual Funds	4	1,100	150,000
Professional insurance funds	7	40	30,000
Non profit organisations ecc - TOTAL	50,600	101,000	1,500,000
Unions in general	50,000	100,000	1,500,000
Institutions	600	1,000	-
Non profit organisations	n/a	n/a	n/a

Source: Nasioulas (2012).

producers.

2. Transparency and accountability
3. Fair trade practices
4. Eligible payment
5. Extinction of child labor and forced labor
6. Commitment to non-discrimination of sex, language, color and freedom of association for all.
7. Good working relations.
8. Capacity development capability
9. Promoting fair trade
10. Respect for the environment

In Greece, "Bodies of Social and Solidarity Economy" are:

- a. Social cooperative enterprises
- b. Social cooperatives of limited liability
- c. Employee cooperatives and agricultural cooperatives.

### **Solidarity economy in Greece**

With 2012 data, the cooperatives shown in Table 1 are active in Greece. They are elements of social economy structures, workers and their members. Agricultural cooperatives are the main category, followed by residential cooperatives and cooperative banks. A significant proportion is made up of small business cooperatives (plumbers, electricians, agrotourism). The limited social cooperatives (in fact social cooperatives that include disabled people were only 16.

According to Cicopa, Cooperatives and Employment (2nd global report, 2017), cooperatives employ at least 250 million people worldwide, either as employees or as co-workers, or as cooperative members. Agricultural cooperatives in Greece play an important role in the production and process and marketing of the agricultural sector. Agricultural cooperatives in Greece, amidst the financial crisis, will invest in marketing and networking among rural cooperatives (Kontogeorgos et al., 2015).

### **DATA AND METHODOLOGY**

This work examines the factor composition and the internal coherence of the questionnaire, based on data gathered from a sample of 214 citizens region of Thessaly in order to record and study their opinion on the economy of solidarity and social entrepreneurship.

#### **Determination of the measuring instrument**

As a measuring instrument, a structured questionnaire was used with 43 questions (topics, variables) in total, consisting of: (1) questions on citizens' demographics (questions 1 to 7); (2) questions on citizens' statements related to social and cooperative enterprises (SCE) (questions (variables) 8-21 (scale A)); (3) questions on barriers to the development of social entrepreneurship (questions 22-36 (scale B)) and (4) questions examining the charm of a joint venture (questions 37 - 43 (scale C)).

The measurement of the topics of the three scales was calculated with a five-point gradient. The rating includes the following replies (statements): 1 = Absolutely disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Absolutely

agree. The grouping in sub-scales (factors) of the three scales A, B and C will be done by the Principal Component Analysis method, to be used for further analysis.

#### Data collection

Questionnaires (214) were gathered after telephone communication and on-site visit between October 2017 and November 2017. Lawley and Maxwell (1971) report that using the maximum likelihood method in factor analysis requires a sample size of 51 greater than the number of the topics of the measuring instrument (Lawley and Maxwell, 1971; Kim and Mueller, 1978). In the present case, for the A-questionnaire with the 14 topics (themes), the B questionnaire with the 15 topics (themes) and the C scale questionnaire with the 9 topics (themes), the size of the sample satisfies the Lawley and Maxwell (1971) and Kim and Mueller (1978) condition for the three scales.

#### Reliability analysis

Statistical analysis of the data was done with the Statistical Product and Service Solutions, SPSS version 23, an IBM Statistics product (Hejase and Hejase, 2013). The internal consistency of the three-scale questionnaires was assessed on the basis of the Cronbach Alpha Index (a-Cronbach) calculated from the application of the reliability analysis to the respective data sets.

#### Factor analysis-cluster analysis

It followed factor analysis on the three scales by the Principal Component Analysis method in order to group the variables into sub-scales to be used for further analysis. Four steps were followed during the factor analysis: (a) the correlation matrix was created among all the topics (themes) and the suitability of applying a factorial model was investigated; (b) it determined the number of factors sufficient to describe the data and the good application of the chosen model was assessed; (c) for the final factorial solution, rotation of the axes was used so that the factors are clearly interpretable and (d) the factor scores for each factor were calculated.

In order to determine whether the correlation matrix of the questionnaire topics for each scale is suitable for factorial analysis, two criteria were used: the Bartlett sphericity criterion and the Kaiser-Meyer-Olkin (KMO) index. Bartlett's test of sphericity was applied to test the null hypothesis that the correlation matrix coincides with the identity matrix, where all diagonal elements are equal to 1 and all non-diagonal elements are zeros. If the sphericity criterion is low, this assumption will be rejected and then the decision to apply a factor analysis should be reviewed. The 'KMO' index (Kaiser-Meyer-olkih's), the measure of sampling adequacy, is an index of comparing the magnitudes of observed correlation coefficients to the magnitude of partial correlation coefficients. Small index values indicate that factor analysis of variables is not appropriate, since correlations between pairs of variables cannot be explained by the other variables (Anagnostopoulos and Papadatou, 1992).

The determination of the number of factors for each scale (A, B and C) was based on the graphs of the eigenvalues of the characteristic equation of the correlation matrix and the eigenvalues criterion. The hierarchical cluster analysis method (Ward Linkage and Square Distance) was then applied to group the topics-variables of the scales A, B and C. The hierarchical cluster analysis tree was used to group the topics into groups. Finally, the groups formed by each of the two methods were compared for each scale separately.

#### Analysis of variance

Analysis of variance (ANOVA) was used to test the significance of the difference between the mean values of the different groups created by different independent variables (age, gender, educational level, etc.) for the factors (sub-scale) of each scale of topics. The F statistic was used to test the difference of the mean values of  $m$  groups when  $m \geq 3$  and the statistic  $t$  when  $m = 2$ . This method analyzed the factors of the three scales in relation to demographic, educational and economic characteristics, namely: gender, age, occupation, education, knowledge of social entrepreneurship and family income.

#### Correlation coefficients and reordered descriptive statistics

The correlation coefficients and the descriptive statistics of the factors (sub-scales) of the three scales A, B and C were calculated. For the study of the correlation (relationship) between the variables, the Pearson correlation index  $r$  was used.

## RESULTS AND DISCUSSION

#### Reliability, factor, and cluster analysis

The internal consistency of the three-scale questionnaires was assessed on the basis of the Cronbach Alpha Index (a-Cronbach). The a-Cronbach index for Scale A "Citizens' statements related to Social and Cooperative Enterprises" was found to be equal with 0.654, for Scale B "Barriers to the Development of Social Entrepreneurship" was found to be equal to the high degree of reliability  $a-CrA = 0.881$  and for scale C "The charm of a joint venture" was equal to the high degree of reliability  $a-CrA = 0.884$ . The reliability of a questionnaire increases with the Alpha Index. Many professional researchers require a reliably completed questionnaire to display Index  $a-Cr > 0.60$  marker. In any case,  $a-Cr > 0.50$  should be used to make the questionnaire reliable (Hejase and Hejase, 2013: 570). The KMO markers for the A, B and C scales were 0.694, 0.846 and 0.866, and those for the Bartlett sphericity were 292.38, 534.48 and 446.09 ( $p < 0.001$ ), respectively, which means that the Factor Analysis of variables is an appropriate statistical technique for extracting factors for all three scales.

Then, pre-export factors were proceeded to, using the maximum likelihood method. For each scale and topic, the "common part" (Communalities) was calculated, that is the percentage of variance of the topic, which is interpreted by the common factors. When the common part of a topic has a value close to zero, it means that common factors do not interpret a significant percentage of the variance, so this topic counts (states) something unique. This has not been observed in any of the three scales. Factor analysis identified 8 factors for scale A, 6 for scale B and 5 for scale C, which interpret 79.40, 77.78 and 85.20% of the total variance in the respective data sets.

The factors of scale A (or sub-scales of scale A)

**Table 2.** Grouping the variables of scale A “Citizens' statements related to Social and Cooperative Enterprises” in sub-scale (factors).

Sub-scale	Number of variable (loading)		
AA1Q: Supporting a Social Enterprise with cash or voluntary work:	-	A7	A9
	-	0.79	0.82
AA2: Supporting a social enterprise	-	A6	A13
	-	0.78	0.81
AA3: Contribution of the JV to the development and tackling of unemployment	A2	A11	A12
	0.64	0.75	0.59
AA4: Voluntary job offer	-	-	A3
	-	-	0.83
AA5: Sponsorship of various social events and privileged management by the state	-	A4	A14
	-	0.84	0.69
AA6: The Social Enterprise is a collective property company and acts democratically	-	A1	A10
	-	0.95	0.39
AA7: Social Enterprises must have adequate government funding	-	-	A5
	-	-	0.96
AA8: Supporting a social enterprise only with volunteer work	-	-	A8
	-	-	0.92

**Table 3.** Grouping the variables of scale B “Barriers to the Development of Social Entrepreneurship” in sub-scale (factors).

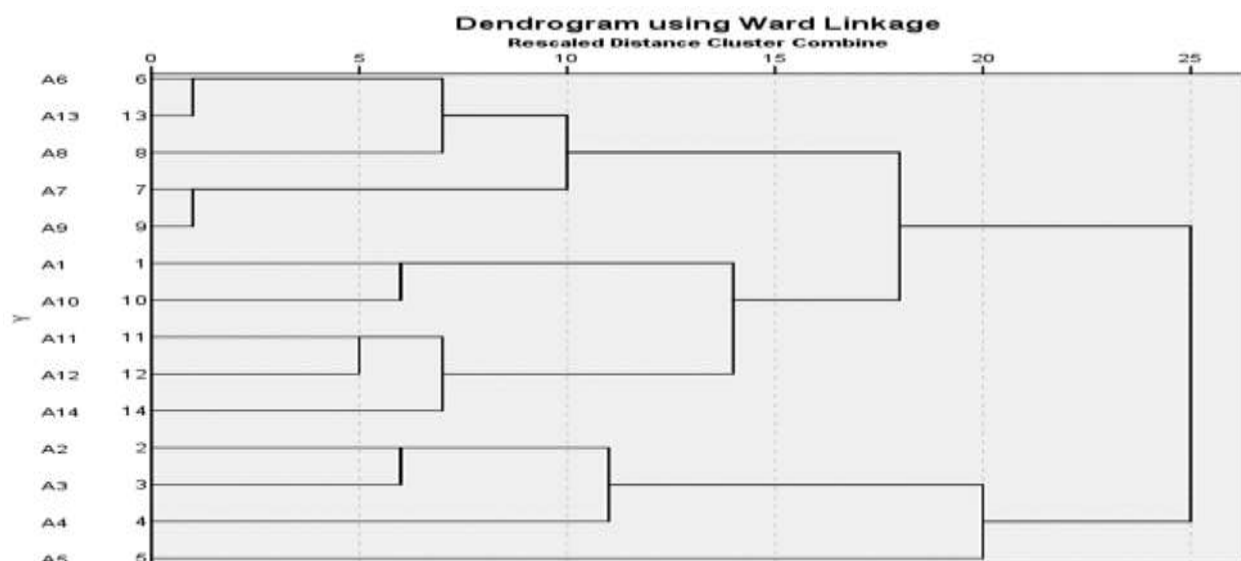
Sub-scale	Number of variable (loading)			
BB1: Lack of institutional framework and non-support of social entrepreneurship by state bodies	B3	B11	B12	B13
	0.56	0.75	0.75	0.69
BB2: The weaker relationship of collective action - economic benefit	B9	B10	-	-
	0.50	0.77	-	-
BB3: Indifference and fear for the new	B4	B5	-	-
	0.67	0.85	-	-
BB4: Lack of knowledge	B1	-	-	-
	0.86	-	-	-
BB5: The economic crisis and competition	B7	B8	-	-
	0.83	0.52	-	-
BB6: Lack of Funding	B2	-	-	-
	0.79	-	-	-

“Citizens' statements related to Social and Cooperative Enterprises” that support the theoretical dimension of the subject are shown in Table 2. The factors of scale B (or sub-scales of scale B) “Barriers to the Development of

Social Entrepreneurship” that support the theoretical dimension of the subject are shown in Table 3. The factors of scale C (or sub-scales of scale C) “The charm of a collective enterprise” that support the theoretical

**Table 4.** Grouping the variables of scale C “the charm of a collective enterprise” in sub-scale (factors).

Sub-scale	Number of variable (loading)	
CC1: Sensitivity to environmental protection	C5 0.82	C6 0.75
CC2: Collective action and provision of social work	C1 0.89	C2 0.72
CC3: Creating a new culture with social sensitivity	C8 0.88	C9 0.57
CC4: Democratic Administration and Social Responsibility	C3 0.89	C4 0.58
CC5: Sensitivity towards the economic and social partners	C7 0.81	- -

**Figure 1.** Grouping the topics of scale A with hierarchical cluster analysis.

dimension of the subject are shown in Table 4

In order to support the results of the factor analysis, we proceeded to apply the hierarchical cluster analysis method (Ward Linkage method and squared Euclidean Distance) to group the variables of the three scales.

From the dendrograms of the hierarchical cluster analysis, we observed that the 14 topics of scale A are grouped into 8 groups with the same topics, which are contained in the eight subscales identified by Factor Analysis (Table 2), except that the factor analysis integrates the A2 variable into third factor (load 0,644) while cluster analysis in the fourth factor (load 0.397). Moreover, the factor analysis assumes that the variables

A4 and A14 belong to the same factor (AA5) while the cluster analysis presents them as separate factors (Figure 1)

The 13 topics of scale B are grouped into 6 groups with the same topics as the six subscales identified by Factor Analysis, except that Factor Analysis integrates the B11 variable into the first factor (load 0.744) while Cluster Analysis in the sixth factor (load 0.463), and B3 in the first factor (load 0.563) while Cluster Analysis in the fourth factor (load 0.371) (Figure 2).

The 9 topics of scale C are grouped into 5 groups with the same topics contained in the five subscales determined by the factor analysis (Table 4), except that

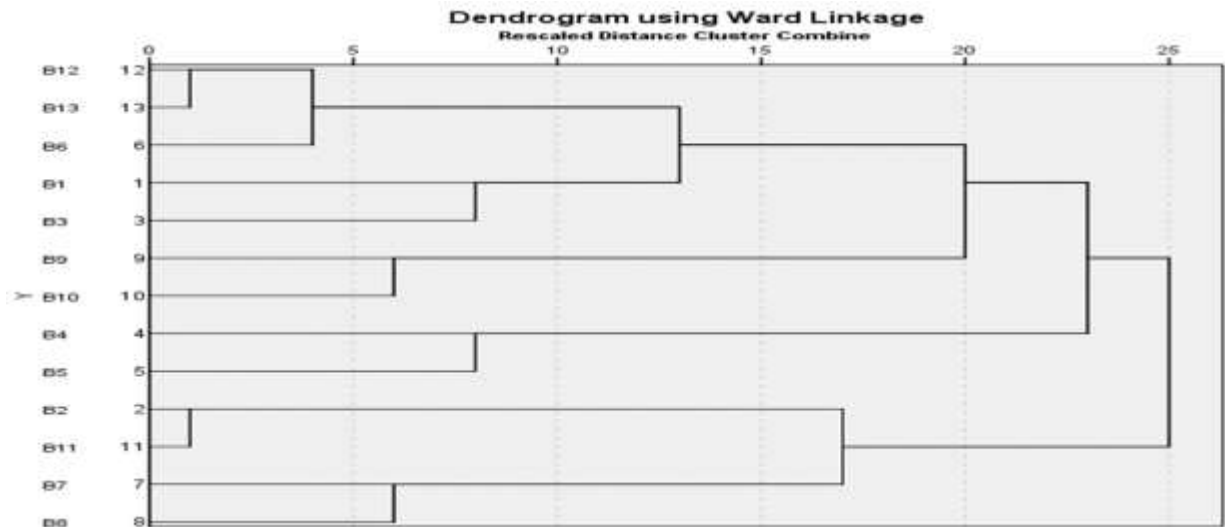


Figure 2. Grouping the topics of scale B with hierarchical cluster analysis.

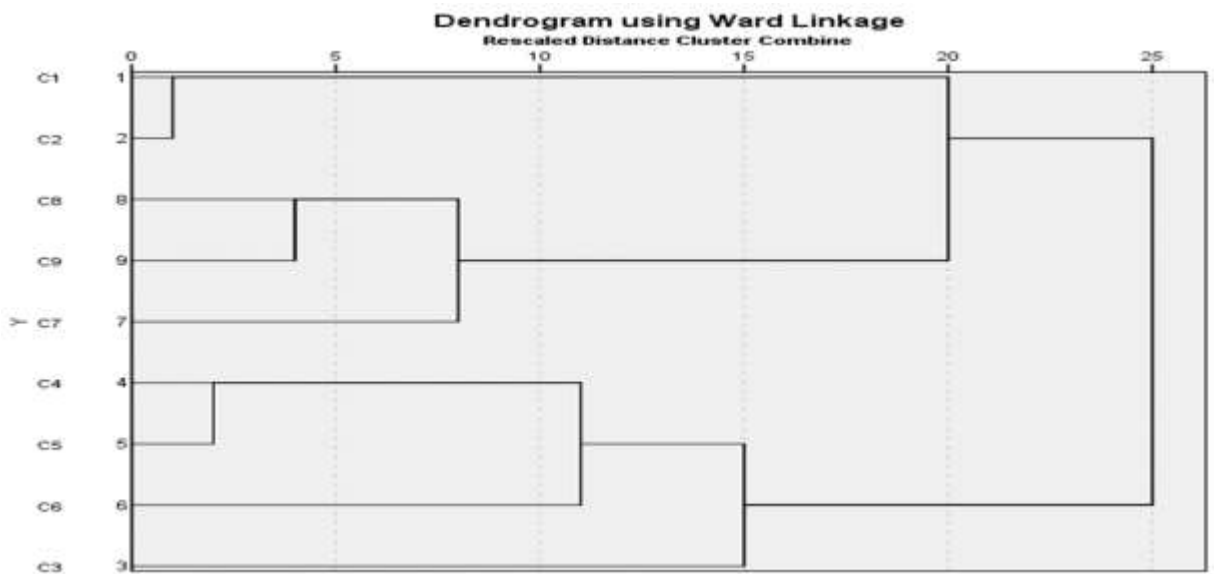


Figure 3. Grouping the topics of scale C with hierarchical cluster analysis

Factor Analysis encompasses the C4 variable in the fourth factor (load 0.578) while the Cluster Analysis on the first factor (load 0.401) (Figure 3).

To test whether the model of the 8 factors for the scale A, the model of the 6 factors for the scale B and the model of the 5 factors for the scale C, reproduce satisfactorily the observed correlations between the topics, the residual for each topic was calculated. The residual equals the difference between the observed correlation coefficient and the estimate from the corresponding model. The tables of reproduced correlation contained a relatively small percentage (10.98% for A, 3.85% for B and 0.00% for C) of the

residuals with an absolute value greater than 0.10. This result indicates that the models of 8 factors for scale A, 6 for scale B and 5 for scale C reproduce relatively well the observed correlations between the topics.

**Descriptive statistics and distribution of sub-scales**

The results of factor analysis can be considered as part of a group of topics. Based on those topics that are part of each factor the researchers created eight subscales for scale A, six sub-scales for scale B and five sub-scales for scale C.

Every scale A can be evaluated at the eight sub-scales,

**Table 5.** Mean value, standard deviation, standard error and median for the eight sub scales of the scale A.

<b>A/A: sub-scales</b>	<b>Mean value</b>	<b>Standard error</b>	<b>Standard deviation</b>	<b>Median</b>
AA1: Supporting a SCE with cash or voluntary work	3.014	0.071	0.738	3.000
AA2: Supporting a SCE by any means	3.752	0.068	0.705	4.000
AA3: Contribution of the SCE to the development and tackling of unemployment	3.573	0.051	0.524	3.667
AA4: Voluntary work offer	2.804	0.091	0.936	3.000
AA5: The SCE are sponsoring and must be privileged by the state	3.266	0.068	0.698	3.500
AA6: SCE are collective property companies and act democratically	3.234	0.054	0.564	3.000
AA7: SCE must be adequately funded by the State	2.551	0.083	0.86	2.000
AA8: Supporting a SCE only with volunteer work	3.701	0.087	0.903	4.000

considering mean value of the initial responses for the initial topics. The Descriptive Statistics (mean value, Standard error, Standard deviation, and Median) for those eight factors (sub-scales-factors are shown in Table 5).

The results of the factor analysis can be considered as indicative of a grouping of the topics. On the basis of the topics involved in each factor, we formed eight sub-scales (factors) for scale A, six for scale B and five for scale C.

Each topic of scale A is ranked in one of the eight sub-scales, each of which appears as the arithmetic mean of the topics that correspond to it. Descriptive statistics (mean, standard error, standard deviation and median) for the distributions of these eight indices (factors) are presented on Table 5. The frequency curve for all the eight indices is almost the normal distribution curve except the one from factor AA8 that is a bit asymmetry left (Figure 4).

Each topic of scale B is ranked in one of the six sub-scales, each of which appears as the arithmetic mean of the topics that correspond to it. Descriptive statistics (mean, standard error, standard deviation and median) for the distributions of these six indices (factors) are shown in Table 6. The frequency curve for all the eight indices is almost the normal distribution curve (Figure 5).

Each topic of scale C is ranked in one of the five sub-scales, each of which appears as the arithmetic mean of the topics that correspond to it. Descriptive statistics (mean, standard error, standard deviation and median) for the distributions of these five indices (factors) are shown in Table 7. The frequency curve for all the eight indices is almost the normal distribution curve with slight asymmetry to the left (Figure 6).

### **Analysis of variance (ANOVA)**

In order to test the existence of differences in the categories (groups) of the sub-scales (dependent variables) of the scales A, B and C, which are formed with independent variables, the social, educational and income characteristics of the citizens, the method of

simple variance analysis (one-way ANOVA) was used. In particular, the method studied the existence of significant differences between the mean values of the levels (groups) of sub-scales of the three scales defined by the independent variables: gender, age, profession, education, knowledge of the terms SSE and SCE, the way you know the terms SSE and SCE and family income. If the independent variable contained two levels (categories), the t statistic was used to test the existence of significant differences.

#### ***Analysis of variance of sub-scales of scale A “Citizens’ statements related to Social and Cooperative Enterprises”***

Significant differences in the level of 5% ( $p = 0.05$ ) present the mean of the levels: 1) of the sub-scales: AA2, AA3 and AA8 with independent variables “gender”; 2) of the sub-scale AA3 with independent variables “age” and 3) of the sub-scales: AA3 and AA5 with independent variables “Educational level”.

#### ***Analysis of variance of the sub-scales of scale B “Barriers to the Development of Social Entrepreneurship”***

Significant differences in the level of 5% ( $p = 0.05$ ) are presented the mean of the levels: 1) of the sub-scales BB1, BB2, BB3, BB5 and BB6 with independent variable the “gender”; 2) of the sub-scale BB5 with independent variable the “age” and 3) of the sub-scale BB2 with independent variable “the way you know the terms social solidarity economy (SSE) and Social and Cooperative Enterprises (SCE).

#### ***Analysis of variance of the sub-scales of scale C “The charm of a collective enterprise”***

Significant differences in the level of 5% ( $p = 0.05$ ) are presented by mean levels: 1) of the sub-scales CC2 and CC5 with independent variable the “gender”; 2) of the

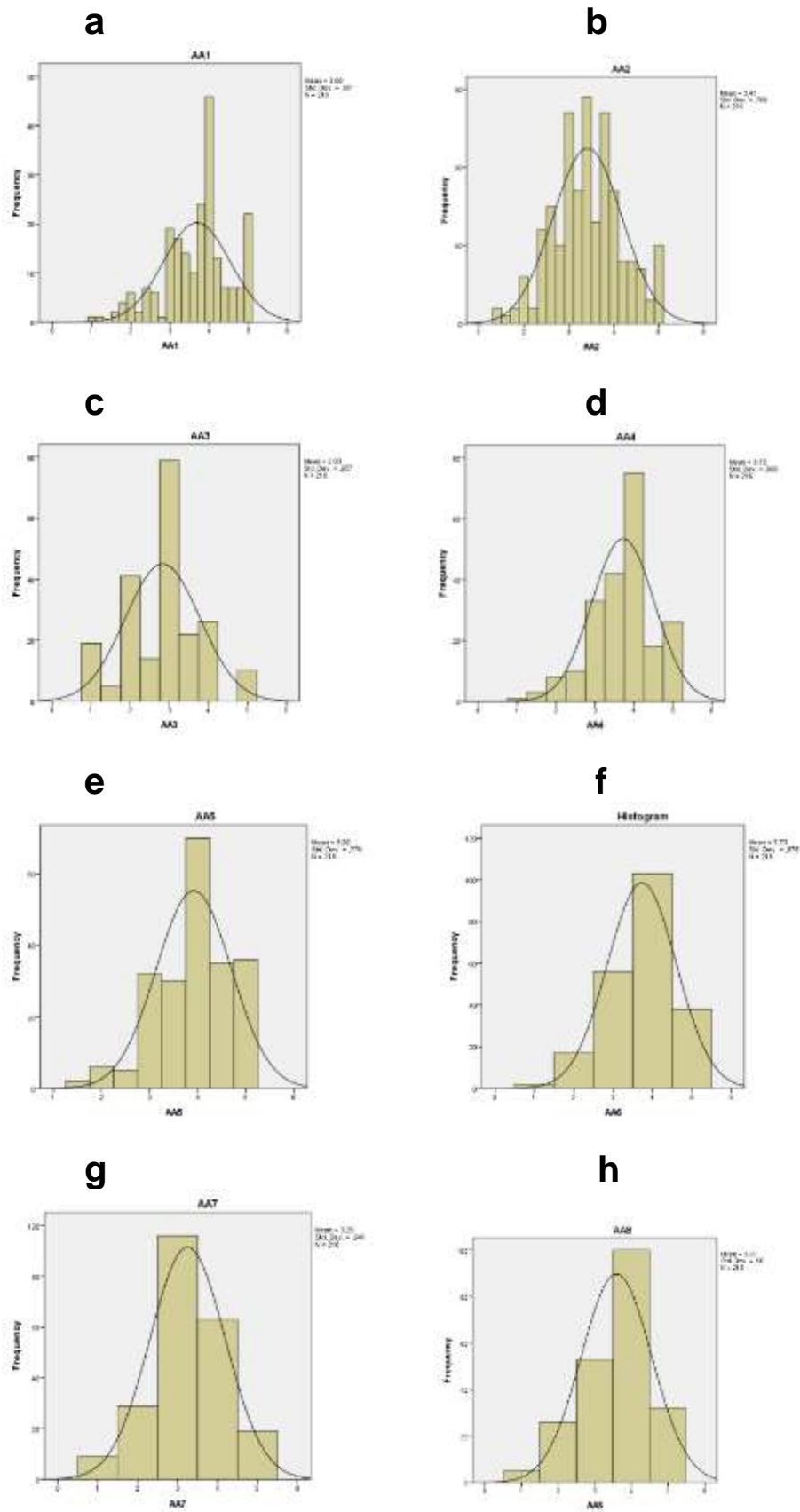
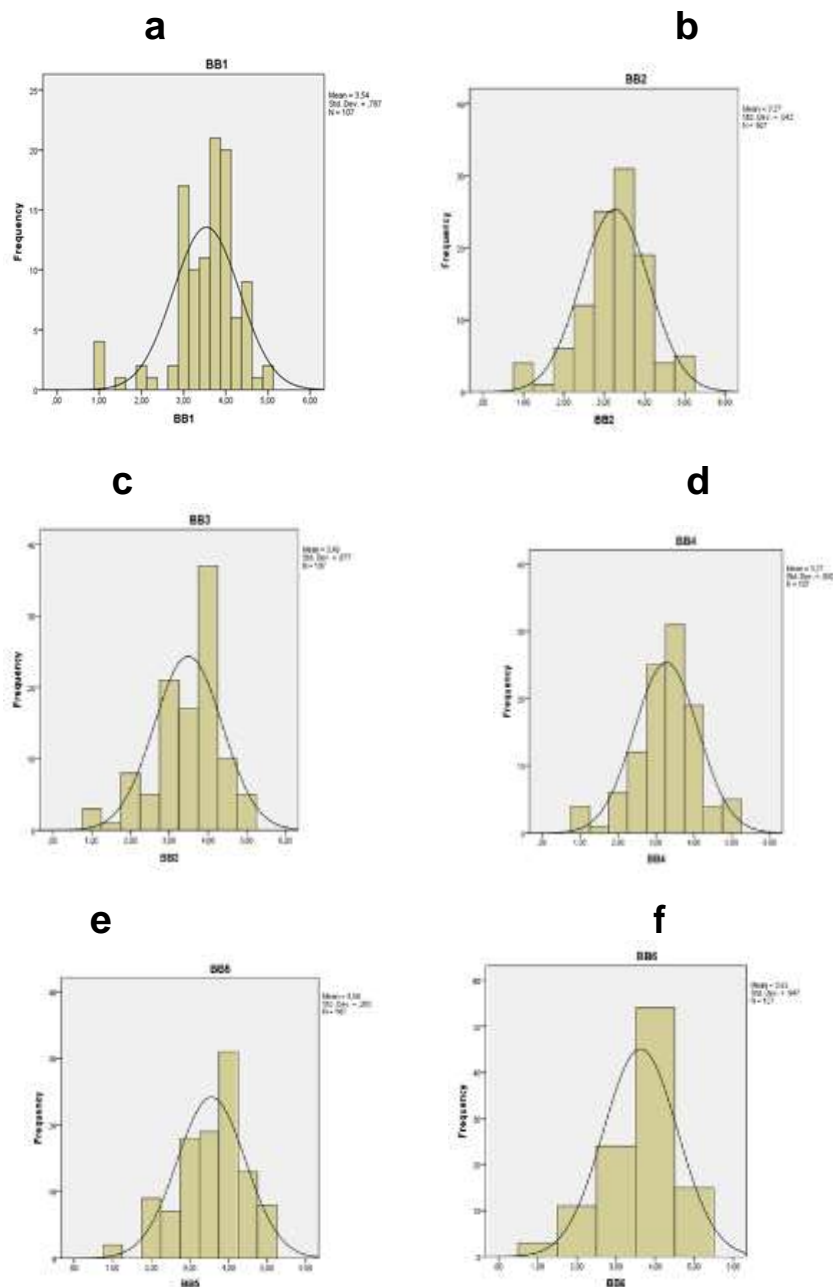


Figure 4. Histograms of the indices of the eight subscales of the scale A.



**Table 6.** Mean, standard deviation, standard error and median for the six subscales of the scale B.

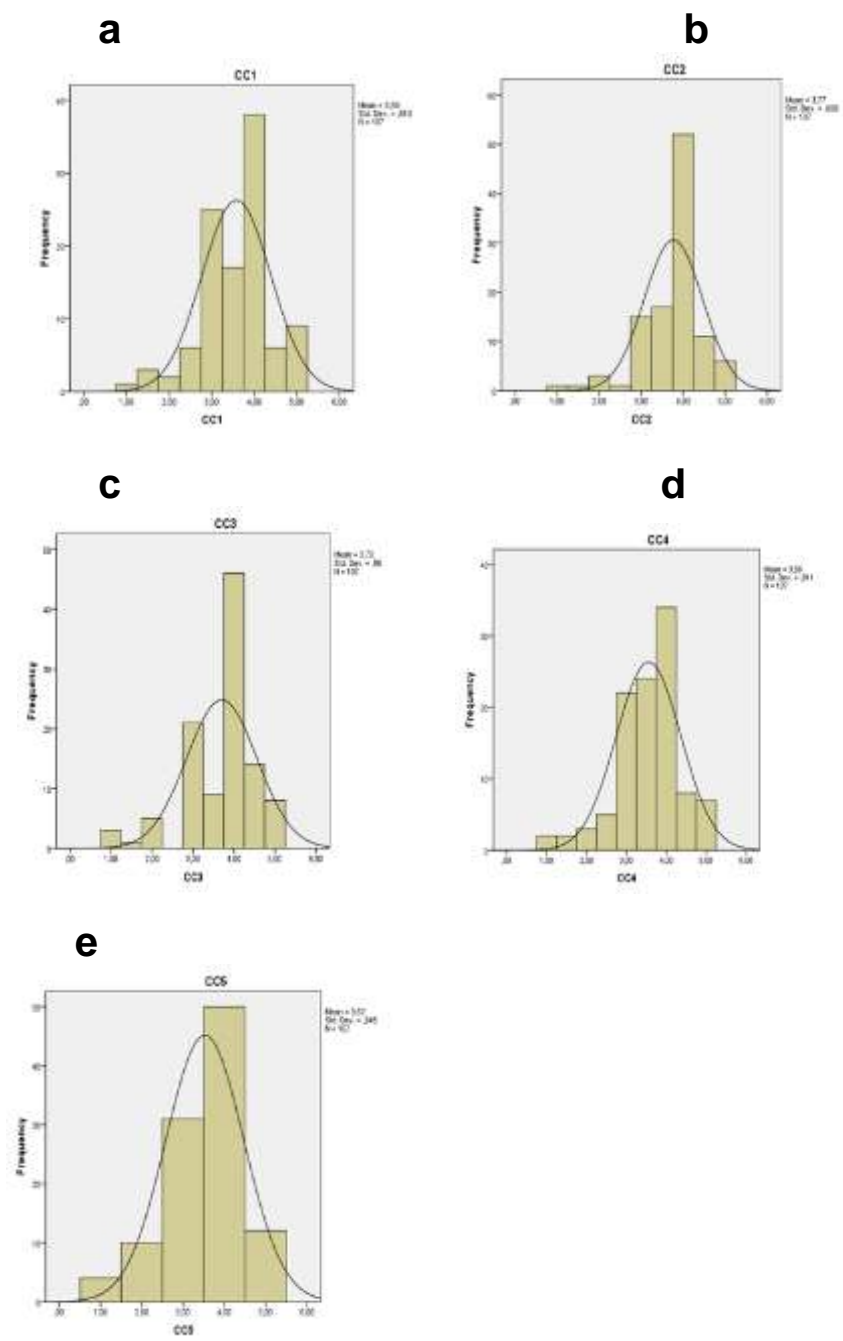
A/A: Sub-scales	Mean	Standard error	Standard deviation	Median
BB1: Lack of institutional framework and non-support of SCE and SE by state bodies	3.540	0.076	0.787	3.750
BB2: The weak relationship of collective action - economic benefit	3.271	0.081	0.842	3.500
BB3: Indifference and fear of the new	3.491	0.085	0.877	3.500
BB4: Lack of knowledge	3.897	0.089	0.921	4.000
BB5: The economic crisis and the competition	3.556	0.085	0.883	3.500
BB6: Lack of Funding	3.626	0.092	0.947	4.000



**Figure 5.** Histograms of the indices of the eight subscales of the scale B.

**Table 7.** Mean, standard deviation, standard error and median for the five subscales of the scale C.

A/A: Sub-scale	Mean	Standard error	Standard deviation	Median
CC1:Sensitivity to environmental protection	3.579	0.079	0.813	3.500
CC2: Collective action and provision of social work	3.766	0.067	0.698	4.000
CC3: Creating a new culture with social sensitivity	3.701	0.083	0.860	4.000
CC4: Democratic administration and social responsibility	3.556	0.078	0.811	3.500
CC5: Sensitivity to the economic and social partners	3.523	0.091	0.945	4.000



**Figure 6.** Histograms of the indices of the eight subscales of the scale.

sub-scale CC2 with independent variable the “Knowledge of the terms social solidarity economy (SSE) and Social and Cooperative Enterprises (SCE)” and 3) of the sub-scale CC4 with independent variable “Family income”.

### **Correlation coefficients**

#### ***Correlation coefficients for the sub-scales of scale A “Citizens’ statements related to Social and Cooperative Enterprises”***

For the study of the correlation between the variables of scale A, the Pearson correlation index  $r$  was used. Significant correlation at  $p = 0.01$  presents:

1. The sub-scale “AA1: Supporting a SCE with cash or voluntary work” with the sub-scales: AA2 ( $r=0.437$ ), AA3 ( $r=0.353$ ), AA6 ( $r=0.310$ ) and AA8 ( $r=0.318$ ).
2. The sub-scale “AA2: Supporting a SCE by any means” with the sub-scales: AA3 ( $r=0.384$ ), AA6 ( $r=0.206$ ) and AA3 ( $r=0.401$ ).
3. The sub-scale “AA3: Contribution of the SCE to the development and tackling of unemployment” with the sub-scales: AA4 ( $r=0.206$ ), AA5 ( $r=0.215$ ) and AA6 ( $r=0.203$ ).

#### ***Correlation coefficients for the sub-scales of scale B “Barriers to the Development of Social Entrepreneurship”***

For the study of the correlation between the variables of scale B, the Pearson correlation index  $r$  was used. Significant correlation at  $p = 0.01$  presents:

1. The sub-scale “BB1: Lack of institutional framework and non-support of SCE and SE by state bodies” with the sub-scales: BB2 ( $r=0.523$ ), BB3 ( $r=0.479$ ), BB4 ( $r=0.452$ ), BB5 ( $r=0.514$ ) and BB6 ( $r=0.523$ ).
2. The sub-scale “BB2: The weak relationship of collective action - economic benefit” with the sub-scales: BB3 ( $r=0.352$ ), BB4 ( $r=0.383$ ), BB5 ( $r=0.477$ ) and BB6 ( $r=0.253$ ).
3. The sub-scale “BB3: Indifference and fear of the new” with the sub-scales: BB4 ( $r=0.244$ ), BB5 ( $r=0.439$ ) and BB6 ( $r=0.320$ ).
4. The sub-scale “BB4: Lack of knowledge” with the sub-scales: BB5 ( $r=0.309$ ) and BB6 ( $r=0.377$ ).
5. The sub-scale “BB5: The economic crisis and the competition” with the sub-scale: BB6 ( $r=0.426$ ).

#### ***Correlation coefficients for the sub-scales of scale C “The charm of a collective enterprise”***

For the study of the correlation between the variables of scale C, the Pearson correlation index  $r$  was used.

Significant correlation at  $p = 0.01$  presents:

1. The sub-scale “CC1: Sensitivity to environmental protection” with the sub-scales: CC2 ( $r=0.486$ ), CC3 ( $r=0.560$ ), CC4 ( $r=0.598$ ) and CC5 ( $r=0.486$ ).
2. The sub-scale “CC2: Collective action and provision of social work” with the sub-scales: CC3 ( $r=0.582$ ), CC4 ( $r=0.523$ ) and CC5 ( $r=0.509$ ).
3. The sub-scale “CC3: Creating a new culture with social sensitivity” with the sub-scales: CC4 ( $r=0.565$ ) and CC5 ( $r=0.600$ ).
4. The sub-scales “CC4: Democratic administration and social responsibility” with the sub-scale: CC5 ( $r=0.577$ ).

### **Conclusions**

The present work dealt with three main components: a) the citizens' statements related to Social and Cooperative Enterprises (SCE); b) the barriers to the development of Social Entrepreneurship (SE); and c) the charm of a collective enterprise.

For the scale of topics (questionnaire) of each component the reliability analysis showed strong ( $\alpha > 0.650$ ) to very strong ( $\alpha > 0.880$ ) internal consistency of the questionnaires and then applied the factor analysis, which is a basic tool for checking the validity of a conceptual construction of a questionnaire when it adapts to another language.

Factor analysis identified 8 factors for scale A, 6 for scale B and 5 for scale C, which interpret 79.40, 77.78 and 85.20% of the total variance in the respective data sets. The same results resulted both in the hierarchical cluster analysis method for the grouping of the variables of the three scales and in the residuals method for each topic.

The variance analysis (ANOVA) showed that, in the grouped Citizens' statements related to Social and Cooperative Enterprises (SCE) (factors of scale A) most important can be considered the: 1) AA1: Supporting a SCE with cash or voluntary work; 2) AA4: Voluntary work offer; 3) AA6: SCE are collective property companies and act democratically and 4) AA7: SCE must be adequately funded by the State, because in any of the independent (categorical) variables gender, age, profession, education, knowledge of the terms SSE and SCE, the way you know the terms SSE and SCE and family income, the means of the levels do not differ between them.

In the grouped barriers to the Development of the Social Entrepreneurship (factors of scale B) most important can be considered the “BB4: Lack of knowledge”, because in any of the independent (categorical) variables the means of the levels do not differ between them.

In the grouped charm of a collective enterprise (factors of scale C) most important can be considered the: 1)

CC1: Sensitivity to environmental protection and 2) CC3: Creating a new culture with social sensitivity, because in any of the independent (categorical) variables the means of the levels do not differ between them.

The findings were critical and had academic interest. Also recently it is a major thought that solidarity economy is of great importance for the modern economy and can boost small local cooperatives and businesses into a greater scale on the country or even abroad. Although it needs better information for the citizens and better legal frame.

The next step of the present research is the study on the organization and economic efficiency of social cooperative enterprises

## CONFLICT OF INTERESTS

The authors declare that they have no conflict of interest.

## ACKNOWLEDGEMENTS

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*Full Length Research Paper*

# Rediscovering public engagement in higher education: A bridge between university community and publics

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In recent years, public engagement attention is drawn towards university institutions since the role of universities is projected towards the sharing and spreading of knowledge beyond the traditional academic bounds. Thus, the university is becoming a “partner” that collaborates at the community's growth, and debates with all the stakeholders who might have an interest, either direct or indirect, in the university's activity. However, a systematization of the public engagement in higher institutions is still lacking. The aim of this paper is to advance the study of university public engagement construct through the analysis of research published in the main journals in the ambit of three disciplinary areas: communication, marketing and public management. A systematic literature review was used to select the main articles from these subject areas. Coding a selection of articles from these disciplines it is been possible to deepen the public engagement concept. The results show that public engagement is an umbrella term that covers a range of strategies and activities, which potentially come from different ideological standpoints. Five coherent definitions-in-practice emerged in the literature review: set of activities; process; communication tool; strategy; and approach. Moreover, this research presents some progresses in understanding the variables that intervene in the conceptual and methodological definition of public engagement from an inter-disciplinary perspective and the major benefits of an effective use of public engagement in the higher education management.

**Key words:** Public engagement, civic engagement, community engagement, systematic literature review, higher education.

## INTRODUCTION

Public engagement has received much attention in recent years not only from the academic world but also from institutions due to its features, which offer important social and economic benefits. Specifically, university public engagement, that is, “the myriad of ways in which the activity and benefits of higher education and research can be shared with the public (National Coordinating

Centre for Public Engagement, 2010)”, in recent years, is receiving particular attention. In fact, today universities are recognized as a driving force for economic and social growth and therefore the opening of the university to the territory is a challenge but also an opportunity for a structural change of university organizations in a social and “managerial” perspective (Watermeyer and Lewis,

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2018). Public engagement has many possible uses in the management field and has been investigated as a potential tool for the participation of public. The literature has produced qualitative and quantitative contributions that illustrate experiences of public engagement in a specific context or that have a conceptual nature aimed at retracing the theoretical approaches (Borum Chattoo and Feldman, 2017; Bandelli and Konijn, 2013; Bruning et al., 2006; Curtis, 2014; Domegan, 2008; Hart and Northmore, 2011; Kim, 2007; Watermeyer, 2012, 2016; Watermeyer and Lewis, 2018). However, when dealing with this subject it was discovered that its boundaries are badly outlined. The different disciplinary fields uses of the term "engagement" assumes different connotation. The first of which being marketing ambit (in this case, there is consumer engagement; tourism engagement; customer engagement, etc.). Second, politics where the concept of public engagement has been associated to a series of government actions bent on involving citizens more in institutional activities (in this case, there is find citizen engagement). In addition, in a strictly managerial ambit where public engagement is linked to the need for stakeholders who are more involved and more decisive in the activities and choices made by their organizations' governance (in this case there is have stakeholder engagement). The other studies on engagement sometimes refer to those directly involved in the activities/ services of public utility (institutions/organizations etc.). Davies and Wilkinson (2013a, b) as well as Wilkinson et al. (2011) related it to the concept of "citizenship", that is, to those practices that lead the citizen to participate in a public decisional process for a common interest; but it also has wider connotations, that is, to interact and share with the members of a community or to be faithful to a group.

In particular, in dealing with the theme of public engagement in universities, there are three main issues: the context within it is dealt that determines its definition; measuring the effectiveness of its activities; finally, the implications that public engagement activities can reserve for those who implement it, but also for those who benefit from it. Although researchers are trying to find a definition for public engagement and to conceptualize its construct (Hart and Northmore, 2011) by applying diversified approaches to its investigation, little attention has been paid to careful analysis of its nature and its determinants and of the context in which it is being investigated (Watermeyer and Lewis, 2018; Davies, 2013a, b; Hart and Northmore, 2011). Moreover, despite the current debate has an intrinsic inter-disciplinary character, little attention has been paid to study of public engagement across different research area. The aim of this paper is to individuate the main definitions of university public engagement through the analysis of research published in the top scientific journals in the ambit of three disciplinary areas: public management, communication and marketing. The present paper explores the university

public engagement analysing the literature found in the top journals of management in order to catch its characteristics, factors and benefits that precede and follow its manifestation. Indeed the systematic literature review will permit to recognize the main contributions of public engagement construct, contextualising the public engagement within literature (Rowley and Slack, 2004).

An integrated vision can help to advance the current research on this topic by highlighting future developments of research and at the same time, it adds its contribution to a multidisciplinary perspective that is so far still lacking. The interdisciplinary point of view that can give an enlarged and complete vision of its subject matter in disciplines that can support public and private management in the specific, communication and marketing. Since public engagement construct implies interest, emotions and interaction between two parties in a bi-directional exchange that generates the co-creation of knowledge (Rowe and Frewer, 2005), the subject area, marketing and communication, can improve knowledge about engagement with the publics in higher education institutions.

The findings of this study provide valuable input to a theme that has not been widely discussed in a multidisciplinary point of view. To fill this gap in current literature, this paper identifies the main contributions on public engagement in the main subject area of management (marketing, communication and public management) by individuating how public engagement is investigated in the literature, the main definitions, the subjects involved, the factors and consequences of the involvement. This research contributes on several aspects. First, it provides a multifaceted perspective of public engagement owing to a multidisciplinary approach. Second, from a managerial standpoint, the clarification of public engagement mechanisms allows for a deeper understanding of the context under which public engagement is effective.

## METHODOLOGY

A systematic literature review was performed to detect available evidence on public engagement that adopts a rigorous, objective and successive fractions approach (Rowley and Slack, 2004) for detecting the main papers that discuss the topic. A replicable and strict approach was adopted both in the selection of the sample and in the analysis of the data of the research in accordance with the indications given by Davies and Crombie (1998). The course of action included the steps described subsequently and summarized in Table 1.

**(i) Keyword Identification:** to clarify the use of the term "public engagement" in the management literature, terms used as synonyms in the literature on public engagement were considered (such as "civic engagement, public involvement, etc). In this study, the concept of "public participation" was taken into account that, moreover, has already found its univocal and consolidated definition in the literature: "public participation is the practice of involving members of the public in the agenda-setting, decision-making, and policy-forming activities of organizations/institutions responsible for

**Table 1.** The process of analysis.

Step	Phase	Description
1	Keyword Identification	Choose the followings terms: “public involvement”; “public engagement”; “community engagement”; “civic engagement”; “civic involvement”
2	Selection of disciplinary	Research was limited to the subject areas of “Communication”, “Marketing” and “PSM”. Articles published in the scientific journals mentioned by Harzing’s Journal Quality List.
3	Finding Selection Criteria	Search for each keyword in the title or abstraction in the papers of journals ranked as A* (highest quality category) and A (second highest quality category) according to the quality list classification made by the Australian Business Deans Council (ABDC) (Journal Rankings List 2013)
4	Selection of papers	Only papers that reported the keywords in the abstract and/or in the title of paper
5	Purification dataset	Evaluation of the quality of the studies based on the objectives of the research (purification)
6	Content analysis	Analysis of articles on the base of research criteria

**Table 2.** Criteria for the paper analysis.

Criteria	Meaning
Level of analysis	Subjects to which public engagement research is intended (citizens, young people, institutions, immigrants, etc.).
Methodological approach	Methodology used: qualitative, quantitative or quali/quantitative approach
Definition	How public engagement is defined
Factors involved	Variables affecting public engagement
Outcomes	How public engagement affects university stakeholders

policy development.” (Rowe and Frewer, 2005: 253). Unlike public participation, public engagement is intended as an underlying mechanism that feeds the different forms of participation of the individuals (Rowe and Frewer, 2005). Public engagement is considered as a multi-faceted construct that implies interaction between two parties in a bi-directional exchange that generates the co-creation of knowledge.

**(ii) Selection of disciplinary:** to identify a representative sample able to summarize the current developments of the debate on “public engagement” and allow the understanding and replicability of the study, it was decided to refer to the classification of the Harzing Journal Quality List, which reports the international journals based on the main subjects area.

**(iii) Finding selection criteria:** to narrow the field to our area of investigation, three subject areas were chosen “Marketing, Communication and Public Sector Management”. In addition, to manage the amount of scientific contributions the articles published in the main journals were chosen (for originality, reputation importance and impact factor of the magazine) classified, according to the Australian Business Deans Council, in the categories A and A\* as suggested by Webster and Watson (2002). The total of journals that met these criteria were 151 (N=19 in the subject area communication, N=68 in the subject marketing area and N= 64 in the PSM disciplinary area).

**(iv) Selection of papers:** the collection of the articles involved the works published until 2018. At the end of the selection process, there were 38 active journals with 269 articles of which 71 on the subject area “Communication”, 57 on the subject area “Marketing” and finally 141 on the subject area “PSM”.

**(v) Purification dataset:** during the research process only those articles in which the object of research was “public engagement” in higher education were selected. So the final sample of articles was 38 of which 22 for “Communication”, 2 for “Marketing” and finally 14 for the subject of “PSM”. A bibliographical list of all publications was developed and a file was created in Excel spreadsheet.

**(vi) Content analysis:** after having collected all the articles with public engagement as the objective of the study, a contents analysis of each article was proceeded. The coding scheme was constructed based on the paper’s aim established at the beginning of the review (Table 2).

## RESULTS

Interest for this topic can be found in all the disciplines with some journals showing more interest than others do: in the ambit of communication, the journal with the largest number of articles is Science Communication (20 papers). For the area of Public Management, Studies of Higher Education has a particularly high number of publications with 6 papers. This attention shown by the different disciplinary areas indicates a certain transverse nature as regards the area of our research. The publication of the articles inherent to our topic varied significantly between subject areas (Figure 1).

Preliminary studies on public engagement were found in the 2004 in the PSM and Communication research

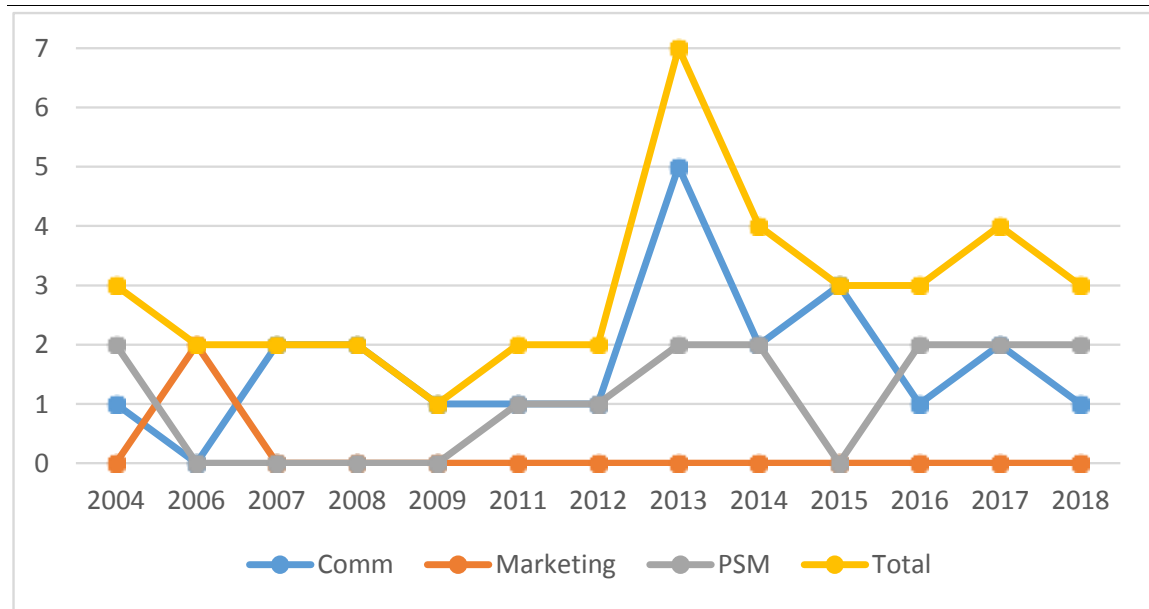


Figure 1. Temporal variation of publication activity for subject area.

Table 3. Public engagement for subject area.

Variable	Public engagement
	N (%)
Subject area	
Communication	22 (58)
Marketing	2 (5.2)
PSM	14(36.8)
Total	38 (100)
Keywords	
Civic engagement	8 (21.05)
Community engagement	4 (10.52)
Public engagement	25 (65.78)
Public involvement	1 (2.63)
Total	38 (100)

areas. In the “Marketing” area, the publication of articles inherent to our topic shows an interest on 2006. The last five years have shown a significant upwards trend for all the disciplinary areas and this reflects a significant increase in interest. The analysis showed that public engagement in the university is mostly dealt with in the “Communication” subject area (N=22 articles out of a total of 38) and only in part by the “PSM” (N=14) and by the “Marketing” subject areas (N=2 out of a total of 38 articles) Table 3 shows the total sample of articles divided for subject area.

Despite these clear-cut separations into groups, it is obvious that an interdisciplinary approach to the interest

in public engagement, even if it deals with only a limited number of contributions, shows the versatility of the subject but also confirms the difficulty of obtaining a unique definition. Moreover, Table 3 shows that the most frequently used word linked to public engagement is just that: “public engagement” (N=25). There are only a few words linked to community and civic engagement or public involvement. The following section presents the main contribution for public engagement in higher education and the main contribution investigated was explained better.

#### Definition of public engagement in the university context

The research methodology most widely used is the qualitative type (28 articles representing 73.68% of the total for this conceptualization). No particular theoretical approach has been linked to the explanation of public engagement but the studies are based on a research review constructed on the previous contributions.

The construct of public engagement refers to any activity used to connect and share scientific knowledge with a wider public and is not necessarily linked to an academic activity (NCCPE, 2010). This definition is mostly present in the articles even if four of these also refer to “public engagement” as a “strategy” or “method” (Curtis, 2014; Tøsse, 2013; Miller et al., 2009; Fall, 2006). The definition of public engagement considers two fundamental concepts: “connecting” and “sharing”. In fact, unlike “civic engagement” where active citizen participation in the decisional process with on the spot



**Table 4.** Multiple perspective of public engagement in the university.

Definitions	Meaning	Authors
Activity	Public engagement is a set of activities that aims to bring science closer to the public (children, parents, citizens, etc.) through events and activities that stimulate dialogue and discussion in an informal and fun way (such as open days and science fairs). Among the public engagement activities are those related to the voluntary work of students and professors (e.g. voluntary work outside lesson time, for example in centres for social aid).	Curtis (2014); Tøsse (2013); Miller et al. (2009); Fall (2006); Bruning, et al. (2006); Domegan (2008); Hinchliffe (2014); Tang et al. (2013); Ward et al. (2008)
Process	Public engagement is conceptualized as the process of individual and collective problem solving on aspects related to science. It is a process that involves stakeholders in the decision-making (e.g. through open labs and science live). It provides for collective solutions to the challenges posed by social problems. Public engagement is also considered an integral part of the innovation process of universities. Citizens and institutions engage in dialogue with universities for the realization of technological solutions useful for society.	Kim (2007); Capurro et al. (2015); Bandelli A. and Konijn (2013); Watermeyer R. (2016); Boland (2014); Krabbenborg and Mulder (2015)
Communication tool	Public engagement is defined as any scientific communication that engages an audience outside of academia. It is connected to dialogue with publics and then the relation between public and science.	Poliakoff and Webb (2007); Chilvers (2013)
Construct/ Method	Strategy/ Engagement is a multiple, relational, results-oriented construct. It is a strategy that promotes the understanding of science to a non-academic audience that leads to social change in the direction of a more just and democratic society. It is a method for producing knowledge in a social, economic and cultural perspective that enhances the civic role of the university.	Davies (2013a); Wilkinson et al. (2011); Ostrander (2004); Stephenson (2011)
Approach	Public engagement is seen as the logical basis for participation processes. It is a new approach to tackling social problems. Civic engagement in universities is widely associated with both education and public good and corporate social responsibility concepts. Universities are seen as sites for democratic citizenship and civic engagement is the exercise of this citizenship.	Chilvers (2013); Retzbach and Maier (2015); Kimmel et al. (2012); Persell and Wenglinsky (2004); Denson and Bowman (2013); Boland (2014)

activities is implicit, in “public engagement” the public is involved in activities (such as events, scientific workshops, experiments, etc.). The main purpose of divulging scientific knowledge and information through a mutual and interactive process that must include the commitment of both the organizers (scientists, researchers, university institutions) and the participants (the public, the students, etc.). Table 4 illustrates the main definitions of public engagement recognized by the review of literature. In particular, it is possible to identify 5 macro perspectives attributable to the topic of public engagement. The first perspective defines public engagement as the set of activities organized by the university and research institutes to bring the public closer to scientific knowledge, to stimulate dialogue and reflection, to increase credibility and trust in science (Curtis, 2014; Tøsse, 2013; Miller et al., 2009; Fall, 2006; Bruning et al., 2006; Domegan, 2008; Hinchliffe et al., 2014; Tang et al., 2013; Ward et al., 2008; Winter, 2004;

Davies, 2013a; 2013b). These activities, for example open day, open Lab, science live; scientific research, live demonstrations are aimed at a wide audience of people: local community, parents, schools, businesses, etc. who may have an interest in attending an event organized by the university. The second perspective, on the other hand, defines public engagement as a process. Even in this case, however, it requires a commitment and a predisposition of the university institution to incorporate the benefits of public involvement, but also needs the interest and active participation of the stakeholders to whom the process is addressed. As an innovative process, public engagement is often connected to the concept of Responsible Research Innovation (RRI) (Krabbenborg and Mulder, 2015). The third perspective, on the other hand, defines public engagement as a communication tool that should stimulate dialogue and foster relationships and scientific knowledge beyond the academic walls (Poliakoff and Webb, 2007; Chilvers,

2013). The fourth perspective instead looks at public engagement as a result-oriented construct, strategy or method that triggers participation, social change and relationship (Davies, 2013a, Wilkinson et al., 2011; Ostrander, 2004; Stephenson, 2011). Finally, a corpus of studies sees public engagement in universities as a new approach to the relationship with stakeholders. In this case, the public engagement adopted by the universities facilitates the sense of citizenship, the civic sense and brings the community closer to the university world. It is also associated with Corporate Social Responsibility (CSR) (Boland, 2014). This new vision, however, involves a cultural change, new educational models, new skills and a change in the traditional models of organization to dialogue with the plurality of stakeholders (Stephenson, 2011; Chilvers, 2013, Retzbach and Maier, 2015; Kimmel et al., 2012; Persell and Wenglinsky, 2004; Denson and Bowman, 2013) Aranha and Garcia (2014) proposed a Creating Social Value (CSV) as a new model that substitutes the dimension of CSR and serves as an alternative guide to investments in communities.

### Level of analysis

The results identify also the subjects that can be involved in the public engagement activities and the main targets to whom these activities are addressed. A first target can be identified in the local community. University can engage the territorial community, thanks the voluntary and recreational activities (for example, science festival or public events). Students, administrative staff and teachers are the main actors involved in these activities. In addition, public institutions and professional world are the others target to which the public engagement activities are oriented. In this case, by means of university research centres, or the departments it is possible to realize activities for sharing the results of the scientific research or the consultancy services. Finally, people are the third target that can have an interest in the university activities (visitors, parents, future students, etc.). University institution is involved directly. Thought spaces welcoming and pleasant, structures accessible and usable and scholarships and prizes to worthy students, university demonstrates its capability to satisfy the needs of this type of public. Scientific centres, new media, new technology, incentives and society orientated university curricula are considered the drivers of public engagement (Tösse, 2013; Retzbach and Maier, 2015; Capurro et al., 2015; Curtis, 2014).

### Factors involved on university public engagement

Among the other variables that could influence public engagement by hindering or encouraging these activities there are organizational factors (time and environment

variables) such as lack of time; the time allowed for discussion or environmental factors that construct boundaries around the opportunities participants have to interact. Also institutional barriers, lack of professional development; difficulties in reaching specific publics; fear of public controversy and of institutional change (Davies, 2013b; Wilkinson et al., 2011; Persell and Wenglinsky, 2004; Bandelli and Konijn, 2013). Table 5 describes the factors affecting university public engagement.

### Outcomes of university public engagement

Almost all the articles deal with the implications of public engagement both concerning the university Institution and the territory/community. In the first case, the main consequences are accessibility for citizens to scientific knowledge (8 articles), for example, through science events, technology transfer and collaboration with industries and a greater trust in the university Institution with a consequent impact on the reputation and image of the university institution. In the second case “public engagement” reinforces the role of the University inside the territory as a third *propeller* that can contribute to the development of the territory in which it lives and thus works to increase its social leadership to the point of developing a so-called Holding Involvement (3 articles) (Table 6).

In summary, the main papers on the topic define the public engagement as a set of activities that stimulates dialogue and discussion along all of university stakeholders in a process that involves stakeholders in an informal and bi-directional way. Moreover, the results shows that, among factors affecting the effectiveness of public engagement, openness and transparency are the main aspects to which the higher education management should pay attention. Also an application of public engagement into the HE institution supports the sharing of correct scientific information, increases the quality of the student learning and also the satisfaction among all university stakeholders (public, university community, public institutions and firms).

### DISCUSSION

Our study contributes to the definition of the university public engagement construct, of growing interest over the last 14 years in the ambits of Communication, Marketing and PSM. In fact, it is evident that public engagement includes concepts such as those of involvement, sharing and participation. Literature on the subject has always shown ambiguity in its definition (Marino and Lo Presti, 2018; 2017; Hart and Northmore, 2011; Rowe and Frewer, 2005; Watermeyer, 2016). Five perspectives emerged from the analysis of the public engagement construct (public engagement as a set of activities, a

**Table 5.** Factors affecting university public engagement.

Factors	Number of papers	Meaning	Bibliographical list
Commitment and training	3	Long-term commitment, experimentation, and trialling are requested to have the capacity and ability to relate work to different publics	Watermeyer (2012); Watermeyer (2016); Kim (2007)
Motivation and interest	3	Interest of students for community-based/service learning and enhancement of student learning	Boland (2014); Ward et al. (2008); Kim (2007)
Openness and transparency	8	More openness and transparency about scientific results and listening to the real needs and concerns of the public	Tosse (2013); Ward et al. (2008); Kimmel et al. (2012); Ostranger (2004); Stephenson, (2011); Winter (2004); Davies (2013b); Kim (2007)
Cooperation and project types	5	Adoption of a shared immersion model (based on creating a common experience between researchers and publics through joint participation). But cooperative research requires constant attention to transdisciplinary engagement with stakeholders and public constituencies	Tang et al. (2013); Hinchliffe (2014); Ostrander (2004); Glass et al. (2017); Gal-Arieli et al. (2017)
Communication capabilities	4	- How experts interact and talk with publics (accessible language, relaxed style, etc.) - Practical issues such as a lack of preparation, appropriate time, audience expectations, can impact on the intention to offer opportunities for listening and interaction	Ward et al. (2008); Wilkinson et al. (2011); Winter (2004); Reinsborough (2017)
Attitude, beliefs and capacity	6	Attitudes that can limit the public engagement can be: whether participation was regarded as positive, beliefs about whether participation was under their control (perceived behavioral control), past involvement in public engagement, whether scientists believe their colleagues participate (descriptive norms), positive or negative perception of public engagement activities; also interpersonal skills and audience expectations.	Poliakoff and Webb (2007); Kimmel et al. (2012); Wilkinson et al. (2011); Stephenson (2011); Chilvers (2013); Retzbach and Maier (2015)
Organizational factors (time and environment)	4	Organizational factor such as lack of time allowed for discussion with stakeholders and fear of public controversy and of institutional change; environmental factors such as institutional barriers, lack of professional development or difficulties in reaching specific publics can affect public engagement.	Davies (2013b); Wilkinson et al. (2011); Persell and Wenglinsky (2004); Bandelli and Konijn (2013)
Media	5	Mass media and game are engagement tools for sharing research results and scientific projects	Tøsse (2013); Retzbach and Maier (2015); Capurro et al.(2015); Curtis (2014); Borum and Feldman (2017)

process, a communication tool, a strategy and an approach), highlighting the possibility of an integrated study vision on the subject of public engagement in three subject areas: "Communication", Marketing" and "PSM".

In particular, it was found that "PSM" and "Communication" subject areas, investigate the topic

while Marketing presents only two contributes. Moreover, the results presented here have allowed us to clarify public engagement construct and frame the main definitions of this topic. In fact, the definition of public engagement becomes clearly delineated when inserted in the context of reference and its responses at a clear

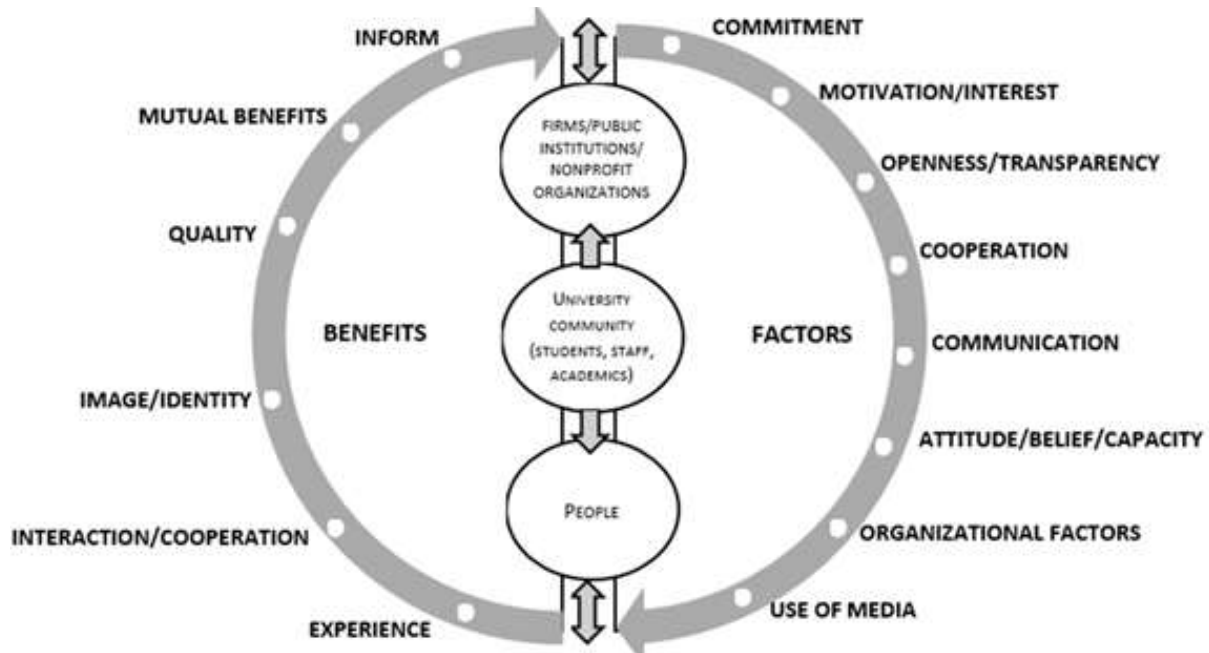
**Table 6.** Outcomes of public engagement in the university.

Outcomes	Number of papers	Meaning	Bibliographical list
Inform	8	-Public engagement informs about what university are doing -It counteracts the declining interest of young people in the natural sciences and in engineering, and it raises public awareness of science in general	Davies (2013a); Wilkinson et al.(2011); Winter (2004); Tosse (2013); Curtis (2014); Watermeyer (2016); Winter (2004); Schoerning (2018)
Mutual benefits	4	-Community members attend events that are of interest to them, and the attendees have a more favorable impression of the institution as a result -It helps to build valuable public support for scientific research and academic institutions	Davies (2013a); Bruning et al. (2006); Ward et al. (2008); Schoerning (2018)
Quality	6	-Community-based/service learning improves the quality of student learning and gives a professional perspective to the study -It can support entrepreneurs as they respond to opportunities and challenges identified in the holding environment. -University-community collaboration can be a strategy for institutional and social change leading to a more just society	Boland (2014); Kimmel et al. (2012); Ostranger (2004); Stephenson, (2011); Kimmel et al. (2012); Krabbenborg and Mulder (2015)
Image and Identity	3	-Communities have a more favorable impression of the university institution -It improves the identity and role of university	Bruning et al. (2006); Watermeyer (2016); Ward et al. (2008)
Interaction and cooperation	5	-It helps in building a profitable dialogue that can culminate in an equitable synergy between academic and public communities -The community-university engagement can develop LANs (Learning Action Networks) linking individuals through information and ideas -Through cooperative research, public engagement co-builds and makes the knowledge more acceptable	Watermeyer (2012); Stephenson (2011); Hinchliffe (2014); Kimmel et al. (2012); Dickerson-Lange et al. (2016)
Experience	6	-Public engagement experience is shared and tangible -It increases the degree of personal satisfaction and enjoyment (for engagers) -Science centers and museums (SCMs) perform their role as “facilitators of engagement” between scientists and the public and they are good platforms to bring science to the public	Miller et al. (2009); Wilkinson et al. (2011); Denson and Bowman, (2013); Bandelli and Konijn (2013); Chilvers (2013); Goldner and Golan (2018)
Accessibility	3	-By incorporating online social applications, interaction between scientists and players could be facilitated, thus helping to increase the ‘accessibility’ of science and scientists -It permits the connection with industrial sector	Curtis (2014); Watermeyer (2016); Winter (2004)

managerial goal. The more recent literature is critical about public engagement in higher education. For example, according to Watermeyer and Lewis (2018) “we would caution against an assumption that just because researchers are involved with public groups they are automatically engaged with public groups” (p. 1622). The findings here are an initial step to fill the gap in the extant literature regarding the knowledge of potential differences

in interpretations (and implementations) of the public engagement. Moreover, it responds to the need to determinate the extent of diversity in types of public engagement activity pursued by different universities (Watermeyer and Lewis, 2018).

The analysis also shows the strategic role of public engagement in the university management. The results also show that “public engagement” participation requires



**Figure 2.** University public engagement circle.  
Source: our elaboration.

commitment, time and a strategic plan capable of supporting the new forms of social interaction such as social media and finally dialogue and interest to reinforce the bonds inside the community. Therefore, the systematic analysis of the literature has allowed us to circumscribe the implementation ambits of public engagement by identifying its manifestations, its determining variables and finally the consequences of its on-site application (Figure 2).

The most recent studies on this subject of engagement demonstrate that through the adoption of a new culture that use public engagement as a new approach for tightening bonds with publics, it is possible to build new relationship between Higher Education-Citizens, Higher Education-Businesses and Higher Education-University community. Moreover, in the meaning of “public engagement” as referring to the university context, as yet there is no shared framework capable of illustrating the factors that intervene in the involvement and its consequences, but the contributions on this subject limit themselves to reporting case studies that use qualitative methodologies that only confirm the embryonic state of the research on this subject. A careful examination of the intervening variables and the benefits of public engagement in the university public engagement led us to deduce some new traits.

In particular, in the university public engagement the relational valence is an essential part of the success of public engagement activities. It is also a concept supported by the studies made by Rowe and Frewer (2005) who see public engagement as a mechanism that

initiates participation and identify a two-way communication process as a characteristic of this kind of involvement. Based on the recent studies it is possible to notice that it is in progress a process of istituzionalization of public engagement and there are many initiatives oriented in this direction. Nevertheless, there is a need to evaluate the public engagement and operationalize the construct to permit to be more efficient (Watermeyer and Lewis, 2018). This increasing interest for the public engagement in the university is expression of a reconfiguration of the university: it is not only the place of knowledge bu also a city of citizenship.

The interest for public engagement in the public and private ambits does in fact show the importance of the topic today if the latest trends in the most differing social contexts are also consider, where sharing has become a daily form of interpersonal communication. Public engagement, therefore, becomes an opportunity for sharing with institutions and organizations, which needs to be taken advantage of starting from, of course, its multiple modes of application. The activities used for their implementation also change in function of the perspective from which they are dealt with. To be more specific, the analysis of the literature has helped clarify the concept of “public engagement” by outlining a multi-dimensional construct that takes into account the managerial sphere in which the concept of engagement covers a wider meaning that refers not only to student participation in the university community (usually the student engagement), but also the social relations of higher education institutions with their social stakeholders. While the

research has already moved to investigate the relations that interact between the public engagement activities and the increase in public involvement, in the university ambit however, the subject is still in an embryonic form and the attention of the scientific community is still focalized on understanding what public engagement is and what the potential benefits are for the universities and their users (local communities, students, institutions, businesses, etc.). This last point could be addressed in future research. Moreover, the literature are moving towards a better comprehension of the role of student engagement in the university public engagement activities (such as entrepreneurship education, participation in start ups or in research incubators, etc.) and their impact on social sustainability. Sendawula and Turyakira (2018) identify action regulation factors influencing sustainable entrepreneurship intention among university students (action plans, action knowledge and self-efficacy). For the authors “[the] universities should teach sustainability and entrepreneurship together. This will enhance sustainable entrepreneurship intention among students in the university.” (p. 137). Indeed, universities and teachers should assume more active role in shaping students’ attitudes towards sustainability (Karimi, 2013). For Ebewo et al. (2017) it is necessary to increase positive attitudes towards entrepreneurship for increasing the level of entrepreneurial initiative among students. For this reason, the importance of the learning to sustainable entrepreneurship is another aspect that could be studied and developed in future researches in the ambit of the “encouraging economic regeneration” dimension that is one of the seven dimensions of university public engagement (Hart and Northmore, 2011). From the theoretical point of view, this paper presents the state-of-the-art on the university’s engagement and contributes to advance the research on public engagement construct highlighting the factors and the benefits of an implementation of public engagement in the higher education management strategies. From the managerial point of view, the findings of this paper have implications for Universities and Public Institutions. Individuation and classification of factors affecting the public engagement permit to higher education managers to supervise and manage them in a constructive way. Moreover, the higher education institutions must be sensitive to their stakeholders (community, students, citizens etc.) and to their values and needs. In addition, they must learn how to interact with their stakeholders for facilitating community members’ interactions and strengthening relationships among them. Therefore, higher education should institutionalize public engagement in order to generate mutual benefits, and give greater visibility to its initiatives.

## CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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*Full Length Research Paper*

# **The effects of organizational culture on turnover intention: The mediating role of job satisfaction, a case of Oromia Forest and Wild Life Enterprise**

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**The purpose of this study was to identifying the effects of organizational culture on turnover intention with mediated role of satisfaction. Data were gathered by closed ended questionnaires distributed to five OFWELs in Oromia. The scales used were the organizational culture index, job satisfaction survey, and the turnover intention questionnaire. The collected data was statistically analyzed by SPSS 20 and AMOS 21. The data were collected using a questionnaire. Three hundred and fifteen (315) questionnaires were distributed and analyzed by using Structural Equation Model (SEM). To validate interdependence relationships between each variable, confirmatory factor analysis by using structural equation modeling (SEM) has been employed. Some of the results were as expected after theory examination, but others were surprisingly contradictive. Bureaucratic culture was significant with direct relationship with turnover intention. Based on the results, it is recommended that supportive culture could be practiced in OFWELs to gain satisfied and committed employees.**

**Key words:** Job satisfaction, organizational culture, turnover intention, Oromia Forest and Wild Life Enterprise.

## **INTRODUCTION**

Employees are the greatest resource and play an important role in organizations; their involvement and commitment in the organization, making organization become competitive (Roodt et al., 2002)

Smith, Kendall and Huhn (1969) contend that satisfied employees are those who have positive attitude and achieve positive results for their organization as well as in relation to their jobs. Satisfied employees would generate new ideas and could participate more in the decisions that need to be made (Kivimaki et al., 1994). The aforementioned facts result in improved inter-communication among workers and workforce support for

the organization (Lok and Crawford, 2004). Organizational culture is defined as beliefs, values, norms and philosophies of how things are done (Wallach, 1983). Employee's behavior (their attachment and job satisfaction), attitude and their performance would be determined if the implementation of plans, policies and strategies is successful and if the organization was competitive. The existence of job satisfaction is the result of good value, belief and perception practice in the organization. Job satisfaction does not happen in isolation, as it is dependent on organizational variables such as structure, size, pay, working conditions and

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leadership, which constitute organizational culture. Moore (2002) explained that there are many external and internal factors that influence employee turnover.

Turnover intentions are defined as conscious and deliberate willingness to leave an organization (Tett and Meyer, 1993). Employees leaving organizations cause expenses in all personnel activities including selection, training and development of personnel (Stallworth, 2003). In addition to the direct cost, turnover intentions resulted in different indirect loss to the organizations. Indirect costs of turnover include reduced morale, increased pressure among the remaining staff, work overload, and loss of social capital (Hussain and Asif, 2012).

Having good organizational culture and satisfied employees is very critical and important to reducing turnover intentions. Organizational culture is getting more important than ever, because organizations need to ensure that those employees who add benefit to their bottom line need to be satisfied at the organization level and required to continue applying their hard work into their jobs to the benefit of their organization (Brown and Leigh, 1996). Taking into consideration that very little information is known regarding the relationship between organizational culture, job satisfaction and turnover intention; this study was conducted to identify the relationship between organizational culture and job satisfaction, relationship between job satisfaction and turnover intention, investigate the effects of organizational culture on turnover intention and to identify the mediating role of job satisfaction between organizational culture and turnover intention in case of Oromia Forest and Wild Life (OFWL) Enterprise.

However, the direct relationships between organizational culture, turnover intention and job satisfaction interpreted by the level of fit between the employee and the organization working for. On that account, we conducted a research in order to probe the relationships between these variables.

## LITERATURE REVIEW

Several steps are required to be taken to assess the aforementioned proposed hypothesis. One of these steps is referring to the relevant theory about the concepts organizational culture, job satisfaction and turnover intention.

### Organizational culture (OC)

Organizational culture is a complex phenomenon (Dubkevics and Barbars, 2010; Schein, 1984; Peters and Waterman, 1984). Schein (2006) and Daft (2005) reveal that there are three levels of culture: the observable values (artifacts), this is the level that can be observed; the visible organizational structures; and processes. This

level is still hard to understand; the espoused values: on this level an image of the organization is created. The strategies, goals and philosophies are formulated through answering certain questions to create that image. Basic underlying assumptions: these are deep beliefs which form the essence of culture. In this research, the following definitions for organizational culture would be applied.

Wallach (1983) stated that “understanding of the beliefs, values, norms and philosophies of how anything is done”. Wallach (1983) also asserted that culture is divided into three main parts, namely: (1) bureaucratic, (2) innovative or (3) supportive cultures. Based on the adopted culture, an employee is more effective in doing the assigned job and realizes his objectives. This is very important in recruiting, managing, motivating, developing and retaining employees.

### Job satisfaction

Robbin and Judge (2008), Nasarudin (2001), and Luthans (2006) state that job satisfaction has positive feeling, pleasant emotional feeling or positive emotions come from the work valuation or experience. Worrell (2004) stated that, a satisfied employee is influenced by several factors sorted into three categories: personnel data (age, sex...), intrinsic factors and extrinsic factors. On the other hand, Smith and Kendall (1969) and Locke (1970), consider job satisfaction to be the degree to which an employee, by means of a positive attitude, achieves a positive result in relation to his/her job. Also, Cranny et al. (1992) and Lambert et al. (2002) stated that job satisfaction is an individual directive feeling to reflect whether his/her needs are being met or not. From the negative side, the employees expressed their dissatisfaction through so many ways such as leaving the organization, raising their voice to demand to improve the working conditions, be patient by passively waiting for the conditions to improve and neglecting everything in work. A person with a positive attitude is likely to have more job satisfaction, while a person with negative attitude is likely to have job dissatisfaction towards his or her job.

Major determinants of job satisfaction of mentally challenging work are equitable rewards, supportive working conditions, supportive fellow employees, personality-job fit, company policies and programs. Most researchers showed more interest about job satisfaction for several decades and consider that it can influence work productivity, employee commitment, employee turnover and employee retention (Eslami and Gharakhani, 2012). This depends on how many of his/her feelings are achieved. Job satisfaction is assessed in many levels and can be examined from multiple viewpoints using multiple constructs or scales (Schmidt, 2007). For example, the Job Description Index (JDI), developed by Smith and Kendall (1969) defines five aspects of a job: work, pay, promotion, supervision,

and coworkers. Spector (1985) identified nine subscales for the Job Satisfaction Survey (JSS): pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, coworkers, nature of work, and communication. As a result, these facets or subscales may have varied significantly when evaluating overall job satisfaction (Spector, 1985). The researcher used five scales of job satisfaction surveys (JSS).

### Turnover intention

Turnover intention is argued to be a strong indicator for actual turnover (Firth et al., 2004). Turnover intention refers to the intention to leave a job voluntarily. Karin and Birgit (2007) defined it as “the intention to voluntarily change companies or to leave the labor market altogether” (p. 711). Price and Mueller (1981) argue that the use turnover intention over actual turnover is better and more practical. They noted that there are many external factors that influence actual turnover behavior. Moore (2002) explained that although actual turnover behavior is still a popular construct among researchers, turnover intention represents a strong surrogate variable. Moreover, in some contexts, turnover intention can be a barometer than actual turnover for management practices. For example, in some economic cycles, such as high unemployment rates, actual turnover is low despite high turnover intention. However, it is acknowledged that some researchers argue against the use of turnover intention as it does not equal actual turnover behavior and unless this intention to quit is acted on, it is just little more than “talk” (Firth et al., 2004). However, Griffith et al. (2000) carried out a meta-analysis on predictors of actual turnover in which turnover intention was a key predictor and this finding is supported by many studies.

### The study

Figure 1 shows the conceptual model of the research.

### Research hypotheses

The following research hypotheses guided the study:

- H<sub>1</sub>:** Innovative culture has a positive direct effect on turnover intention;
- H<sub>2</sub>:** Supportive culture has a positive effect turnover intention;
- H<sub>3</sub>:** Job satisfaction positively mediates the relationship between Bureaucratic culture and turnover intention;
- H<sub>4</sub>:** Job satisfaction negatively mediates the relationship between innovative cultures and turnover intention;
- H<sub>5</sub>:** Job satisfaction positively mediates the relationship between supportive culture and turnover intention;
- H<sub>6</sub>:** There is a positive relationship between

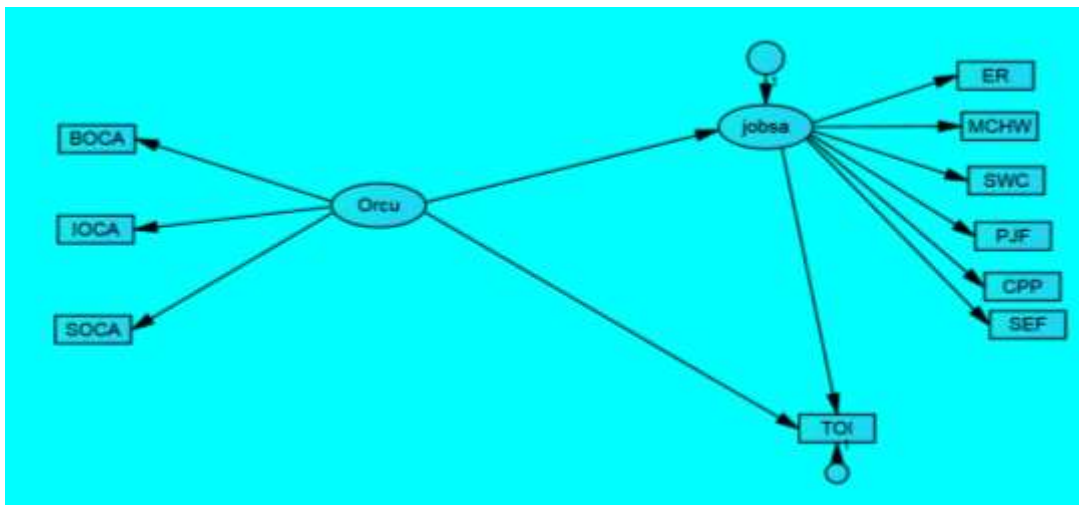
- organizational culture and turnover intention;
- H<sub>7</sub>:** Job satisfaction positively mediates between organizational culture and organizational commitment;
- H<sub>8</sub>:** Experience has positive direct impact on turnover intention;
- H<sub>9</sub>:** Organizational culture has positive impact on turnover intention;
- H<sub>10</sub>:** Job satisfaction is positively mediated between organizational culture and turnover intention.

### MATERIALS AND METHODS

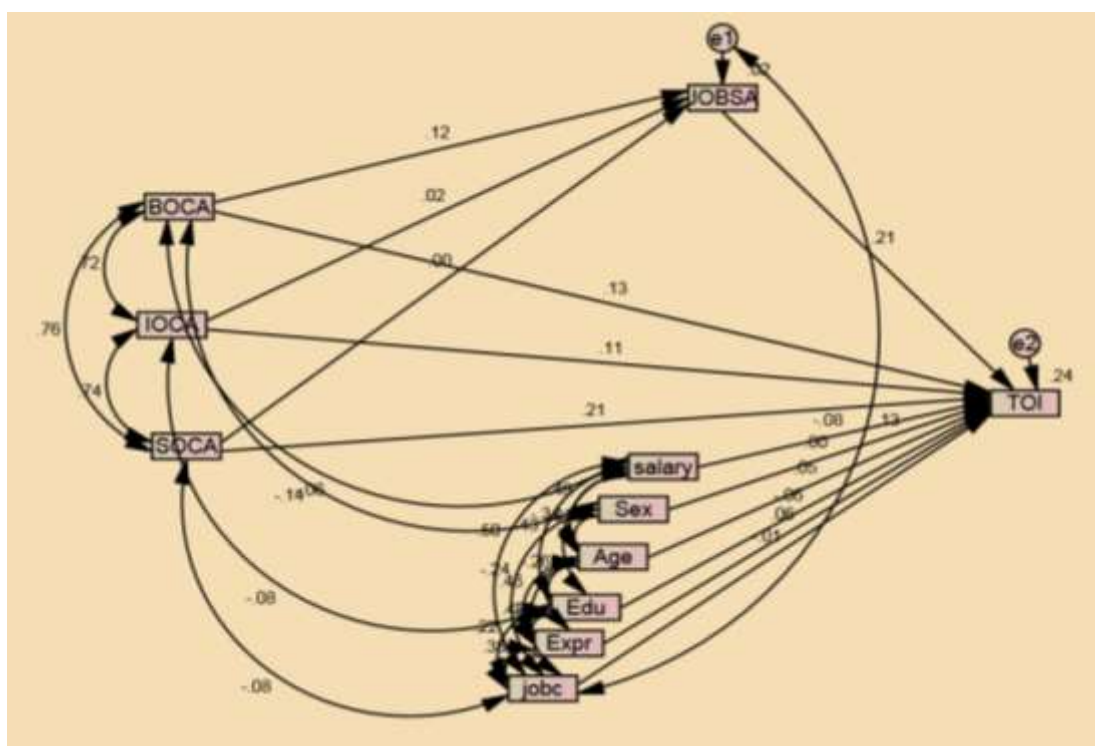
The current research is a descriptive and correlational study that was conducted using the survey method. The statistical population of the research consisted of permanent employees in the selected five branches of OFWE's. The gathered data was statistically analyzed with SPSS 20, and AMOS 21. The number of employees during the research was 3200 persons, and 315 persons were selected to form the sample by using Carvalho (1984) method. Considering the total number, 73% of participants were male, more than 72% of them had BA and higher degree, nearly 34% of them had 11 to 15 years of work experience, and more than 44% of them were over 36 to 45 years old salary division, 50% of the sample population earns more than 7000 a month. In this research, three questionnaires were used to collect the data. These questionnaires were adjusted based on 5-level Likert scale ranging from 1 to 5. The first questionnaire was to evaluate the organizational culture and included 18 questions and the AFL for these items is 0.86; the composite reliability and Cronbach's alpha for the scale is 0.83. The second questionnaire was to assess the job satisfaction and involved 20 questions. The AFL for these items is 0.6 and Cronbach's alpha for the scale is 0.724; and the third questionnaire was to evaluate turnover intention and included 18 questions. The AFL for these items is 0.85, and the composite Cronbach's alpha for the scale is 0.78. According to Hejase and Hejase (2013), “the generally agreed upon lower limit for Cronbach's alpha is 0.70, although it may decrease to 0.60 in exploratory research” (p. 570).

### RESULTS AND DISCUSSION

Connecting theoretical and experimental knowledge for better understanding of real universe is a feature of approach of structural equation modeling. Such analysis provides possibility of modeling based on latent variables and unobserved variables. To this end, this feature is very appropriate to analyze the theoretical models. In the current study, structural equation modeling was used to investigate the conceptual model and hypotheses of the research and the results are as shown in Figures 2 and 3 whereby information indicates that conceptual model of research had very good fit. Fit indices in Tables 1 and 2 support the fact that the conceptual model of research has very good fit with the assumptions of the model which were statistically accepted. In other words, the suggested model has an appropriate fit. Table 3 presents the testing results of the research hypotheses whereby organizational culture components had positive effects on turnover intention such that supportive culture had positive and statistically significant effect on turnover intention ( $\beta=0.212$ ,



**Figure 1.** conceptual model of research.  
Source: Generated by authors from research data.



**Figure 2.** Components of organizational culture direct/indirect effects on turnover intention.  
Source: Generated by author.

$p=0.0140$ ), while both innovative cultures ( $\beta=0.106$ ,  $p=0.186$ ) and bureaucratic culture ( $\beta=0.126$ ,  $p=0.140$ ) had non-statistically significant effect on turnover intention. In addition, the results of path analysis indicated that organizational culture in addition to its direct effects on turnover intention ( $\beta=0.403$ ,  $p=0.001$ ),

was also influenced by the mediating factor of job satisfaction ( $\beta=0.026$ ,  $p=0.001$ ). Thus, it can be inferred that employee's job satisfaction had a mediator impact on the relationship between organizational culture and turnover intention.

Figures 2 and 3 show the accepted fit model; it is now

**Table 1.** Fit Index Model results of components of organizational culture effects on turnover intention.

Index	Value	Accepted
RMSEA	0.030	<0.09
Root mean square Residuals (RMR)	0.026	<0.42
Normed Fit Index (NFI)	0.975	>0.95
Goodness of Fit Index (GFI)	0.984	>0.95
Adjusted Goodness of Fit Index (AGFI)	0.952	>0.95
Comparative Fit Index (CFI)	0.994	>0.95
Incremental Fit Index (IFI)	0.995	>0.95
Tucker-Lewis Index (TLI)	0.986	>0.95
Relative Fit Index (RFI)	0.973	>0.95

Chi-square difference ratio (Chi-square = 27.977), Degrees of freedom = 22, Probability level = 0.176.

**Table 2.** Model fit summary variables.

Index	Value	Accepted
Root Mean Square Error of Approximation (RMSEA)	0.029	<0.09
Root mean square Residuals (RMR)	0.018	<0.42
Normed Fit Index (NFI)	0.978	>0.95
Goodness of Fit Index (GFI)	0.993	>0.95
Adjusted Goodness of Fit Index (AGFI)	0.968	>0.95
Comparative Fit Index (CFI)	0.995	>0.95
Incremental Fit Index (IFI)	0.995	>0.95
Tucker-Lewis Index (TLI)	0.983	>0.95
Relative Fit Index (RFI)	0.980	>0.95

Chi-square difference ratio (Chi-square = 7.542), Degrees of freedom = 6, Probability level = 0.274.

possible to evaluate the hypotheses and assessments. To evaluate the hypotheses testing, the researchers divided the path into two major parts. They are (1) direct/indirect effects of organizational components on turnover intention (Figure 2), (2) organizational culture and job satisfaction as mediator relation with turnover intention path (Figure 3).

### Hypothesis 1 (Not supported)

H<sub>1</sub> stated that an innovative culture has a positive effect on turnover intention. Data shows that this statement is not statistically supported ( $\beta= 0.106$ ,  $p=0.186$ ).

### Hypothesis 2 (Supported)

H<sub>2</sub> stated that supportive culture has a positive effect on turnover intention. As expected, this hypothesis is accepted ( $\beta= 0.212$ ,  $p =0.014$ ). That is, the regression weight for supportive culture in the prediction of turnover intention is significantly different from zero at the 0.05 level (two-tailed). The standardized direct (unmediated) effect of supportive culture on turnover intention is 0.212.

That is, when supportive culture goes up by 1 standard deviation, the turnover intention goes up by 0.212 of a standard deviation.

### Hypothesis 3 (Not supported)

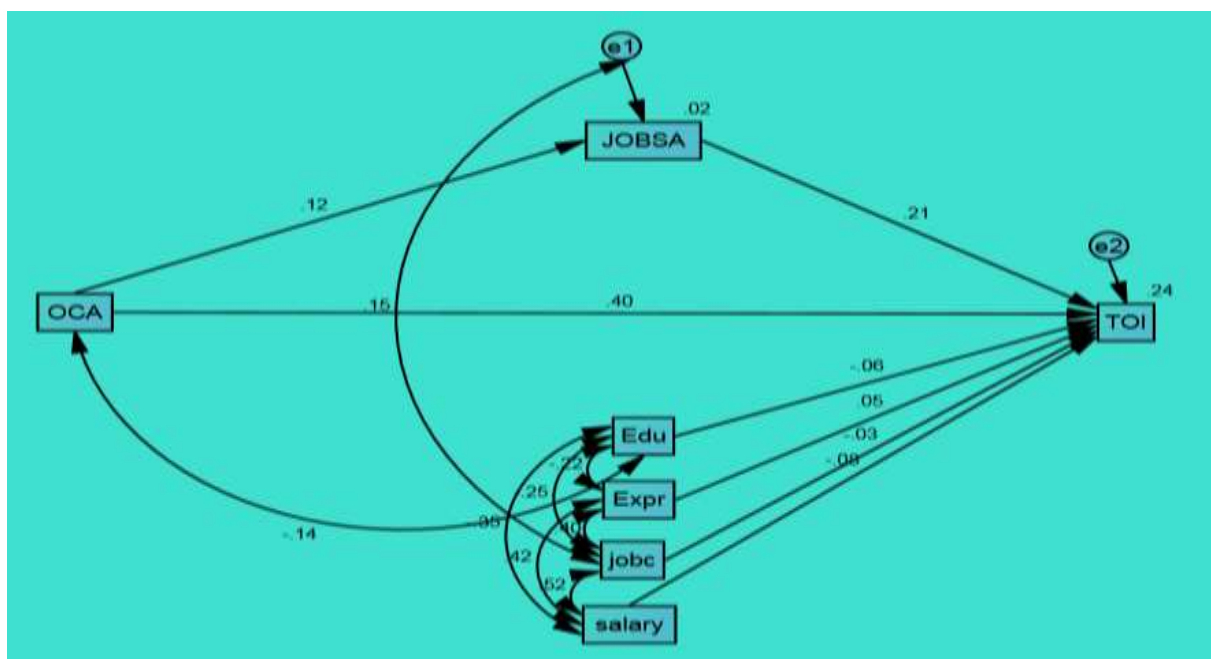
Hypothesis 3 stated that bureaucratic culture has a positive direct effect on turnover intention. Data shows that this statement is not statistically supported ( $\beta= 0.126$ ,  $p=0.14$ ).

### Hypothesis 4 (Supported)

Hypothesis 4 states that job satisfaction positively mediates between bureaucratic culture and turnover intention. As expected, the data support prior research by revealing that hypothesis 4 is accepted ( $\beta=0.024$ ,  $p=0.014$ ) and is statistically significant with  $p\leq 0.05$  level (two-tailed) (Figure 2) The standardized indirect (mediated) effect of bureaucratic culture on turnover intention is 0.024. Because of indirect (mediated) effect of bureaucratic culture on turnover intention, when bureaucratic culture goes up by 1 standard deviation, turnover intention goes up by 0.024.

**Table 3.** Hypothesis testing.

Hypotheses	Regression coefficient	P-value	Result
H <sub>1</sub> : Innovative culture has a positive direct effect on turnover intention	0.106	0.186	Supported
H <sub>2</sub> : Supportive culture has a positive effect turnover intention	0.212	0.014	Supported
H <sub>3</sub> : JS positively mediates the relationship between Bureaucratic culture and turnover intention	0.126	0.140	Supported
H <sub>4</sub> : JS negatively mediates the relationship between Innovative cultures has and turnover intention	0.024	0.0140	Supported
H <sub>5</sub> : JS positively mediates the relationship between Supportive culture and turnover intention	0.002	0.186	Not supported
H <sub>6</sub> : There is a positive relationship between organizational culture and TOI	0.000	0.014	supported
H <sub>7</sub> : JS positively mediates between organizational culture and organizational commitment	0.001	0.982	Not supported
H <sub>8</sub> : Experience has positive direct impact on turnover intention	0.061	0.299	supported
H <sub>9</sub> : Organizational culture has positive impact on turnover intention	0.403	0.001	supported
H <sub>10</sub> : JS positively mediates between organizational culture and turnover intention	0.026	0.001	supported



**Figure 3.** Organizational culture direct indirect effects on turnover intention.  
Source: Generated by author.

**Hypothesis 5 (Not Supported)**

Hypothesis 5 states that job satisfaction negatively mediates the relationship between innovative cultures and turnover intention. Results show that this hypothesis is rejected ( $\beta=0.002$   $p=0.186$ ). Therefore, this path is rejected.

**Hypothesis 6 (Supported)**

Hypothesis 6 states that job satisfaction positively mediates the relationship between supportive cultures and turnover intention. Hypothesis 6 is accepted ( $\beta=0.000$   $p=0.014$ ) (Figure 2). The standardized indirect (mediated) effect of supportive culture on turnover intention is 0.000. That is, due to the indirect (mediated) effect of supportive culture on turnover intention, when innovate culture goes up by 1 standard deviation, turnover intention is not affected.

**Hypothesis 7 (Not supported)**

Hypothesis 7 states that there is a negative relationship between salary and turnover intention. As expected, hypothesis 7 is rejected ( $\beta= 0.001$   $p =0.982$ ). Therefore, this relationship is eliminated from the conceptual framework.

**Hypothesis 8 (Not supported)**

Hypothesis 8 states that there is a positive relationship between experience intentions. Results show that this hypothesis is rejected ( $\beta= 0.061$   $p =0.299$ ). Therefore, this relationship is eliminated from the conceptual framework.

**Hypothesis 9 (Supported)**

Hypothesis 9 states that there is a positive relationship between organization culture and turnover intention. Hypothesis 9 is accepted ( $\beta= 0.403$ ;  $p =0.001$ ), the standardized direct (unmediated) effect of organizational culture on turnover intention is 0.403.

**Hypothesis 10 (Supported)**

Similarly, hypothesis 10 states that job satisfaction positively mediates between organizational culture and turnover intention. Hypothesis 10 is accepted ( $\beta=0.026$   $p=0.001$ ) (Figure 3). The standardized indirect (mediated) effect of organizational culture on turnover intention is 0.026. That is, due to the indirect (mediated) effect of organizational culture on turnover intention, when organizational culture goes up by 1 standard deviation,

turnover intention goes up by 0.0026 of a standard deviation.

**Conclusions**

Organizational culture (OC) influences the attitudes of employees, which in turn induces or contributes to organizational outcomes. Therefore, employees believe in their organization's support, employees feel satisfied toward their job and may reduce any intentions they may have to leave the organization.

Having a good connection with employees and having a clear vision, plays an important role in attaining positive results from employees (Bass and Avolio, 1990; Shamir, 1995).

Accordingly, the main goal of the researcher was to assess the effects of "organizational culture (Bureaucratic, Innovative or Supportive) on turnover intention in OFWL enterprise, through the mediating role of job satisfaction" based on collected and analyzed data; the researcher observed the following.

Innovative culture has positive impacts ( $\beta=0.106$ ,  $p=0.186$ ) on turnover intention while job satisfaction has negative mediating role ( $\beta=0.002$ ;  $p=0.186$ ) between innovative culture and turnover intention. An innovative culture has a creative, result oriented, challenging work environment (Walker and Plotnikova, 2018) and is portrayed as being entrepreneurial ambitious, stimulating, driven and risk-taking. These indicate that Oromia Forest and Wild Life Enterprise should be more practicing innovative system of organizational culture for reducing employee turnover intention.

Similar results also stated that Bureaucratic culture has a positive direct effect ( $\beta=0.126$ ), on turnover intention and supportive culture has positive ( $\beta=0.0212$ ) direct effects turn over intention. Lahiri and Kedia (2009) stated weak relation between organizational culture and turnover intention with these results; organizational culture has positive ( $\beta=0.403$ ;  $p=0.001$ ) direct effects on turnover intention, while job satisfaction was positively ( $\beta=0.026$ ,  $p=0.001$ ) mediated by the relationship between organizational culture and turnover intention. Salary has positive ( $\beta=0.001$ ;  $p=0.982$ ) direct effects on organizational commitment, which indicated that when salary is increase by 1 standard division, turnover intention increase by 0.001. The present study confirms that job satisfaction does act as partial mediating role associated between organizational cultures on turnover intention in OFWLEs needs to improve the working quality.

**RECOMMENDATIONS**

(1) Management of Ormia Forest and Wild Life Enterprise should be considering a great attention to employees' commitment in order to achieve increased productivity.

This could be achieved by making supportive culture.

(2) Other research could be reviewing on organizational culture and employee commitment in OFWLEs.

(3) Further research also could be viewing influence turnover intention. Leaders should realize that influencing the commitment of employees leads to higher performance and lower turnover rates among other things.

## CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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## ABBREVIATIONS

JS, Job Satisfaction Survey; OC, Organizational Culture; OCI, Organizational Culture Index; TOI, Turnover intention Questionnaire; OFWE, Oromia Forest and Wild Life Enterprise; SPSS, Statistical Product and Service Solutions; OCOM, Organizational Commitment; JOBSA, Job Satisfaction; AMOS, Analysis of Moment Structure.

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