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### Actors in the knowledge economy : a typology

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## Actors in the Knowledge Economy: A Typology

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**Abstract:** The purpose of this paper is to construct a typology of actors in the knowledge economy, based on the specificity of their activities. So far, almost all the researchers focused their interests on organizations and their management in the knowledge economy ignoring the actors who perform and make the progress of the new economy based primarily on intangible resources. The main criterion for this typology is the positioning of these actors with respect to knowledge, as an intangible resource of any economic activity. The whole spectrum of this typology is defined by the end actors who are the composers and the consumers. The composers create knowledge and transform personal knowledge into organizational knowledge, while the consumers are those who use it. In between, there are owners, administrators, and performers. As an extension, we may include in this typology the citizens as end possible knowledge users. Also, we perform an analysis of the characteristics of all these actors with respect to values, objectives, methods, and results. The contribution of the present paper results from the new perspective we offer in understanding the mechanisms and the dynamics of the knowledge economy.

**Keywords:** knowledge; knowledge economy; knowledge resources; knowledge actors; knowledge management

### Introduction

The year 2020 has been a very special one. We may say that Covid-19 defines like no other current crisis the importance of *knowledge* (Tomé et al., 2020) - this happens because the pandemic exists, in one hand we lack the vaccine to overcome the virus; and on the other hand we also lack the social knowledge on how to behave to mitigate the human, financial, economic, social and political impact of the virus (Surico & Galeatti, 2020; Zhou, 2020).

Therefore, to make sense of the world in 2020 it is useful to accept that the developed world largely exists within a knowledge-driven and extensively service-based economy (North & Kumta, 2018; Tomé, 2012). In this new economy, intangibles are now generally perceived as decisive assets (Nonaka & Takeuchi, 1995; Edvinson & Malone, 1997). Intangibles may be analyzed from a variety of perspectives (knowledge management, intellectual capital, human resource development, economics, traditional management, and social policy (Tomé & Loureiro, 2014)) and at various levels, namely regional, organizational and individual (Tomé, 2016). Crucially, any useful analysis of this topic has to address technology, people i.e. actors and processes (Edwards, 2011).

Myriads of papers have been written about the *Knowledge Economy* from all those different perspectives. But, quite intriguingly, we did not find in the literature any analysis about the different types of roles individuals perform in the knowledge economy. It seems that the analysis is made basically on organizations, and on what happens to knowledge within those organizations. But the possibility that there are different roles performed by the individuals within the knowledge economy does not seem to be studied. This situation is a bit strange because in management and economic studies scholars deal with managers, policy deciders, consumers, and entrepreneurs, among the most important types of agents.

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We think that this omission exists because the analysis of the Knowledge Economy has been made essentially through a “productivistic” prism, in which what matters most is to find ways to optimize the use of knowledge in the organizations and mainly in the corporations and companies (Tomé, 2018). This operational way of dealing with knowledge does not seek to understand the behavior and the differences in the behavior of the agents involved. It is as the result of the investment in knowledge and other intangibles do not depend in any form on the agents involved; rather, causes like motivation, functions like leadership, actions like sharing or rewarding effort, and consequences, like job satisfaction, are discussed. But we did not find any study on the type of actors that exist in today’s economy, as defined as the roles people perform. At best, competencies are analyzed, exhaustively, in the Human Resource Development field (Bratianu & Vatamanescu, 2017; Mc Guire, 2013). But that analysis of skills and competences in work-related does not aim to create a broad typology on what type of actors exist in the knowledge economy.

To address this omission is, we believe, important, for two main reasons. The first relates to any economy, the second one addresses specifically the knowledge economy. So, firstly, every economy as every phenomenon gains in comprehension and understanding when a new important insight is given; and we believe the insight we make in this paper is relevant for the understanding of the economy because it sheds light on the reality in a new and important perspective. Then, secondly, as we will see by the typology presented above, the categories defined relate intrinsically to knowledge and are more important in a knowledge-based society than in any other type of society.

In this context this paper analyses what are the basic kinds of actors that exist and the roles that individuals have in any economy in particular in the knowledge economy. Shakespeare would say: if the knowledge economy is a play, what are the types of actors (individuals) that I should put in that play to describe the mentioned economy. We know that Shakespeare used Kings, Queens, noblemen, clergy representatives, and all sort of peasant people – and this could be a typology. In this paper, we, therefore, present a typology for the “actors” in the “play” of any economy and in particular of the “knowledge economy”. By doing so we hope to improve the understanding of the economies as if in a play we would describe who are the actors and what are their roles. In consequence, the research question can be formulated as follows:

*RQ: What are the main actors in any economy and in particular in the knowledge economy?*

To answer that question the paper is divided into six sections. In the first section, we explain our methodology; in the second section we define the main elements of our typology as compared to the basic typology used in economic and managerial sciences; in the third section we dissect each type of actors relating the analysis with four specific questions namely the following: Objectives; Values; Methods and Results – therefore we summarize theories that define each one of those actors; in section four we analyze how in recent years (2018-20) those actors have been active at the societal and organizational level; in the fifth section we discuss the findings and assess their implications and limitations; the sixth and last section includes the conclusions and suggestions to further research.

### **Methodology: creation of the typology**

The idea of creating a typology about the main actors in any economy and in particular in the knowledge economy came to the author’s mind during talks at the European Conference on Knowledge Management (ECKM) 2016, a conference held in Belfast. The most important and decisive talks involved professor Dan Remenyi, from Trinity College, Dublin. The idea that generated all the others was this one – not all people behave in the same way in the knowledge economy; and more precisely some people “create knowledge”, while some people use the knowledge that is created. We end up naming the

first class as “Composers” and the second as “Costumers”. These two classes represented the two ends of the scale of reasoning, namely the persons who generate and the persons who consume knowledge, the maximum of activity, and the maximum of passivity. But having arrived here we considered that some links were missing between the “Composers” and the “Costumers”. And we found two missing links.

The first missing link is the “Owner” meaning the person who directly or indirectly possesses control over knowledge; the second missing link is the “Performer” meaning the person that is in the everyday activity and above all in the working activity uses knowledge assets. Therefore, we would say that the Performers put knowledge created by Composers and possessed by Owners in a form that is to be used by Costumers. Having arrived at this stage we believed that the “supply-chain” had been described but we also felt something very important was missing. Namely, going away from a private company framework to a more organizational and public sector framework we thought that some people are not “Owners” but “Administrators” and some individuals are not “Costumers” but “Citizens”. We still believe this description of reality is interesting to describe any economy and in particular the Knowledge Economy. Finally, having defined the six types of actors we believe that it is necessary to describe the work of the Knowledge Economy from the perspective of knowledge itself; we tried to define each of the six categories more in detail. And we thought about values, objectives, methods, and results. It is this typology we explain and discuss in the remainder of this paper.

## Concepts

### *The traditional way*

The traditional way of analyzing economic activity divides people into employees, employers, and buyers (Frank, 2015). The first type of people should work for the second type to satisfy the needs of the third. By doing that the three groups would receive wages, profits, and utility and the society would be in something like an equilibrium; in fact, a global macro equilibrium would be generated by the sum of a myriad of small micro equilibria. This kind of analysis has been made since the beginning of the economic analysis and is still worth it. In macro and micro-markets, the analysis has been made for ages related to employees, employers, and buyers. This is somehow old fashioned and urgently needs an update or at least a complement.

### *The knowledge-based approach*

However, in the last two decades, the nature of society changed dramatically with the advent of the so-called Knowledge Economy (KE). In that new form of economy, the most important task is to use knowledge assets as the driver of both innovative ways of creating and delivering new products and services as well as understanding a much more quality and value-orientated market. To succeed with this, it is necessary to have a new way of understanding the actors which can contribute to organizational success.

### *Actors in the Knowledge Economy scene*

In the Knowledge Economy there are six fundamental types of actors, namely are the following:

A) *Composers* - these are the people whose work output is somehow unique. These people produce knowledge assets that help to model our society. They are individuals who contribute at the highest level as knowledge workers. Examples of these people are inventors like Thomas Edison or writers like James Joyce and painters like Picasso or Dali. In terms of business and industrial organizations, these are the persons that conceptualize goods and services that afterward will be developed and produced for use by others. Bill Gates and Steve Jobs (for goods), Larry Page, Sergei Brin or Mark Zuckerberg (for

services), and Nonaka or Edvinson (for books or reports) are examples of this category of individual. These people seem to be constantly one step ahead of the rest of their peers, and effectively they show the way to the rest of the world through thought leadership. Composers create new goods and services or routines and with important consequences for the societies they live in.

B) *Performers* – these are the people who routinely use the knowledge assets, and as such their work patterns are often in some way predefined. These individuals are very common in our society and they are found in offices, factories, and most other locations of work. Workers that use the Six Sigma mindset for example are of this type. Performers are important because they implement the outcomes of the Composers and in so doing they create profitable companies that use Composers' ideas to satisfy the Costumers' needs. Without the knowledge assets and routines created by the Composers, the Performers' work would mostly be inefficient and ineffective. If Composers are the soul, Performers are the muscles, even if their work may not be physical. Performers are indeed a more routine class of knowledge workers. Some Performers may be extremely well paid like footballers, CEOs, surgeons, airplane pilots, or classical pianists because they are extremely skilled and efficient in their profession; also they are a bit unique even if they don't create anything new. Crucially the way they perform is based on tacit knowledge and therefore some Performers may become Composers and the more Composer like they become the more they earn. But most Performers do not create much, and they are not so unique they often depend on a machine or a tool or an organizational routine to add some value to society.

C and D) *Owners and Administrators* – these people have direct control over the factors of production. They determine corporate and national objectives and strategies. Owners can also be Composers or even Performers if they arrived at the Ownership position because they earned enough money to acquire the companies or because they achieved or were put in a position in which they control the factor of production. Owners depend on Composers for ideas, on Performers for effort, and on Costumers for the demand of the goods and services the organizations they own provide. In the public sector although the owners are officially the State their role is often fulfilled by administrators, and in the following subsections, we will put this distinction forward. We may also consider that all knowledge workers (Composers and Performers) own their labor force. However, the biggest representatives of this class of people are the Owners of multinationals or the heads of big national services and governments. Composers and even Performers may achieve either of those positions.

E and F) *Customers and Citizens* – these are the people that consume the output made by Performers following ideas of Composers in organizations possessed by Owners. They are indeed powerful because the new economy is a society of consumption and marketing and because the information is available on the internet about almost every product we may buy or sell. In consequence, Costumers effectively drive the businesses, and ultimately define their good or bad fortunes. Nowadays Costumers search for quality and high value whereas in former times there was a greater tendency for consumers to look for quantity and low price. Citizens search for the fulfillment of rights and more related to Administrators. Of course Composers, Performers, and Owners also are Costumers, and vice versa. The four first categories are linked to the supply side of economies and the last two to the demand side. The six types of actors are described in Table 1.

**Table 1 – Basic comparison of the six types of actors**

	<b>Lowest quantity</b>	<b>Middle Quantity</b>	<b>High Quantity</b>	<b>Highest quantity</b>
<b>Highest quality</b>	Composers			
<b>High quality</b>		Owners and Administrators		
<b>Middle quality</b>			Performers	
<b>Lowest quality</b>				Costumers and Citizens

### Characteristics of the six types of actors

In Table 2 below, we expose the main features of each one of the six types of actors. We have in mind four basic questions, namely values, objectives, methods, and results. We assume a functional perspective of each actor according to which each one has an objective which is pursued using facilitators and values, and that can be evaluated; the model is based on the following logic:

Values → Objectives → Methods → Results

**Table 2 – Basic characteristics of the six types of actors**

	<b>Composers</b>	<b>Performers</b>	<b>Owners and Administrators</b>	<b>Consumers and Citizens</b>
<b>Values</b>	Labor is its own reward Creating knowledge is universally good	Being recognized as a caring individual in the community Make a living Climbing the corporate ladder or the social ladder	Get and stay rich Bigger portfolio of investments. Be elected or nominated	Enhance lifestyle Have more choice Eat better, live longer
<b>Objectives</b>	Explore ideas for the fun of it Leave a mark on the world	Deliver a service or making a good	Make money and social good. Have power.	Enjoy a standard of living and quality of life.
<b>Methods</b>	Academic education, trial, and error.	Professional education and sometimes talent	Free market and globalization political connections.	Web and the internet
<b>Results</b>	Corpus of work Acknowledgment of peers Others wanting to learn from them	Efficiency and effectiveness Wealth accumulated from earnings	Wealth accumulated from Returns on Equity	Conspicuous consumption Good and services consumed

### Values

At the base of the activity of each type of actors, there are the fundamental values, each one of them defends namely knowledge and creation for Composers, making a living for Performers, get and stay rich and powerful for Owners and Administrators and having enhanced lifestyle and making him or herself being heard for Costumers. Every one of us is a bit of every type of actor but each actor has a dominant perspective. Values are integrated into the spiritual knowledge field and they interact with the fields of emotional and rational knowledge (Bratianu & Bejinaru, 2020).

For Composers, their fulfillment comes from knowing that they have created something new and that their innovation has led to valued improvements. This is similar to the

motivation of the artist. They need to distinguish themselves but their creation is often more important to them than the accolades which they receive. Performers want to be recognized as a caring individual in the community, to make a living, and to climbing the corporate ladder or social ladder; they need not necessarily be very ambitious, but they are essential to the functioning of society because they are by far the biggest share of the workforce. Owners seek the best return on their investments, while administrators and politicians want power. Finally, Costumers seek an enhanced lifestyle; have more choices, eat better, and live longer.

### ***Objectives***

The actors differ greatly in their ultimate goals. Composers ultimately wish to leave a mark in the world and they have great fun in exploring ideas. This is a type of action that has been seen in History since Antiquity – the Encyclopedias are full of these people, like Archimedes shouting Eureka in the bath to Wittgenstein writing the note of his Treaty on Philosophy while fighting World War I. Quite curiously nowadays it is easier to become a composer because there are more tools of creation available than never before due to the proliferation of technological devices like the Word program, laptops, etc., and also because education and science have expanded in the world like never before. Also nowadays it is easier to earn money as a composer because of the technological possibilities that enlarge the market, particularly the English speaking one. But every composer will tell you that regardless of the money they end up earning, their highest reward is the sheer joy of doing it, be it writing, painting, or singing.

When a composer becomes a millionaire or multimillionaire it is because he becomes interesting to society or a specific organization and therefore becomes the focus of business (Forbes, 2016). In fact, he or she may or may not become an Owner, but to get rich he or she has to become famous and very important in social terms (Frank, 2016). It is almost a paradox Composers may not want much money but when they do become famous they tend to become rich and appear in the rich lists (The Sunday Times, 2016). Composers may even be famous and important and due to contractual reasons not be rich like it happened with the Beatles in the first years. In terms of the Maslow Pyramid, these are the persons that achieve the highest level of satisfaction (Maslow, 1943).

Performers have a much more modest objective – delivering a service or making a good. This usually is done by using tools of production Performers don't own and by performing standardized and repeat tasks; and this is the case of the traditional industry and the low skilled new economy in call-centers. However, in the new economy, we must realize that due to the nature of many occupations, performance is becoming more and more a personal act, and success depends on experience and tacit knowledge. This is the case of the more skilled jobs that are normal in an inverted pyramid of skills. In those types of performance, there is an element of creation because the performance is unique or the good or service is somehow unique. Quite importantly the uniqueness may be a way of obeying the owner who ultimately pays the wages, or to satisfy the customer/consumer. In terms of the Maslow pyramid, Performers tend to satisfy lower than Composers but when they can use tacit knowledge, in the new jobs of the new economy they may achieve much higher levels of satisfaction. Knowledge dynamics can explain all these transformations between rational, emotional, and spiritual knowledge according to the theory of knowledge fields (Bratianu & Bejinaru, 2020).

Owners/administrators basically want to make money or to have power. Specifically, if they are in the private sector, this goal is achieved by earning profits; if they work in the public sector they aim to be elected or nominated. The use and consequences of these profits are subject to debate: one may assume that profits are a social benefit (like Milton Friedman considered), or that profits imply a distribution of productions surplus that may be datable (as studied in General Equilibrium Theory) or even a relationship with the government via taxes and subsidies (as highlighted by studies on Public Finance). Also, it is important to mention that Owners offer many jobs to Performers and also ultimately

sell goods to Costumers. Politicians and public administrators are a specific kind of Owners because they are responsible for the functioning of the public sector of the economy and influence the private and non-profit sub-sectors. By achieving power administrators should seek to add to the public or social good but this has not often been the case as the literature on corruption, crime theory and public failures indicate (Le Grand, 2008). In the current times of financial tightness financial considerations are becoming more and more important, even for administrators. As we saw already, Composers may be our turn to be Owners of large businesses or big administrators and Performers own their own labor force.

Consumers and Costumers mainly want to enjoy a high standard of living or a better quality of life. And in the connected world of the internet they are very important because they can classify, comment, post, protest, grade, like, and follow. And all those activities are a form of consumer choice and a way of putting pressure on Composers, Owners, and Performers. In what concerns administrators and public administrators, voters are a specific type of Costumers and the political market is indeed a very specific one. Also in many social matters people effectively “vote with their feet”.

### **Methods**

Quite crucially, the six types of actors differ considerably in the ways they approach the achievement of success. Composers focus on academic or creative education, and trial and error, formal and informal, creating new ideas and testing new concepts relentlessly; they have to mix talent with ingenuity, inspiration, and transpiration; as Thomas Edison famously said, genius is more transpiration than inspiration. Performers derive their position from professional education, and training, often on-the-job training (Linderman, 2003); in the case of low-level Performers, talent is almost not an issue; if you work in a call center talent is not important but if you are a top footballer or a pianist or a flight pilot it matters; in the case of high-level Performers talent matters, and this one of the reasons these persons are a bit like composers, the other reason being the use of tacit knowledge (Polanyi, 1963).

Owners and administrators depend on the free market, the globalization process, and on their political connections; marketing is a fundamental issue; also respect for some social norms to belong to the club of the “happy few” who effectively govern the world is due (Chomsky, 2016). Finally, Costumers derive their power by going public with their opinions and making their voice heard – in today’s world social media provide daily possibilities of making viral statements, and having thousands of followers and likes, in an enhanced form of consumer sovereignty and society (Ingham, 2014).

### **Results**

The six types of actors also differ decisively on the ways they want to be assessed, and by the ways, they measure their success. Composers believe in leaving a legacy that is grounded in a corpus of work; quite crucially they seek acknowledgment of peers more than social glory and fame. Composers usually live in small circles, even in the internet age, and they constantly care about the opinions of the circle members. Examples of fights and friendships between major intellectuals are well known (i.e. the dispute between Camus and Sartre or the friendship between Marx and Engels). Also, some Composers are good teachers and they like to profess to those wanting to learn from them (like Bertrand Russel, Paul Krugman, or Joseph Stiglitz, among others).

Performers usually seek efficiency and effectiveness, doing things right more than doing the right thing. Execution is in this sense the contrary to creation, and in this Composers differ from Performers. It may happen that Composers also perform or Performers have to compose and in this sense, we are again in the blurred zone between the two concepts. Owners are driven by financial ambition, and the desire to accumulate wealth via earnings – greed is good may an extreme motto for this kind of people. In the global economy,



billionaires are every day a more common phenomenon, originated by the every day easier capacity of selling everything everywhere; it is not strange that the

Owners of the most important multinationals are the richest persons on Earth and becoming quickly the most important as the election of Mr. Donald Trump to the Presidency of the USA eloquently illustrates. Quite decisively, the phenomena of billionaires generate the idea that money is good in itself and that money should be an objective for life; this so trivial concept is not supported by any economic theory – neoclassical microeconomic theory states that consumers seek utility and money is only a way of obtaining utility (Frank, 2015). Furthermore, the marginal utility of income decreases with the rise of income (Frank, 2015); therefore, the idea that everybody has to become a billionaire by becoming an entrepreneur and owner is as ideological as it can get but the underlying that idea that money gives happiness has no basis in the microeconomic theory. This explains why the biggest billionaires are also the biggest donors (Forbes, 2016). Wealth is accumulated by Returns on Equity (RoE).

Administrators and politicians seek power as a form of reward, and fight in elections and in the corridors of power where they meet Owners, and occasionally Composers. The Davos Forum is the representation of this melting pot. However, in the internet and global age all these people have to be very careful with the Costumers because even if their wish is to consume and to derive good living standards and good quality of life, from that consumption, they have in social media a weapon of social control and social change like there is no other. Even political matters are deeply affected by social media and Costumers. Composers earn their livings and their glory from being accepted even if in the long-run, Performers have to work in demanded activities and Owners and administrators have to possess or manage companies and organizations for which there is a massive social desire for the goods and services they provide.

## **Data**

In this section, we summarize basic statistics about the six types of actors available on the internet at the time of writing (December 2020).

*Owners and Administrators.* The sixty-two richest persons have more wealth than half of the world population according to Oxfam quoted by the British newspaper, The Guardian. And the top 1 percent has as much as the others 99 percent. Also, the political and administrative power is said to be concentrated in the hands of some “happy few” people like the ones that meet in the Davos Summit.

*Composers.* In the UK the so-called creative industries account only for 3 million people and one-tenth of the labor force. In the US the value is 4.7 million and less than 3 percent in a total of 160 million. To these people should be adding the figures of people that are in the intellectual field. Indeed, according to the Wall Street Journal “people who had non-routine cognitive jobs, what is often called “knowledge work,” consisting of varied intellectual tasks such as professional, managerial or technical occupations” raised from 30 million in the mid-eighties to double nowadays. In this context, composers are around 20 percent of the population in developed countries but much less in developing ones.

*Costumers and Citizens.* The world population in 2016 was 7,5 billion. Not all those persons have income or another funding source only two-thirds have. Also according to the Pew Institute, 15 percent are poor, 56 low income, 13, middle income, 9 upper middle income, and 7 high income. Also in the 21st global and technological world, connections are essential for costumers. More than 1 billion people use Facebook. The number of mobile phone users in the world is about 60 percent in 2016 and the expectation is to rise to 5 billion in 2019. Of the current 2.1 billion are smartphone users. The number of persons with internet connections is about 40 percent of the world population. In what concerns Citizenship, the number of people with extended legal rights in the world has been

increasing strongly in the last decades. Women and men over 18 years have generically right to vote, totalizing 5 billion; all these individuals have power over the Administrators.

*Performers.* According to the International Labor Organization (ILO) the World labor force raised from 2.3 billion in 1990 to 3.3 billion in 2014. Of those, only a small fraction of around 20 percent are skilled and have high qualifications. These people live in rich countries or are the ruling elite of developing countries. Even in rich countries, a big divide exists between low and high paid performers, the first being increasingly more in recent years.

## Discussion

One of the objectives of the society is to deliver in an environment in which these six different groups of actors live side-by-side in a harmonious manner, each being conscious of what they can achieve and the benefits that they can derive from being part of the new economy. One of the biggest problems of societies is the so-called “populations without voice”. Those people are the ones that are excluded from these six groups or those that are low paid performers and don’t have a significant say as Costumers. Those people are excluded and marginalized from society and sometimes they make their voice heard as when they are fundamental in electing American Presidents like what happened with Mr. Donald Trump.

Composers are knowledge workers par excellence. Performers are low key low-paid knowledge workers, even if in a service-based and very humanized and diverse economy where value is more important than price, quality is more important than quantity, and users and Costumers are more important than consumers. Apple and Jobs owe their market value and their fortune to some Composers and many Performers. Composers don’t work in a vacuum. First, all compositions relate to the person and their relations. Composers compose to satisfy their own needs (money recognition etc.) – and this may be confused with Art’s sake. But also they can be interested in the use or their creation and it is because of that copyright exists; in the ever more connected world of today this problem is increased. Something interesting is that Composers like to compose and they get much happiness from it.

Composers are funded in a variety of ways and that does make a difference. They may be rich or get rich, they may be funded by the market, or by “Maecenas” (some entity that supports you), or by an employer, or they may depend on public money. They also may be more or less related to the stock market. The less they are dependent on the market the more they can “experiment”. I am not sure if a certain “pressure” is not important. Sometimes it feels that super-rich creators lose their inspiration when they become super-rich. Composers and creators need to earn a living so they need to be paid by the market. So, yes Composers and creators need consumers and customers. And yes, Composers need to satisfy a need of consumers because otherwise they will not be paid. However, I am not sure if Composers believe they are slaves of Costumers in the sense they depend on the Costumers. Because indeed I believe Composers may have strong power in the market by dictating taste, and fashion. And the stronger the composer is (because they have a big market share) the more he can dictate quantity and price (according to the Economics point of view).

The relation between Owners and Composers is a complex one. If a composer works for an owner, he may have some power over him or her. Composers may also be Owners. The power of Owners is overestimated because they are super-rich but at the end of they are paraphrasing Keynes who said that politicians who hear voices in the air are following obscure economists we would say that these guys who pose to glamour magazines owe their wealth to a bunch of obscure knowledge workers that work for them. Even if you were a composer like Bill Gates and you became a superrich owner in the process you became dependent on a myriad of knowledge workers.

Performers are decisive – they are like the bees and the ants. Performers in the 21st century are less routine prone and a bit more of Composers than in the previous centuries because they work in services essentially and not in the industry and the agriculture as before. Also, it is known that the labor force is split between low earners and high earners the big difference is that the low earners are essentially Performers (call centers, etc.) and they essentially distribute information, and the low earners are essentially creators (research centers) and they essentially create knowledge. Life being what it is, we have to begin by being a performer in a low paid job and then we become a composer in a high paid one. The questions raised in this paper are more acute in a globalized knowledge society because in this society power is more disputed by the four categories. In the old times, Owners had the power, now they depend on Composers which depend on Performers that depend on Costumers.

## **Conclusions**

The term new economy or knowledge economy has been around for more than 20 years. In some respects, it has been useful in that it has pointed to the fact that it is now important to appreciate the fact that although knowledge has always been critical it has acquired an additional level of importance since the world has shrunk due to the improvements in ICT and the move towards globalization. However, little has been said about how different actors in our society have contributed through the application of different levels and characteristics of knowledge.

Six key groups of actors are identified and these may be referred to as Composers, Performers, Owners, Administrators, Consumers, and Citizens. Composers bring to the value creation process knowledge related to innovation and entrepreneurship. In so doing they bring an ability to envisage a different type of future in which new ideas play a central part in the development of products and services which enrich the society in which we live. Performers bring knowledge of how to execute the ideas of the Composers and turn them into realities. These individuals bridge the gap between the currently possible and future potential.

Owners have access to the resources which are needed to take the ideas of the Composers and through the skills of the Performers make these ideas a reality. In a market economy, they are the gatekeepers to the future. Consumers are those who ultimately register their approval of the products, services, and processes that have been created by the combined activities of the Composers, Performers, and Owners.

This taxonomy of players in the knowledge economy is useful in that it allows us to understand the components of the team of actors that need to be engaged and work together with some degree of shared vision if our society is to produce the flow of goods and services required to sustain it. If these four sets of actors are not in concord, then the mechanisms of the free market will punish anyone attempting to embark upon any scheme of innovation or entrepreneurship.

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