Functional Economy a new approach of consumption

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Abstract:

The abundance of consumer products that the world knows since the industrial revolution has generated excessive consumption behavior. The consequences of this relentlessness on products and services are dramatic on the environment, insofar the latter can no longer support the waste caused by this abusive behavior. In an effort to protect the environment, voices have risen to denounce these unconscious actions and call for rationalizing consumption. Among other theories mobilized appears the functional economy as an effective alternative because it proposes to privilege the use of a good to his possession. Thus, the purpose of this article is to define this new concept and to determine its contribution in the advent of a new era of consumption for the protection of the environment.

Keywords: Functional Economy; Consumption; Circular Economy; Sustainable Development; Waste.

JEL Classification Codes : Q01, Q53.

ملخص:

أدت وفرة المنتجات الاستهلاكية التي يعرفها العالم منذ الثورة الصناعية إلى سلوك استهلاكي مفرط، حيث أدى هذا الافراط إلى عواقب وخيمة على البيئة التي لم تعد قادرة على استيعاب النفايات الناتجة عن هذا السلوك غير العقلاني والمفرط اتجاه المنتجات والخدمات. وفي محاولة لحماية البيئة،

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ارتفعت الأصـوات لإدانة هذه الإجراءات غير الواعية والدعوة إلى ترشـيد الاسـتهلاك، و من بين النظريات التي تمت تعبئتها ظهر مصطلح «الاقتصاد الوظيفي" كبديل فعال لأنه يقترح تعزيز استخدام سـلعة ما بدل حيازتها. وبالتالي فإن الغرض من هذا المقال هو تحديد مفهوم الاقتصـاد الوظيفي وتبين مساهمته في ظهور حقبة جديدة لظاهرة الاستهلاك من أجل حماية البيئة.

كلمات مفتاحية: اقتصاد وظيفي؛ استهلاك؛ اقتصاد دائري، تنمية مستدامة، نفايات.

تصنيفات JEL : Q01, Q53.

1. Introduction

For more than two hundred years, the economic model has obeyed the logic that brings to the fore the social well-being of societies interpreting themselves by the increase of goods and services. Thus, man has become aware of the multidimensional nature of the economic crises that have shaken the world since the industrial revolution. They have proven themselves economically as well as social and environmental. However, the finality of this economic model has been questioned for thirty years by another vision of economic development namely sustainable development. The later blames the economic growth for the unequal distribution of wealth:' 20% of the world's population consumed, for example, 80% of the non-renewable energy available annually" (Buclet and Bourg, 2005, p.2), and the enormity of wastes caused by the wasting of naturel resources that are being overexploited. "The World Bank estimates that waste generation will increase from 2.01 billion tonnes in 2016 to 3.40 billion tonnes in 2050. At least 33% of this waste is mismanaged globally today through open dumping or burning" .

This overexploitation does not mean an equal distribution of wealth. On the contrary, it causes inequalities between societies and accentuate the scourge of poverty in the world. The goals of sustainable development face a paradox of reducing poverty and preserving nature while ensuring future generations their share of the earth's resources. The man appealed to his ingeniosity to solve this paradox and to remedy the alarming situation. He invents formulas that will later become economic models. In this

case the reflexions focus on reducing consumption of resources in order to reduce the waste whose management is very expensive. Thus, the consumption of resources is targeted and constitutes one of the pillars on which the objectives of sustainable development are based. (Buclet, 2007, p.2). The most appropriate solution that has been imagined is the "Functional Economy".

The purpose of this study in this article is to define this new concept and to determine its contribution in the advent of a new era of consumption for the protection of the environment. Authors tried to determine the role that Functional Economy can play in achieving the goals of the third millennium brought by the sustainable development.

Therefore, the problematic of our research is: "Does Functional Economy constitute a new approach to the consumption?

To answer the problematic of our research we opted for the following methodology. The second section is devoted to the literature review on Functional Economy and short history. The third section deals with new aspects of Functional Economy as an alternative to excessive consumption. As to the third section, it will address the perspectives of the economics of functionality by taking into account the brakes and the limits that prevent its application. To close our article, we propose a conclusion as a recapitulation of our research.

2. Literature review on functional economy

In the light of the issues, economic, social and environmental challenges incurred by today's societies, the economic models adopted since the industrial revolution must be revisited. This reasoning leads to innovation and to finding other economic models likely to meet the new requirements namely sustainable development. The functionality economy fits into this context and it is the concept that will be treated in detail in this part.

The term feature economics or economics of functionality is known as "Economy

Service" or "Functional Economy" in English. The appearance of the notion Functional Economy dates from the 1980s, “The Functional Economy, sometimes called the economy of performance, is a concept developed by Walter Stahel in the 1980s and taken back by Dominique Bourg in the 2000s” (ADEME, 2017a, p.4).

It was approached by two theoretical schools. The Anglo-Saxon School whose reflections revolve around the model of the Product Service System (PSS). The main contributors of this school are Walter Stahel, Buclet, Okasana. The second school is the French School of Functional Economy and Cooperation (EFC) whose ideas are mainly led by Christophe Sempels, Christian Du Terre (EcoRes, 2015, p.6).

Walter (2006) attests that "the functional economy, which aims to optimize the use - or function - of goods and services, focuses on the management of existing wealth, in the form of products, knowledge or even natural capital. The economic objective is to create the highest possible use value for as long as possible, while consuming the least material resources and energy possible. The goal is to achieve better competitiveness and increased business income (Van Neil, 2007(a), p.3).

It is also defined by ADEME as the economy, which "is to provide enterprises, individuals or territories with integrated alternatives of services and goods based on the sale of a quality of use or use and not merely on the sale of goods. These alternatives must allow lower consumption of natural resources in the context of a circular economy”.

The basic idea of this notion is concerned with the new conception of the economic value of the property. While the traditional economic and measurable approach takes into account its cost, supply and demand. The contemporary approach, inspired by the principles of sustainable development, believes that economic value practically does not include the degradation of the environment through the manufacturing and overconsumption of this good. Therefore, in the absence of being able to integrate the negative externalities (of the manufacturing and use of the

property), the value of the property no longer concerns its appropriation but rather its use.

The Functional Economy is a new economic model as it reorganizes the relationship between the market, the business and the consumer. Indeed, since the advent of industrialization, the interest of economic activity has focused on large-scale production and consumption. The goal of this economic conjuncture was to produce more to satisfy consumption in search of constantly changing goods and services. "For a company, the growth of its markets goes hand in hand with the growth of the units produced in connection with the acceleration of the obsolescence of its products. This obsolescence is frequently "programmed," either by influencing the material lifespan of products that are designed to no longer be repairable or by stimulating the consumer to team up with the latest innovations, few of which are radical innovations that meet new needs and/or uses ". But the era of industrialization is no longer the dream of the thirty glorious; mass production for mass consumption, according to the Fordist doctrine, is no longer seen as an advantage for the realization of the well-being of the people:
“For many economists (Gadrey, 2002 ; Gadrey, Zarifian, 2002 ; Du Tertre, 2008, 2009), the overcoming of the Fordist crisis presupposes the implementation of a new form of economic organization; based on servicing dynamics that they present as a key phenomenon in the economic and societal phenomenon that is essential to economic and societal developments. The idea would no longer be to buy the good that is needed, but to rent the service that the consumption of the good provides "(Vaileanu-Paun and Boutillier, 2012, p.99).

The principle of this new model is to change the relationship between the company and the consumer, which does not mean that the objectives of one or the other have changed. Consumers always try to satisfy their well-being by taking into account the new gift (economic crisis, ecological crisis, etc.). The company also thinks of its profitability interest by remaining the owner of the goods by selling their uses.

Practices in the context of this logic are adopted by several world-renowned companies: Michelin, Xerox, Amazon, Apple, Microsoft and many other companies.

It should be noted, however, that the development of the functional economy depends on the prowess of the Internet. Indeed, "Internet is not only the technical support of the transformations that give rise to the digital economy, it is the incubator of this new economy" (Brousseau and Curien, 2001, p.7).

Thus defined, the functionality economy was mobilized according to three reference theories, namely the Functional Economy and cooperation (EFC), product-service systems (known as the English-language product-service system or PSS) and the Functional Economy (this theory was defined in the previous parts) (ADEME, 2017a, p.4).

The approaches involved in explaining the functionality economy have created two economic models that break with the industrial model of intensive growth. The "service model » and the "life cycle" model.

The service model marks the advent of an economic logic based on the use-value of the asset whose added value is calculated in relation to the sale of the service of that asset and not on the basis of the manufacturing and sale of that asset. In this context, Ademe (2017) defines this model as follows: "This logic corresponds to the development of the service and customer relationship focused on the useful effects and results of the solution, mainly using the intangible resources on which the company's activity is based (skills, trust, relevance of organization). It mobilizes recipients, industrialists, communities or citizens-consumers in a dynamic of co-production and long-term commitment. Innovation is about all the aspects of the economic model. This service logic aims to increase the value created and the quality of the offer by setting aside the logic of volume manufacturing associated with the reduction of unit costs.

To complete this model, which does not mainly take into account the product's life cycle, the life cycle model intervenes. The purpose of this approach is to improve the

environmental efficiency of products. "It makes it possible to design products differently by taking into account their environmental effects throughout their life cycle. Thanks to this new product view, this approach can generate new ideas and be creative "(ADEME, 2012b, p.8). The novelty in this concept is in "the technological evolution of the goods made available, in this case the lengthening of the lifespan of the goods, and in the logistics put in place to ensure the closing of the physical flows of goods and materials. "It requires the company's business model to evolve »(ADEME, 2017a, p.4). Although the two models (of service and life cycle) appear to be complementary, they still represent some disparities.

Thus, the purpose of service logic is to obtain the efficiency of the use of the good and not simply to make it available to the customer. "Service logic is based on the company's intangible assets. This "immaterial capital" is essentially linked to the skills of the company (professionalization of people, knowledge, know-how ...), the relevance of the company's organization and supply (R&D intangible and technological, marketing, relevance of goods and services integration). Also, trust between actors (cooperation, reputation, internal and external interaction) and workers ' health. The value of the company's intangible factors depends on the success of a service strategy as part of the functionality economy.

As for the life cycle logic, the company is committed to selling the use of the property while remaining the owner. In this case, the company will not adopt a planned obsolescence strategy. It will take responsibility for the maintenance of the assets, especially if it manufactures them on its own and manages them throughout their life cycle. "Extending the lifespan of property is not the only potential benefit; goods loop management will be theoretically facilitated. Manufacturers, remaining product owners, will be able to reuse components and recycle materials to produce new products. These practices will be encouraged all the more as the costs and risks of shortages of virgin raw materials are high" (ADEME, 2017a, p.4).

Even if the two logics allow the functionality economy to be approached. Life-cycle logic gives more to the concept of circular economy as opposed to servicing logic, which tends to replace Functional Economy.

3. Decoupling or sustainability of production: a pillar of the functionality economy

The Functional Economy is seen as a new economic model that can change the relationships between economic actors. Therefore, the question that challenges us is to what extent this new economy can contribute to people's well-being at the economic, social, and environmental levels.

The functional economy is an economic model based on substituting the use of a good for its appropriation, a solution that promotes the notion of "decoupling" between the added value created by economic activity and the consumption of energy and raw materials.

The debate between advocates and growth opponents is not recent, but attempts have been made to go beyond this conflict on an international scale by defining a decoupling strategy. The latter knew its rise when it was recognized by UNEP (UN Environment Programme) in 2001 (Mamoudou, 2015, p.7).

"Decoupling is a breakdown of the links between" environmental ills "and economic goods" (OECD, 2004). Decoupling is divided into two categories: "Relative decoupling and absolute decoupling. Relative decoupling or low decoupling occurs when environmental pressures increase less rapidly than economic growth; and absolute decoupling or strong decoupling when economic variable increases as environmental pressures stagnate or decrease (Laurent, 2011, p.245).

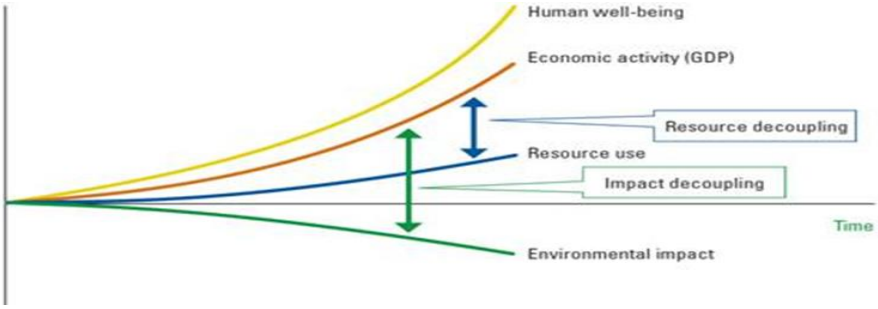
Conventionally, economic growth means a substantial increase in manufacturing measured by the so-called macroeconomic aggregate GDP (Gross Domestic Product). This increase also requires the extensive use of natural resources and energies leading to environmental degradation through the overexploitation of resources and the

creation of waste. The interest of decoupling lies in the reversal of the relationship between the manufacturing and use of natural resources and energy.

Indeed, "there is decoupling when the wealth created (measured generally by gross domestic product) in an economy increases faster than the amount of natural resources used or consumed. Decoupling can be relative or absolute: in the first case, the amount of resources used or consumed continues to increase. In the case of absolute decoupling, resource use or consumption decreases as wealth created increases "(Nicklaus, 2017, p.3). The novelty in the functionality economy model is that value-added creation is not done by the company's overall turnover, but is done in relation to the ideal use of the property (Damesin, 2013, p.11).

The following figure illustrates the purpose of the functional economy that is part of a goal of improving people's well-being.

Figure 1 :The decoupling concept



Source: Bouillot, P.E, 2011, p.1

Also shows the main idea of decoupling: the trends of the two curves, green (environmental effect) and blue (resource use) must converge to zero. Likewise, that of yellow economic growth must be disconnected from the other two.

However, the notion of decoupling is considered as a "myth" in some research. Tim Jackson's book sheds light on the impossibility of absolute decoupling between economic growth and the negative externalities generated / resource consumption. He argues that a relative decoupling between economic growth and the environmental / resource consumption impact can be achieved by curbing the momentum of the

environmental / resource consumption impact with technological advances. However, absolute decoupling is out of reach, according to Jackson, it can be a dangerous illusion. As a result, the decoupling between economic growth and environmental impact / resource consumption is imminent even if pessimistic researchers persist. Despite this pessimism, relative decoupling is sought by companies because the pressure exerted on them is lower. Ultimately, if a consensus has been reached on the goal of intellectual decoupling, the problem of its practical realization remains.

4. Prospect of functional economy

The Functional Economy is considered as a new economic model that can change the relationships between economic actors. So, the question that challenges us is to what extent this new economy can contribute to people's well-being at the economic, social, and environmental levels.

The common idea is that the Functional Economy allows environmental benefits as they lead to the intensification of the use of goods. But is this really practically feasible? Ademe (2017) argues that the "common idea is that these business models are virtuous as they decrease the number of outstanding assets at a given moment. It is forgotten that the intensification of the use leads to a faster wear resulting in a more frequent renewal of these goods. This intensification of use must be doubled with greater product robustness to be to be really interesting in terms of the environment".

In this order of ideas, the functional economy represents an opportunity for the business world and opens opportunities for sustainable development. "This economic model is quickly assimilated to a sustainable development component" (Formant, 2012, p.1). In the in the sphere of functional economy, companies have the opportunity to retain ownership of the goods they offer on the market and possibly make earnings. The value of use and the lifespan of the products must be extended, thereby reducing resource consumption and consequently environmental effects(Van Neil, 2007(a), p.3).

The functional economy approach aims to overcome this impasse by encouraging

manufacturers to transform their way of understanding their sector of activity. The rent generated by the mutualization of sustainable goods is intended to guarantee the involvement of industrial players in "sustainable development (Yoann, 2017, p.63).

When functional economy allows better use of resources and promotes decoupling between the use of a good and the consumption of energy and raw materials; contributes to the decrease of greenhouse gasses. The functional economy also supports the entire life cycle by the producer – production – use – maintenance – reuse – waste management – mainly because the equipment manufacturer is also the one who will have to deal with the end of his life (Fondation Concorde, 2010, p.22).

As a new economic model, the functional economy encourages innovation at the level of use service that is much more oriented towards value-added growth than that of turnover. At the same time, it reduces physical flows by professionalizing maintenance and use methods(Van Neil, 2007(a), p.23).

On the social plan, it must be admitted that the functional economy is in these terms a direct manifestation of our society's shift from a property regime to an access regime (Val Neil, 2014(b), p.7). As a result, it promotes employment nearby by creating jobs of service and value through the creation of new jobs. “Dedicated positions will appear in companies (with ad hoc training in universities) to determine the need and drive change. Multiple "externalizations" of functions are possible and will have to be identified in various fields within many industrial activities. The customer relationship and the maintenance of dedicated product parks should thus create numerous jobs” (Fondation Concorde,p.25).

The functional economy also aims to transform the company economically with advantages for both the investor and the customer. Thus, the latter will have the option of transferring spending, which limits debt. Also, consume in a way that is tailored to your needs and have better cost visibility. As for the investor, he will differentiate himself with an innovative offer and retrace the value chain by offering more service. It

will also benefit from the loyalty of its customers. Although the functional economy is not known, it offers great opportunities for businesses in particular. Certainly, it requires for the moment an integrated economic model but it really represents the future of the production.

5. Conclusion

"*From the power of purchase to the power of use* "this is the slogan of the functional economy. It has been developed for several decades and is intended as a two-dimensional economic model: the use replaces the appropriation of the good and the decoupling between the added value and the consumption of the raw materials. It has emerged in the context of sustainable development and environmental awareness-raising. Despite the praise of research on the functional economy, it remains unknown and alien to the corporate world. It is clear that the growth model adopted since the Industrial Revolution has passed and must adapt to the new situation of natural resource scarcity. But how to convince the company manager to adhere to this approach. It must be provided with a well-established strategy on natural resource consumption and job mastery. Also, the shift to functionality economy requires influencing consumer behaviour. The latter must be part of an integrated agreement that takes into account environmental, economic and social elements. The changes adopted for consumption will be considered in macro and micro-economic terms and will follow the principle: "*Halte excessive consumption*."

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