

Knowledge Economy in the Retraining Process

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Abstract. *The knowledge economy is present in all fields and occupations where human capital is needed. It consists of educating and informing staff, thus helping to improve work performance and create competitive advantage. Where we have human capital, there is also the possibility of retraining staff, also present in all fields and occupations. Retraining of staff may be unavoidable especially following major impact events such as the 2019 pandemic or the Russian-Ukrainian war. The literature provides us with many insights from the field of knowledge economy and shows us that it underpins the development of a company's staff, regardless of the field. And as staff is the key to a company's success, this research will be dedicated to staff who have gone through retraining. This paper explores the relationship between knowledge economy and staff retraining. This paper will study the retraining of personnel in the case of Michelin, the well-known tire manufacturer. The pandemic, or simply the need for change and reinvention, has prompted employees to make a professional change from physical work in the factory to office work, or rather work from home. The study will show the retraining process that Michelin staff go through, we will see what are the differences between physical work for the actual production of tires versus online work. Through this process, we will see the need for the knowledge economy.*

Keywords: knowledge economy, staff retraining, Michelin, human capital, vocational reconversion.

Introduction

Knowledge is today's competitive strength and advantage; it is what fuels production and sustainable growth. The knowledge-based economy has become a global necessity and has even become an asset and is one of the main elements of the economic system. This shift to the knowledge-based economy focuses on the importance of human capital. It focuses on understanding the value that human capital brings to the whole economy, and the importance of investing in well-informed and trained human capital.

The knowledge economy applies in any field, in any field there is a need to transmit information, to share it or even to exchange information in order to improve the existing one. The knowledge economy is based on the knowledge and skills of human capital. It is therefore the basis of good professional training, which ensures the correct professional preparation of staff. By sharing the right information and teaching relevant information, a capable and prepared human capital is formed. Therefore, we can say that in the case of retraining, it is the knowledge economy that makes the transition from one profession to another.

In the case of our study, we will focus on retraining within the tyre manufacturing company, specifically Michelin. In this article we will study the retraining process from factory work to office work, or vice versa, depending on the situation and wishes of each employee. This retraining within Michelin can be beneficial to the company, as hiring from within can improve the company's performance and create more skilled staff who are more invested in Michelin's mission. Through

this study we will show the importance of knowledge economy in the retraining process of the staff in Michelin, and we will analyze the main activities of an office job at Michelin and the main responsibilities in a fabric. Although it is an easier retraining, considering that it is still the tyre field, the activity is very diverse and the transition from factory to office work or vice versa is a challenge for the staff and requires very well-organized training. That is why in this article we will show how important teaching and selection of relevant information is for the retraining process to be successful.

Literature review

The reviewed literature

The documented literature is very rich and well updated, as the subject of knowledge economics is at the basis of many fields and is continuously developing due to technology. However, the subject of retraining in the vulcanization sector is more restricted, so the following research will bring some insights and a less discussed approach to the subject, which is hardly found in the literature

Human Resources Management in the Knowledge Economy.

In “Human Resource Management in the Knowledge Economy” by Mark L. Lengnick-Hall and Cynthia A. Lengnick-Hall has shown us the concepts of knowledge economy and the importance of human capital

Knowledge economy is an economy in which the share of knowledge-intensive jobs has considerably increased. The economic weight of the sectors linked to computer science, communication and information processing plays a decisive role. Among these, we find in particular the services to companies which participate in the conception of new services or new products and their commercialization, more precisely, the development of new markets for these new goods, for instance in marketing or design.

It can be identified mainly at the level of sectors of activity. The sectors that have had a powerful driving effect in recent decades, increasing the average growth rate of the entire economy, are sectors characterized by a certain degree of centrality of science and technology such as medical equipment, communication technology etc. Science and technology thus play an important role in the knowledge-based economy. But this is also true for traditional sectors that transform themselves until they become at some point knowledge intensive. The entry of a traditional sector into the knowledge economy can be based on a certain "evidence" of technical progress and on the organizational changes associated with it, an intensification of competition, and a transformation of institutions. If the basis of the knowledge economy is therefore clear, it also develops in relation to territories; not territories that are especially well endowed with this or that natural resource, but territories that have been able to set in motion a dynamic of agglomeration of the resources characteristic of this economy.

Methodology

This research conducted for this article was carried out using the qualitative research method, as the study was based on the professional and personal experiences of Michelin employees. The study was made on four Michelin employees that have been through professional reconversion.

We have chosen four questions for them, selected in order to obtain different kinds of details, whether strictly personal or strictly professional. The results were analyzed manually because of the small number of respondents. Respecting the privacy of our respondents, we didn't provide all the personal details, only the essential details in order to obtain a result. The retraining

situations encountered at Michelin led us to choose this company as a research subject in order to prove the following hypothesis: the knowledge economy is at the basis of successful retraining.

Results and discussions

The notion of "knowledge economy" appears historically as the result of an economic analysis carried out in terms of "information". The knowledge economy can cover all jobs and all industries because in every work area there is a need of information and a need of sharing that information further (Baird and Henderson, 2001).

The knowledge economy emerged due to commercialization and advanced communication technologies. Also, the rapid pace at which technologies have developed and continue to develop has made it much easier to access more information. Besides the fact that information is more plentiful, the variety of information is more interactive and tailored to the audience than before. Thanks to the internet and communication between people, information is distributed much more easily and can be obtained in seconds globally (Boyette et al., 2001).

Creative industries hold a significant economic role in the European Union and within the knowledge economy. In a reality dominated increasingly more by sound, images, ideas and symbols, activities and works resulting within the creative industries can generate significantly more jobs in the next decades (Nistoreanu, 2017).

The knowledge economy can be seen as an information-generating system made up of intellectual capital. This system attaches great importance to scientific discoveries and research, and can be said to be a characteristic of highly developed economies. These scientific studies and applied research are essential to maintain a strong economy, because in a knowledge-based economy, the most valuable assets are the intangible assets themselves, more exactly intellectual property (Derek, 2006).

Differentiating between less developed and more developed economies, we can say that less developed or developing economies focus more on agricultural or manufacturing industries, while more developed economies tend to focus on research or consulting.

And as mentioned above, in a knowledge-based economy, the greatest values are represented by intellectual capital, namely knowledge, which can be commercialized as patents. Human capital knowledge is very valuable because although it is an intangible good, it can be considered a tradable commodity that can be traded internationally. In a knowledge-based economy, human capital can be sold to generate profits for companies or other individuals. This kind of economy is based on intellectual power and does not rely as much on other kinds of resources such as natural resources. In such an economy, innovation in the economy and research are highly encouraged, so that more fields will succeed in developing fields such as science (Bohlander et al., 2001).

Vocational training is the set of training measures or activities (courses or other forms of vocational training) that enterprises organize and finance for their employees and is aimed at all employed persons who already have a qualification obtained either in the national education system or in the workplace.

Vocational retraining can bring many benefits. Unforeseen events or shocks, such as a major economic crisis or the outbreak of a pandemic, change someone's habits, get out of their comfort zone and force employees to reconsider what matters the most for them and for their well-being. In this context, rethinking the professional career and re-profiling can bring a lot of benefits. For example, easier adaptation, as retraining can add to the knowledge already acquired in new fields and can create a valuable employee out of a simple employee. Taking on new responsibilities,

because the continuous process of learning and development gives the opportunity to develop new skills and therefore new responsibilities, therefore career change means accepting new challenges (Foray, 2009). The labor market can be described on a global level as a very competitive one and for every worker/ employee who plans and hopes for a professional development, international knowledge and capabilities have become required and necessary for success (Dinca et al., 2019).

Nowadays we can say that there is quite a wide range of work on offer, many different job roles and projects. Also the market includes a lot of companies that present their job offer. In recent years there has been a lot more emphasis on the well-being of the employee, on the mental health of people, on the rights due to the employee, that is why more and more companies are competing with each other creating a more welcoming and healthy working environment for employees. These companies even invest in time spent outside working hours, organizing events or teambuilding activities that enhance the creativity and well-being of employees. With so many job offers, employees are tempted to change jobs quite frequently, being tempted to move from one company to another that offers more tailored benefits or even to change their whole activity. In these situations we can also expect retraining.

Although there is a lot of competition between companies to retain their employees, there are companies that manage to keep their employees, offering them everything they need within the company even when it comes to retraining. As an example of a model company for our research, we chose Michelin. A company that invests a lot in the well-being of its employees and offers retraining opportunities if employees will wish so.

Michelin is one of the best known companies in the world. It was founded in 1889 by brothers Edouard and Andre Michelin in Clermont-Ferrand in France, where the group is still headquartered today. The group manufactures and sells tyres for all types of vehicles, from bicycle tyres to aircraft tyres and even metro tyres (the Paris metro is the only metro in the world to have tyres). The list of tyres goes on to tyres for spaceships.

The Michelin Group started its activities in Romania in August 2001 with the acquisition of the Zalău and Floresti tyre plants. Since then, Michelin has produced millions of tyres, built a plant from scratch and become an active part of the life of the communities where it operates./Michelin employs more than 4400 people in Romania, has 3 factories, 2 în Zalău and one in Florești, a commercial network and a shared service center. Since 2018, Bucharest has become the coordination center for the Central Europe region which includes 20 countries such as Albania, Bosnia Herzegovina, Bulgaria, Cyprus, Croatia, Greece, Macedonia, Montenegro, Poland, Serbia, Slovakia, Slovenia, Turkey and Hungary.

Michelin is one of the companies that cares a lot about its employees, offering them many opportunities for professional development. One of the benefits Michelin offers is the freedom of retraining of staff. We will take as an example the employees of the Corporate Business Services project. In the case we want to investigate, it is an easier retraining, i.e. the transition from a job in the "field" or rather in the factory to an office job. Moving from the actual manufacturing of tyres to invoicing or entering them into the system.

Group Services and Commercial activity is coordinated from Bucharest, through the departments: Commercial, Purchasing, Human Resources, Administration, Finance, Legal, IT, Marketing and Communication.

Michelin Corporate Business Services, CBS and the Shared Services Centre also operate from the Bucharest office. The CBS team is active in five different areas: Customer Service, Purchasing, Finance, Personnel, and Logistics and covers mainly activities in Europe. In the area of sales management, the CBS team also serves Africa, India and the Middle East.

Michelin values employees' accumulated experience and gives them the freedom to explore. This type of retraining can benefit the company as all the roles in the Michelin group, although in different fields, are closely linked to each other and work in parallel. Each employee has an important role in the company, as all roles can only work together for the Michelin group to fulfill its mission. More specifically, an employee who has worked in the factory already knows the basics of tyre manufacturing, so a job in tyre invoicing will come as a continuity, and many processes will be more logical and easier to understand. In such a retraining, the employee knows several perspectives of work, the factory perspective and the office perspective. Such an employee can bring improvements within the team, within the company and within the process in general, because he knows from his own experience what impact each step in the process can have.

There are several roles in the CBS project, but we are going to choose some of them as an example of job at the office. After this we can observe the differences between the possible duties and roles in the fabrication and the possible responsibilities for an office job.

We can start by describing the missions of one of them, which is Customer Service Manager. This person has many responsibilities such as setting strategies, tasks, policies and service standards, leading and motivating customer service staff.

A Customer Service Manager contributes to the satisfaction of the clients in his/her portfolio, has to ensure the proper execution of the contract, he or her has to be able to demonstrate the added value of its services. They have to initiate and follow up continuous progress actions on customer issues, in accordance with contractual and mutual commitments.

His or her missions are managing the overdue, deployment of new contracts or contract exits, contractual and operational updates such as tariffs, operational guide and others. A customer Service Manager is also the link between other employees from the project, such as the Customer Relations Manager or the Key Account Manager. Another mission is organizing customer visits.

Another example of a role in the CBS project is the Customer Relations Manager. The Customer Relations Manager. He is the one who maintains the company's relationships with customers and makes sure they keep them as customers. His responsibilities are assisting the clients in finding solutions to meet their needs, offering support to the back office team in managing flows, supporting the CSM in analysis, work to optimize the contract management, analyze the results and the customer satisfaction, handle level the claims and also report analysis and administrative support to the account team.

Factory work is of course a lot of hard work, and skills that can only be formed over time and with a lot of practice. Some activities can even be risky and require appropriate equipment. The manufacture of certain items may require the use of sharp objects or the processing of hot materials. Therefore the knowledge economy plays an important role and it is necessary that all steps and information are communicated correctly.

So in order to better understand the work in the factory we will explain a little about the process of making tyres and how it works. Tyre manufacturing has many steps and all of them have an essential role without which the result cannot be achieved, therefore the roles in the factory can be many and can be very different. For each stage there are allocated certain employees who are prepared to accomplish the missions of that stage. Each component of the rubber has its essential role for obtaining a desired tire. One of the components, for example, is the steel cord, it is placed in a calendar and is wrapped in two or more layers of rubber. A long sheet of rubber will be obtained, which is then cut according to the tire model. For each model, the sheet must be cut at a precise angle, and then it is rolled for the following processing. All this is followed by several important stages such as mounting the tires, the vulcanizing press and the last, quality control.

A very important part is the control of the quality. In every stage of the manufacturing process, starting with preparation and use of raw materials to delivery of finished product, the tires are a matter of continuous quality verification. And there are specific employees for the quality control. A comprehensive process ensures that tyres are thoroughly checked for quality. Finished tyres lastly go through the: visual inspection, the X-ray inspection and various shape and uniformity verifications.

After all the mandatory inspections and checks of the tyres, they are delivered to the distribution warehouse and ready to be purchased.

With all this explained, we can see the big differences between the office jobs and the jobs in the fabrication and how important a good transfer of information is so as the retraining process is successful.

The research has been done on four respondents, and we have chosen them in order to have a balance. Two of them have changed their profession from tyre manufacturing and working in the factory to an office job in the domain of tyre invoicing. From the process of making them to the process of selling them. And the other two respondents have made the opposite, the professional reconversion from invoicing the tyres to making them in the industrial platforms. The research has been made from December 2022 until February 2023, in Romania, Bucharest. The respondent's age vary from 35 years old to 50 years old. We have selected two men and two women.

We have chosen four questions, and even though the questions are not numerous, they focus on different perspectives in order to achieve a variety of subjects.

First question is of course "What determined you to change your profession?"

With this question, we want to determine what made the employees make this decision and this change in their life. We will find out whether there were simply personal reasons (the need to try something new) or imposed by certain circumstances such as the Covid 19 situation. This way we will find out what is the main reason that determines employees to make such a change.

The second question is "Why was the professional reconversion still at Michelin and not another company or another industry?"

Since we are talking about a professional reconversion, we talk about a change of profession, a change of activity and even entering a new domain, so learning something new from scratch. In this case, we refer to an easier reconversion, having as duties something different from the previous job but in the same field and in the same company. Do the employees keep the same company because the transition was easier, already knowing the internal system of the company? or is it because Michelin offers this freedom of employment and encourages this kind of professional development to its employees?

The third question "Did you consider your professional reconversion as difficult? Are the differences between the activities overwhelming at the beginning?"

This question will help us answer if the knowledge economy has helped during this process, more specifically if the information was well passed on and explained, more important, if the chosen information was relevant etc. This way we will see how the employees have felt during this process, if it was worth it or not. Even though we haven't asked precisely if the knowledge economy has helped them, their answer will show this aspects by themselves.

The fourth question "Do you consider your professional reconversion an advantage for the company?"

Addressing this question will help us find out if an internal professional reconversion can be beneficial for the companies or if it is only the case of Michelin. We can make an idea if this type of reconversion should be encouraged by other companies too. Knowing the company from

different points of view and having different responsibilities can only enrich the employee's knowledge and enrich the company itself with the owned intellectual capital. Of course this kind of reconversion doesn't work in all the domains.

We will present each answer of each respondent so in the end we can compare and analyze them.

“What determined you to change your profession?”

For the first question Mihai said: “Even though I've been working in the factory since the beginning of my career at Michelin, the pandemics made me reconsider this. I felt like I needed more safety and felt the need to work from home for the rest of my career. Of course back then this situation seemed more dangerous for me and my family, but even now I feel like I've made the right choice and it is easier for me.”

Natalia answered: “I've been working as a CSM for 3 years, and this job also implies communicating with people from all the sides of this business, we have the clients that own the transportation companies, we communicate with the people from the back-office and also with the people on the field, the fleet operators and the people from the factory. Having the chance to communicate with so many employees with different perspectives showed me how much I can also try. I chose to reorient myself to work in a tyre factory, because actually working with the materials themselves feels like you are creating something and feels more like a hobby that you do in your free time rather than your job. There are also a few salary benefits involved in the field work.”

Veronika told us: “Because of the war in Ukraine, working in a factory was no longer safe. I had to make the decision to reconvert and even to move out as well. The company offered me more options, but also the option to have an office job, which involved the professional reconversion, and at that time I wouldn't mind learning something new because it made me a bit happier.”

Valentin explained to us: “Michelin often organizes visits in the industrial platforms for the rest of the employees and we have access to technical information that the people outside Michelin don't. Also any curiosity concerning the process of making tires we have, it can be answered and well explained. Having access to all this information made me more curious to even make the decision to work in such an industrial platform. I can say that I find the process of creating the tyres fascinating.”

The participant's answers for the second question:

Mihai: “I think Michelin is a very welcoming company and definitely it was easier to make this kind of reconversion at the same company I used to work before the professional reconversion. Especially during the Covid 19, the company was very supportive and understanding, this made the process easier. Also the whole process in general came easier knowing already internal details about the tyres, this just added more information. It was like a continuity to my previous job in the factory.”

Natalia: “I considered making this reconversion also at Michelin because of curiosity and because of the open source of information. You have access to all the information you need and you are well encouraged to try something new.”

Veronika: “Definitely I chose to do this at the same company because Michelin is offering support to Ukrainian people that are in the same situation as me, they are very understanding with their employees and this helped me very much.”

Valentin: “The access to the information presented daily made me more curious”

The answers to the third question, three of four respondents told us the process was easy and logical and one answered it was a bit difficult.

Mihai: “Every change can be difficult at the beginning but this time it was easier, the work I’ve already done on the industrial side made me understand more the importance of every step in any business. Learning the new information that I have been taught was logical to understand.”

Natalia: “At first yes, in order to understand all the processes there is need of a lot of practice and a lot of training. After practicing all the steps I needed to follow became automatic and quite relaxing. But we need to be careful because every detail influences the performance of our products.”

Veronica: “For the reconversion was easy to make, I think my previous job in the factory used to be a bit more tiring because it was more physical work rather than the work I do now.”

Valentin: “The key is to practice a lot and be careful. I find a lot of differences but the process comes easily because I already knew the theoretical part and the last steps of selling the product and what the clients look for. But I can say in both of the processes there is a need for attention to details but most certainly the one from the office needs more efficient communication in order to inform and convince the clients and ensure the communication between the other departments, and the work from the factory needs more efficient work.”

The answers from the last question:

All four participants have answered that switching from their jobs can be easy from the point of view of understanding the information and they considered this as a plus for the company due to their level of good understanding and knowing important details from their previous job, whichever that job was. Two of the respondents have even managed to introduce new systems that would facilitate the communication between the people from the industrial platforms and the back-office employees or helped with other processes and made them clearer and more helpful for both parties.

Table 1. Analysis of the answers

Respondent	The reconversion was beneficial for the company	The knowledge economy helped the process of professional reconversion	The reason of the reconversion	Did the employees added value to the work after their reconversion?
Mihai	Yes	Yes	Covid 19	Yes
Veronika	No	Yes	Personal	No
Natalia	Yes	Yes	War	Yes
Valentin	yes	Yes	Personal	Yes

Source: Authors’ own research.

Conclusion

From this study we can see the importance of the knowledge economy in the retraining process, especially when it comes to the transition from factory work to office work with totally different activities, or even vice versa.

Comparing the two types of profession, we can see how different their activities and responsibilities are, but how much they depend on each other. The production of the product in the factory is the first step, of course this step comes in many steps and cumulates knowledge and processes and the second step is the marketing of the produced product. These two steps fulfill the company's mission, and an employee who can engage in both steps in his or her professional career

is both a personal gain and a gain for the company, as with such experience the company's performance increases with the help of the intellectual capital acquired by employees during retraining.

This study may inspire more companies in many fields to put more emphasis on the possibility of retraining within the company. As a result of the research, companies can consider the benefits of retraining and the performance they can achieve thanks to the knowledge gained from human capital

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