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Fondazione Guida alla Cultura, Italy²Independent Researcher, Senior Scientific collaborator Università Statale di Salerno, Italy*(e-mail: info@paolocaputo.eu)**Circular economy. Possible solutions to waste collection and recycling
How collect paper and cardboard. A practical experience in Italy****Annotation**

Main problem: This article is for to the divulgation of ideas and projects implemented (or proposed) in the circular economy. The topic covered is the collection and recycling of waste produced by citizens and small businesses.

It is a «CASE STUDY» of concrete projects that have been designed using the method of «possibilist economics», i.e. that new branch of Development Economics devised by A.O. Hirschman (USA) and developed by Luca Meldolesi (EUROPE) with his Italian working group (a group of which I have been an active member since 1986). During the years I spent working as a business economist, I adapted and increased the analysis and operational tools of the possibilist method to the subject of business development and creation, expanding the method with some new operational tools derived from my practical work and the analysis of the different realities in which I worked. This adaptation of ‘possibilism’ to business economics has been particularly useful in helping me find ‘possible’ solutions to complex problems in disadvantaged social and economic contexts.

Purpose: The goal of this study is to give a concrete example of how the possibilist method is useful to create work and business in any field of economy.

Methods: The article analyses a project of the author and its results.

Results and their significance: This adaptation of «possibilism in economy» to business economics is a demonstration of the useful to helping economist to find «possible» solutions to complex problems in disadvantaged social and economic contexts.

Key words: Circular economy; possibilism in Economy; research and development; business creation.

Introduction

Paper, like all products derived from cellulose, is not an inexhaustible material. Cellulose is obtained from cotton, straw, and wood. It is largely used in the dietary sector (useful in slimming programmes and as a laxative), in the pharmaceutical sector (production of gauze and coatings that modulate the release of active ingredients from the tablet), cosmetics (for the preparation of gels, stabilizers, films, toothpastes), war (manufacture of explosives), textiles (rayon, lyocel), to produce PAPER AND CARDBOARD. Paper, as we know it today, was born in the 19th century, a period when the industrial revolution made its mass production and the variety of its uses possible. Preventing valuable materials such as paper from ending up in landfills by giving them a new life is a necessity as well as a socially and economically important industrial activity, especially for those societies that do not have the raw material pulp and must import it from other countries. Recycling not only reduces the consumption of raw materials, but also saves energy and water, reduces carbon dioxide emissions, and decreases the number of materials going to landfill, thus conserving valuable resources that would otherwise be wasted. The impact of pulp production on nature is a problem that has only been realized in recent decades. To deal with it, different solutions have been imagined, and it has finally led to the creation of the INDUSTRIAL CYCLE of paper and cardboard recovery and recycling, a set of activities aimed at protecting the environment, reducing waste, saving resources, creating employment. The industrial and commercial paper chain is defined as ‘closed’ where new

paper is reborn from paper. The product once used can be recovered and reused in the production process. Usually, the manufacturing and recovery phases are linked. Paper factories use 'wastepaper', i.e. recovered paper that becomes a secondary raw material, together with or as an alternative to virgin cellulose. The industrial paper chain is a concrete example of a circular economy. The paper supply chain includes a wide range of economic activities, ranging from wood plantations for paper production, through the manufacture of pulp and paper itself, to industries that process paper products such as corrugated and coated cardboard packaging, paper bags, stationery, and tissue paper. It also includes the sectors of advertising and direct marketing, printing, and publishing, and extends to delivery logistics through postal and courier services. The cycle ends with the recovery of paper and cardboard waste and its reuse in paper factories.

The paper recovery cycle in Italy (and in European states) has been designed as a socio-economic and industrial MODEL (of CIRCULAR ECONOMY) with the following characteristics:

- Citizens and small businesses start the virtuous recycling cycle by separating paper and cardboard from general waste;
- Specialised marketing companies conduct constant communication campaigns to sensitise people to respect nature and to cooperate in bringing paper and cardboard to the recycling points and avoid throwing it in the general waste stream;
- The collection company (usually a local monopoly) organises the paper and cardboard collection service and delivers the material to the storage facilities;
- The recovery plants sort paper and cardboard by type, remove extraneous cellulose materials and then the material is pressed into bales of wastepaper to optimise its handling;
- Paper factory: this is where the bales of paper and cardboard are processed to revive the paper in new forms, defined as SECONDARY RAW MATERIAL, i.e. material derived from a recovery process.

Recycled paper is sold to paper converting and printing companies where it is transformed into products and packaging, products that are once again available for use in our daily lives.

Materials and methods

Paper products are natural and come from so-called renewable sources. They are recyclable and are part of the group of goods made from raw materials that are not exhausted in the first production cycle and can be reused up to seven (7) times. The prevailing MODEL of the economic and industrial cycle of paper and cellulose-based packaging (cardboard) recovery and recycling has the CITIZEN as the first stage of its production and economic cycle, i.e. its ecological conscience and its good practice in separating paper from other waste and taking it to the designated collection points. Paper recycling involves citizens who, after using the products, collaborate with administrations and industry in their recovery. There are practical aspects to this stage of the production cycle (i.e. giving correct directions and schedules to the citizen to make the delivery of paper to the designated collection point efficient and effective). The practical activities of this collection model meet and often clash with individual psychological factors, the social environment, and individual cultural and schooling levels. In Europe, 2023 data, in first position for collection we have Germany followed by Italy. The waste bales produced in Europe are purchased by recycling plants from ALL OVER THE WORLD. In the ASIAN countries in general, we can say that collection and recycling are poorly developed, they do not have a widespread PAPER INDUSTRIAL CYCLE. They are countries that currently import wastepaper the most from the rest of the world. The production of recycled paper and board (collection of waste and formation of bales of paper) is subject to the market economy, a secondary raw material which is subject to market supply and demand fluctuations like other raw materials. For many years, European countries have consumed all recycled paper production in their domestic markets. Today (2024) the decrease in consumption of paper and board in Europe has also led to a reduction in demand for packaging. This condition has created (2024) a surplus of wastepaper and a drop in market prices that has found a natural outlet in Asian countries, particularly India, Indonesia, Vietnam, Thailand, and Malaysia. This condition is expected to persist for many years to come as the densely populated states struggle to set up intensive paper recovery and recycling projects within them.

The main model of the economic and industrial cycle of paper and cellulose-based packaging (cardboard) recovery and recycling has as its first step THE CITIZEN, i.e. his or her ecological awareness and good practice in separating paper from other waste and taking it to designated collection points. Paper recycling involves citizens (individuals and small entrepreneurs) who, after using the products, collaborate with administrations and industry in their recovery. In this phase of the

production cycle, there are practical aspects (i.e. giving correct directions and schedules to the citizens to make the delivery of paper to the pre-established collection point efficient and effective). It must be taken into consideration that practical organisational aspects meet and often clash with individual psychological factors, the urban environment, and individual cultural and schooling levels.

Collection takes place through two different channels:

- Urban, with selective collection conducted by municipalised and assimilated waste management companies (public and private companies).
- Industrial, through specialised companies, private.

The companies that conduct separate waste collection deliver the paper to recovery stations, specialised companies that deal with the selection and valorisation of the so-called 'paste.' This material is then utilised in the production processes of paper factories, which convert it into new paper. Subsequently, this material is utilised by the converting companies of the paper industry, which use it to make finished products. At the end of the product's life cycle, i.e., once its use has been exhausted, the citizen's wish is to return it to the collection points, thus restarting the recovery cycle.

The Italian (and European) PAPER CYCLE MODEL has presented different criticalities over the years, often proving to be expensive and inefficient, especially in certain local realities that are economically and socially more backward than others. In Italy, the first positive results on collection and recycling percentages (data are based on statistical calculations) came years after the start of the various local recycling activities. It must be said that in paper and cardboard collection, the result of the quantities collected for many years was unsatisfying, despite the enormous economic resources deployed in the recovery cycle to improve quantity and quality. This has prompted the various economic and political actors involved in the recycling system to look for new project ideas and encourage solutions to complex problems that are difficult to solve.

In this context of the necessary search for solutions to the problem of paper and cardboard recycling, the «PROGETTOCARTESIO» (designed and implemented between 2013 and 2015 in Italy), the case study of this book, is placed. It is an experiment implemented in an economically and socially depressed area of the city of Naples, and its characteristic feature is that the project had an opposite mode to the prevailing model of Italian recycling. The success of the initiative meant that the solutions and the METHOD used to find possible solutions to specific problems were emulated and became an important reference not only in Italy but also in other countries around the world. Currently (2024), thanks to the experience gained by the sector and to the openness to new project ideas and the implementation of some of them, the results of the paper and board recovery cycle have become encouraging. The circularity rate (ratio of secondary raw materials to total raw materials used) of the entire sector has reached 55 %, to the point that European Union directives require states to reach 85 % in 2030.

The paper and cardboard collection project known as «Cartesio» was developed in 2013 to respond to a failure: the low quantities of paper collection in the city of Naples and the whole of southern Italy, with failures in relation to various attempts to improve it that had been going on for 20 years. Naples, at the time the project was elaborated (2013), had about (1) one million inhabitants in its urban centre, while the periphery, which had an autonomous government (province of Naples) boasted another three million inhabitants. In 2014, the periphery was unified with the centre and Naples became a Metropolitan City with approximately four (4) four million inhabitants and ranked first in Italy as population density. The so-called urban waste production in this area was among the highest in Europe while the recovery and recycling rates for paper, but also plastic and ferrous materials were among the lowest in Europe. Collection, it is clear, is the main source of the industrial cycle of paper and board recovery. The prevailing industrial model entrusts recovery exclusively to the virtuous behaviour of individual citizens. Low collection amounts mean the failure of the entire industrial recovery and recycling chain.

The work used the operational tools of Possibilist Economics, adapting them to the circumstances.

Possibilism in economics is the method (of analysis and practice) that proposes to find possible (not just probable) answers to complex problems. To the typical tools of the method, those developed by A.O. Hirschman and later by L. Meldolesi, new 'working tools' have been added over time, providing possibilist economists with additional operational tools. New analytical and operational methods derived from practical activity and the consequent observation of the different realities in which possibilist economists and social scientists have operated. The two economists (P. Caputo and R. Celentano) worked on this project using the possibilist method, expanding it with new

tools they both developed. Following possibilism, the answer on how to improve the collection of paper and cardboard in an extremely difficult context was constructed from observation of reality and the search for its problems, the obvious ones and above all the non-apparent ones, which impeded the functioning of the selective collection system. The key points of the method used are:

- Problem Analysis and search for initial solutions without imposing pre-established analytical schemes and models;
- Observation of the reality in which one operates to search for obstacles and difficulties that are not apparent and to discover hidden or under-utilised resources;
- Simultaneous use of -bottom-up- and -top-down- solutions to break barriers to entry and overcome obstacles;
- Self-subversion's approach, i.e., questioning acquired certainties when observation of how reality works disproves them;
- Participant Observation, i.e., entering reality and being part of it, observing it from the inside to get to know it and find solutions and innovative ideas;
- Doing more and better with available resources [1];
- The 3F analysis (Caputo, 2008), i.e. analysing and understanding how people working towards a goal and in a certain context react according to the questions set by the 3Fs: «knowing how to do» – «wanting to do» – «enable us to do»;
- Studying local traditions and cultures and learning to innovate and use them for the purpose (innovation and tradition);
- Transforming weaknesses and difficulties into strengths and new opportunities;
- Activating the expansion mechanisms of creative social energy;
- Using all those mechanisms that seem improbable but are possible

Finding balances and ways out between the drives of converging and diverging interests.

The WASTE COLLECTION MODEL in Naples (2013) was based on the work of a private company (ASIA spa) with the city government as a shareholder, which worked under a monopoly regime, the only company authorised to collect all the waste from the city centre and subsequently from the large Metropolitan City of Naples. The contract between the City Government and Impresa ASIA spa was for the provision of a service: The company organised and carried out the service of collecting paper material, and for this work the local government paid a fee and made substantial financial contributions, regardless of the results in terms of quantity of recovery obtained.

The procedure used for the collection was typical of the industrial recovery and recycling chain: the company asked citizens to voluntarily participate in the collection of waste, which had to be placed at certain points in the city on pre-established days and times, while ASIA spa workers on these days went with the collection truck and picked up the material that had previously been left by citizens. The principle on which this collection system is based is that of educating citizens to respect the environment and making them protagonists in the hygiene and recovery of materials. To achieve this, continuous institutional communication campaigns were conducted in all media (and on social media) to induce citizens to behave in a virtuous and cooperative manner. It was a method used in other parts of European cities. It was a common belief that since this method worked in different European cities then it could and should work everywhere. One of the official justifications given as the reason for the low recovery was the organizational difficulties faced by the leading collection company, Asia spa. In fact, over the years, its corporate organizational structure had become overloaded due to an excess of employees that had absorbed a lot of available economic resources, while it had had to deal with the problem of the waste emergency, for which the choice was to use most of its company resources on ordinary waste collection, limiting that of material recovery.

In truth, long before the waste crisis in the Campania (and Naples) region, many efforts had been made to collect and recover paper, both economically and organizationally to make it efficient and effective, but the results had always been unsatisfactory. The emergency made the situation even worse, until the year 2012 when there was finally a way out of the crisis. In this year, there was a political and administrative change in the local government, which had been more fortunate and had managed to resolve the serious emergency (thanks also to economic support from the national and European governments).

In this new phase of overcoming the crisis COMIECO, the Italian national consortium of the cardboard and paper recovery industry, was looking for efficient and effective ideas and solutions to improve recovery.

Luck was on the side of good intentions. Comieco's management asked business economics professors from Milan's Bocconi University and Professor Luca Meldolesi to provide some solutions to solve the Neapolitan problem. They asked to Paolo Caputo if he had any good ideas on how to tackle this decades-old problem of low paper recovery in Naples and the Campania Region.

The idea exposed by Paolo Caputo was considered interesting, after which it was submitted for evaluation by the COMIECO management, which accepted it as an experimental hypothesis to be designed and implemented. The idea (elaborated and concretely developed by Paolo Caputo with the fundamental collaboration of Roberto Celentano) with which the request for help from «Comieco» to improve cardboard collection in the city was addressed, is based on reversing the approach to the problem.

The first step was to understand the reasons for the insufficient paper delivery by citizens. The answer was simple, it was there for all to see: THE CITIZENS' WAYS OF CONFERRING ON A VOLUNTARY BASIS WERE NOT RESPECTED, people and small businesspeople were not interested in supporting it. Paper, as well as cardboard, which was used in commercial packaging, was not given to the collection points by citizens and everything ended up in the undifferentiated waste bins (or abandoned in the streets). Several factors contributed to this situation, but primarily, it was essential to comprehend both the collective and individual behaviors of Neapolitans concerning public hygiene. The two designers started from the rediscovery of a commonplace: it was said that Neapolitans were very clean in their own homes and very dirty outside their homes. This was partially true: Naples, like other large cities in southern Italy, had always been a very dirty city, individual bad and uncivilised conduct made the city in a permanent state of decay from the point of view of urban hygiene. There was also another commonplace: Neapolitans, it was said, are not very work-oriented, they are lazy and cunning, they are scarcely productive at work (they work little and badly). Even this cliché had its good reasons for existing, there is a part of Neapolitans that really does behave this way, especially those who, once they get a job, adapt to doing as little as possible without ever taking responsibility. And this attitude was also present among the Asia spa workers. In the city, there was a dispute over who was responsible for urban decay.

- Citizens accused ASIA spa workers of not working or of performing poorly and minimally, making further accusations of incompetence and corporate disorganization.

- Asia spa blamed citizens for their uncivil behaviour and for abandoning waste in the city without respecting the elementary rules of urban hygiene.

The accusations were both true, the individual behaviour of the citizens and that of the insiders added up to a «SYNERGY OF DEGRADE and DIRTY»: the Neapolitan dirty, the insider doesn't clean (or works badly) and from DEGRADE comes NEW DEGRADE, in a vicious circle with no way out. Moreover, the crisis of the waste emergency had also induced in the Neapolitans an enormous distrust towards the economic policies of collection and recycling, towards the non-transparent business and interests that orbited around the industrial model. Everyone was saying a common phrase addressed to the administrations and the industrial system: WASTE IS YOUR WEALTH AND OUR DEGRADATION.

The social mood was not favourable to the voluntary participation of citizens and small entrepreneurs in paper and cardboard recovery activities. It was necessary to change the way Neapolitans participated in paper delivery. Citizens, this was the intuition, should not be volunteers who, out of moral and environmental interests, spontaneously did their best to deliver paper because the results of this approach were extremely poor. The idea was to turn paper delivery into a direct or indirect economic interest of citizens and small entrepreneurs. Rubbish was to become an opportunity for citizens and perceived as an economic improvement of their neighbourhood but also as the creation of new businesses and jobs from below. Given the complexity of the specific local context, the solution to the problem could not rely on pre-established solutions and methods imposed from above, nor could it be addressed by a large enterprise with an excessively large and costly organization. The answer could and should have started from the bottom, that is, from the citizens themselves, through the creation of small labour cooperatives each operating on a part of the city and a defined territory, trying to get the job-seeking, unemployed residents of the neighbourhood to work in the same cooperatives.

What to do and how to do it.

Once the new idea was developed it was necessary to plan what to do and how to do it.

At that point, the possibilist method becomes fundamental again, which involves analysing the reality, in which one concretely operates, in its complexity, studying local history, local culture, social

dynamics, to get innovative ideas from it. Through the study of the cultural and social history of Naples (and southern Italy), it became apparent that there had always been a constant certainty over time: The art of getting by (of making do). In fact, in the traditional economy of Southern Italy, the «art of making do» was very present and it was discovered that there had existed an ancient, improvised and spontaneous work of collecting cardboard (not paper) by very poor people, which was then resold to the paper industries present in the Bay of Naples (Castellammare, Amalfi Coast, Pompeii, etc.). It was a survival job, unauthorized but tolerated, carried out by very poor people who, thanks to the recovery and resale of cardboard collected in the city on the streets, managed to have a minimum economic income to live on. Initially the «cartonari», as they were called, collected the cardboard on the street, usually during the day carrying it manually on wheelbarrows, but over the years they had organized themselves by working at night and transporting the material on the famous «Piaggio ape cars» small three-wheeled motorcars produced in Italy by the «PIAGGIO» factory. From this reading of history came the idea of what to do: We needed to take up the vanished art of the old «cartonari» to entrepreneurialism them and create a group of workers in the neighbourhood to intercept the huge amount of cardboard that is normally dispersed. It was essential to focus on the need that many Neapolitans had to get a job, thus on well-motivated people, but also on the simple economic rule of any business for which «I earn only if I collect». For the experimental phase of the project, an extremely popular neighbourhood was chosen, called «rione sanità», which is well known throughout the Western world for its very special and ancient architectural, archaeological and artistic beauty. The «Rione Sanità» had about 200,000 inhabitants, a remarkably high population density, with the presence of micro and small commercial and craft production enterprises. Given the high presences of small businesses, the daily cardboard waste was very substantial. The neighbourhood had a profoundly serious social situation: unemployment, poverty, school evasion by young people, presence of numerous Mafia gangs engaged in criminal activities (extortion, murder, drug and arms trafficking, smuggling, money laundering, corruption, tax evasion). Through field observation it became clear that in fact the area also had many interesting and potentially positive aspects. Part of the population was highly active in countering degradation, wanting to follow virtuous examples of land enhancement. There were religious communities operating in the area with the aim of solving social and cultural problems for the benefit of the weaker members of the population and to push the citizenry to redeem their condition of backwardness and hardship. There were many small handicraft production enterprises (some historic) and many commercial enterprises that resisted the economic crisis and focused on the legality and urban decorum of their neighborhoods. From these considerations, the «Cartesio» project was concretely constructed. The project was designed as an experiment with the aim of evaluating the validity of the new cardboard and paper collection system that was based on:

– URBAN WASTE IS OUR WEALTH:

the bottom-up approach, the citizens of the neighbourhood being stimulated to collaborate through widespread animation and by assigning collection tasks to a (specially created and trained) work team of unemployed people in the neighbourhood.

– IF I COLLECT, I EARN:

the entrepreneurial incentive and the power of achievement, «the more I collect the more I earn». The collected paper is sold like a commodity to the recycling centres, there is no economic welfarism.

Only in the first experimental phases did the «Comieco» consortium have to bear the costs of the start-up phase and the initial expenses of the project, and during the collection phase it had to recognise an economic contribution when high levels of collected quantities were reached (THE MORE I COLLECT THE MORE I GET);

– POPULAR STRENGTH:

Reversing the purpose of collection for the benefit of the many and the collective wellbeing stimulated the explosion of social energies and the recovery of hidden or unused resources.

– the logic of «doing more and better with less» with what you have available.

The «Cartesio» experimental project is based on the possibilist method of activating the mechanisms for the expansion of creative social energy. Albert Otto Hirschman, economist and social scientist of the last century, argued that to foster economic development, it was appropriate to summon up those capacities or resources that were poorly used or not utilised at all, because they were hidden or dispersed. To use these hidden resources, it is necessary – asserts Hirschman – to be open to the unexpected, to let oneself be surprised by reality and with creativity draw those connections that at

first sight seem unlikely, to react to emerging difficulties, to engage in the search for ways out by going beyond the predictable to find possible solutions to complex problems. The possibilist practice is, as said, the base of the experimental project of differentiated cardboard collection that is the subject of our «case study». Starting from an innovative (and countercultural) idea, it has been shown (successfully) to move a process of change (collective and individual) that has activated the collaboration of the local population, created new businesses and new jobs, and achieved significant improvements in paper and cardboard collection rates. The same method was useful in facing and overcoming the multiple resistances from different stakeholders who hindered it by trying to make it fail. The construction of the project proposal was a mixed effort between actual business activity and balancing policies towards the various stakeholders orbiting the paper recycling business. Many difficulties had to be overcome initially:

– DIFFERENT AND OPPOSING INTERESTS.

Many activities in the executive project are a compromise to reconcile the different interests at stake and prevent them from becoming insurmountable obstacles.

– BUREAUCRACY.

overcoming the enormous administrative and bureaucratic problems in obtaining legal authorisations for paper collection.

– POLITICS AND TRADE UNION INTERESTS.

Political difficulties to overcome the resistance to change of those who want to safeguard privileges and acquired rents (such as the lack of cooperation - which was considered fundamental for logistics and equipment – of the monopoly company «ASIA spa»).

To overcome these problems, several mechanisms called PINCERS EFFECT: To break a closed hard core, within which there are opposing and opposing privileges and interests, we acted as a pincer; by lobbying from below, through the emergence of individual and collective interactions (common people, micro-entrepreneurs, local religious authorities) with which it was possible to mobilise underutilized energies and resources. From above a strong political will given by the city government and the Comieco Consortium, which were an expression of governmental and institutional political will. This push broke through the hard core of resistance without colliding with it, which would have effectively stopped any progress in the work.

INFACT: From the bottom up, the first phase of the project involved building a social network of local popular interests capable of supporting its activities. From above, the construction of an institutional and political network. Obviously, all this with the involvement and support provided by the Comieco consortium. The activity conducted by the City of Naples government was also fundamental. This last collaboration was vital, without the strong political and administrative will to support the experimentation, everything would have been much more difficult. In the execution phase, questions from the 3F PRACTICAL ANALYSIS MODEL also had to be answered:

1. Do we want to do it? Are we willing to do it? Do we have the individual and collective psychological structure to overcome obstacles and assume responsibility, effort and commitment?
2. Do we know how to do it? Do we have the skills to do it? Do we have the aptitude to learn?
3. Do they let us do it? Are obstacles and barriers surmountable? Do we have margin to operate freely? Can we counter the opposing forces with our own abilities?

THE PROJECT CAME TO AN END IN TWO DIFFERENT PHASES. The first phase (lasting about nine months) was characterised by the choice of a highly active and prestigious religious community in the neighbourhood, from which youth work cooperatives dedicated to tourism and activities to enhance the artistic and architectural beauty of the neighbourhood had sprung up.

At the end of the preparation process and after the subsequent presentation to the MASS MEDIA of the same, just before starting the concrete and operational work of the collection, the community and the cooperative linked to it decided to give up. To the apparent defeat suffered by the entire working group (economists, Comieco, city government) – which caused a strong sense of discouragement and mistrust – Paolo Caputo, unlike everyone else, saw in this a great opportunity. He thought that not being tied to already privileged social groups was an advantage because it gave greater freedom of choice and operational freedom to design and implement. The Economist first persuaded his colleague R. Celentano to support him and then again proposed to the director of Comieco (and the deputy mayor of Naples) to let him try again, this time free of constraints, offering to work without remuneration but to receive it ONLY if he achieved the goal [2; 3].

The project started again in a second phase. Initially, another religious community was involved in the project, well known among the people of the neighborhood but not economically and

politically assisted from the outside, which carried out social activities against poverty and unemployment. In addition, many others who had been active for some time in revitalising the area joined the new working group, the so-called 'Rete della Sanità', an informal group that brings together the various associations in the area under the moral and material guidance of Alex Zanotelli.

Finally, the involvement of a workers' cooperative in the executive project was fundamental experienced in the collection of used clothing, which was given the task of providing its business organisation and employing people from the neighborhood to physically conduct the cardboard collection, was crucial.

The experimental collection period lasted about seven months. At the end of the seven months, an ex-post analysis was carried out by P. Caputo and R. Celentano, which led to the following conclusions. The collection service had proved to be so efficient and effective that it had replaced, rather than complemented, the service provided by ASIA spa. The number of staff needed to run the collection service was not 5, as planned, but 7 (4 from the district and 3 from other districts). This contributed to an increase in labour costs, in addition to the fact that the cooperative did not receive the tax benefits for new employees promised by law, so that the monthly personnel costs were almost double what had been planned in the project. About the profitability of the business, the following was found: The daily average of collected cardboard ranged from a minimum of 1.86 tonnes per day (t/d) in the first month of operation (January 2015 survey) to a maximum of 2.47 t/d in the September 2015 survey, all below the project target (which was 3 t/d). In addition, an economic problem had arisen: the market price of the collected cardboard had fallen, resulting in lower-than-expected income for the cooperative. Based on these collection volumes and the market price and considering the initial agreements between the social cooperative and Comieco (fewer economic resources available than in the first project), the income generated did not fully cover the costs, resulting in a small monthly loss. At this point, a further analysis was carried out to understand the reasons for the lack of results. Each day, the district produced more paper and cardboard for recycling than was collected. The compactor van used to collect the cardboard had a low filling capacity and the travel times from the Health Department to the platform where the collected cardboard was unloaded (and the high number of trips equal to 5/7 per day) did not allow better results to be achieved. It would have been necessary to have a larger compactor van, or two small vans and it would have been very useful to create temporary collection points in the neighborhood to reduce the number of trips to the collection platform. Also contributing to the economic losses were the typical problems of low worker productivity, namely the low motivation of two workers who did not live in the health district. Under these (organizational and economic) conditions, the service was not economically sustainable, as had been hoped. Finally, seven months of experimentation was too short a period to test the viability of the project; the problems encountered should have been resolved immediately and the experiment extended for a further six months. BUT the result in QUALITATIVE terms was outstanding. The experimental project drove the process of change towards improving an economically and socially deprived area. Ordinary people began to change their behavior towards urban waste and neighbourhood hygiene. The bulky and conspicuous cardboard was no longer strewn on the streets or piled up in the bins.

People spontaneously collaborated to support the collection, for example, small businesses took care of the storage of paper and cardboard while they waited for the collectors to come by. Religious communities collected the cardboard and paper that was not collected by the collectors, stored it in their own facilities and later handed it over to the cooperative. The neighbourhood was tidied up, and the paper and cardboard left on the streets was just a memory. Small businesses and citizens appreciated the efficiency of the cardboard collection, and Asia Napoli Spa was so satisfied that it invited the cooperative to continue its work and urged the city government to extend the project to the whole area. On this basis, the project became fully operational in the metropolis of Naples and It has been adapted in other Italian cities (and, it is said, in other cities around the world).

Discussion

The article analysing a project and its results. To give a concrete example of how the possibilist method is useful to create work and business in any field of economy.

Conclusion

The Cartesio project has achieved two results at the same time. The first is the solution to the problem of poor collection of cellulose-based material. But the most important result was the creation of a new company and new jobs in an economically depressed area. The CARTESIO project was born with an awareness of the risk of going against the grain of dominant economies and acquired market privileges. It also envisaged a different redistribution of public wealth. This awareness made it

possible to act with the method of Possibilism, which worked very well in this case. Possibilism is precisely the theory and practice that allows one to find solutions to problems NOT by fighting the status quo, but by looking for the right paths, the possible rather than the probable exits and entrances, the ability to step back, when necessary, to find compromises and balances to achieve the desired result. A good result which, in this case, brought about a major positive change and triggered a chain reaction towards other positive results in the following years. The activities followed paths with unpredictable and non-linear sequences, with failures and successes, with unique and unforeseen events. Thanks to the rejection of the first cooperative and the consequent failure of the first cardboard collection project, there would not have been the success of the second project, there would not have been that mobilisation of social and individual energy that wanted to show that it could and would do. This is the essence of the possibilist method: turning problems into opportunities and finding solutions to take concrete steps towards change. We have seen in this story how all resistances to change were mobilised, how they were identified and circumscribed, how the mechanisms that feed them were unhinged, and finally how these resistances were overcome. We have seen how the desire to maintain the status quo prevented the first cooperative from starting the venture. The dream of facing a new opportunity to change its economic and social situation led the second cooperative to act and move towards changing its reality. The activity of the working group was not an end, but also involved the social context of reference, the promotion of civilization, a culture of cooperation and the development of mutual benefits. The Cartesio project has shown that an unsolvable problem, in a difficult context, can in fact generate work and wealth by acting from below and with few resources...and pave the way for possible development in social environments where it is considered improbable and impossible.

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**Шенберлі экономика. Қалдықтарды жинау және қайта өңдеу үшін мүмкін шешімдер.
Қағаз бен картонды қалай жинау керек. Италиядағы практикалық тәжірибе**

Бұл мақала айналмалы экономикада іске асырылатын (немесе ұсынылатын) идеялар мен жобаларды жария етуге арналған. Бұл тақырып азаматтар мен шағын бизнес субъектілері өндірген қалдықтарды жинау және қайта өңдеу болып табылады. Бұл «CASE STUDY» нақты жобалардың «case study» әдісі, яғни А.О. Хиршман (АҚШ) ауытқыған және Лука Мельтолеси (ЕУРОПА) өзінің итальяндық жұмыс тобымен (1986 жылдан бастап белсенді мүше болып келемін) әзірлеген даму экономикасының жаңа саласы. Бизнес-экономист болып жұмыс істеген жылдары мен бизнесті дамыту және құру тақырыбына мүмкіндік беретін әдістің талдау және

жедел құралдарын бейімдеп, ұлғайттым, тәжірибелік жұмысымнан және жұмыс істеген түрлі болмыстарды талдаудан алынған жаңа операциялық құралдармен әдісті кеңейттім. «Мүмкіншіліктің» бизнес-экономикаға бейімделуі маған қолайсыз әлеуметтік-экономикалық контексте күрделі проблемалардың ықтимал шешімін табуға көмектескені үшін ерекше пайдалы болды.

Бұл зерттеудің мақсаты экономиканың кез келген саласында жұмыс пен бизнес құру үшін мүмкін әдістің қаншалықты пайдалы екенін нақты мысалға келтіру болып табылады..

Мақалада автордың жобасы және оның нәтижелері талданады.

«Экономикадағы мүмкіншіліктің» бизнес-экономикаға бейімделуі экономистке қолайсыз әлеуметтік-экономикалық контекстерде күрделі проблемалардың «мүмкін» шешімдерін табуға көмектесетін пайдалылықтың көрінісі болып табылады.

Кілт сөздер: дөңгелек экономика; экономикадағы POSSIBILISM; зерттеулер мен әзірлемелер; бизнесті құру.

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**Циркулярная экономика. Возможные решения для сбора и переработки отходов.
Как собирать бумагу и картон. Практический опыт в Италии**

Эта статья предназначена для распространения идей и проектов, реализованных (или предложенных) в рамках циркулярной экономики. Тема статьи - сбор и переработка отходов, производимых гражданами и малым бизнесом. Это «CASE STUDY» конкретных проектов, разработанных с использованием метода «поссибилистской экономики», т.е. нового направления экономики развития, разработанного А.О. Хиршманом (США) и развиваемого Лукой Мелдолези (Европа) с его итальянской рабочей группой (группой, активным членом которой я являюсь с 1986 года). За годы работы экономистом в сфере бизнеса я адаптировал и расширил анализ и операционные инструменты метода POSSIBILISM к теме развития и создания бизнеса, дополнив метод некоторыми новыми операционными инструментами, полученными в результате моей практической работы и анализа различных реалий, в которых я работал. Эта адаптация «поссибилизма» к экономике бизнеса оказалась особенно полезной, помогая мне находить возможные решения сложных проблем в неблагоприятных социальных и экономических контекстах.

Цель данного исследования – дать конкретный пример того, как метод POSSIBILISM полезен для создания работы и бизнеса в любой сфере экономики.

В статье анализируется авторский проект и его результаты.

Эта адаптация «поссибилизма в экономике» к экономике бизнеса является демонстрацией того, как полезно помогать экономисту находить «возможные» решения сложных проблем в неблагоприятных социальных и экономических контекстах.

Ключевые слова: циркулярная экономика; POSSIBILISM в экономике; исследования и разработки; создание бизнеса.

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