Management of the Patents, an important part of the small and medium sized businesses, in Albania

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Abstract:
From early writing in Mesopotamia, the Chinese abacus, the Syrian astrolabe, and countless other discoveries and innovations, it has been the imagination of the world's creators that has enabled humanity to advance to today's levels of technological progress.
Patent/s management is seen as one of the most important issues in the strategic management of the business organisations. Under this general framework, it is important for us to understand the level of importance of the patent/s and their management (as expressed by the activities pertaining to the management of the patent/s), in Albanian small and medium sized businesses. Many companies in Albania see the patent/s as important asset/s, so the conduction of a research with the focus on patent/s and their management, in some companies of this country, adds value to their management strategies.
The aim of this research is to investigate the level of importance of the patent/s in small and medium sized business organizations in Albania. The methodology used for the research is unfolded with its own dimensions like: specification of the research subjects, tools used for the research, sampling, implementation plan, ethical issues and presentation of the research findings. The research is based on primary and secondary data collection.
*The research is based on the testing of the main Hypothesis, H0**, and some other Sub-Hypotheses**, and the results of the analysis indicate that hypothesis H0: "Patent is not an important asset for the small and medium sized business organizations in Albania", is invalidated. Some important conclusions are given at the end of this paper.*

Keywords: *Patent/s, Patent as an Important Asset, Management of Patent/s, Albanian Small and Medium sized Business Organizations*

1 Introduction

Few will disagree that today's science, technology, and creative arts shape our day-to-day lives. Early technological breakthroughs catapulted the human race out of feudal systems of society. In the last 100 years or so, technological leadership has become a determining factor in wealth creation and has fueled the growth of nations.

Indeed, as the former Director General of WIPO, Arpad Bogsch. stated: "The search for new technological solutions and cultural creative activities deserves constant encouragement because as the history of nations has shown, in addition

to spiritual development, inventions and cultural creations are the main sources of social and economic development of mankind. Food, health, communications and other fundamental needs for the survival of the human race, have improved, are improving and will continue to improve because of inventions and creations. "

In the second half of the 19"' century, goods and workers crossing national borders brought a wave of globalization to industrial powers. Although patent laws had been enacted in several countries, the demand for international protection of inventions began to be felt. In fact, foreign exhibitors refused to attend the International Exhibition of Inventions in Vienna in 1873 because they were afraid their ideas would be stolen and exploited commercially in other countries. This incident resulted in the birth of the Paris Convention for the Protection of Industrial Property in 1883, the first major international treaty designed to help the people of one country obtain protection in other countries for their intellectual creations. Such protection took the form of industrial property rights, in the form of patents (invention), marks, and industrial designs.

"A patent may be granted for a new, useful, and non-obvious invention, and gives the patent holder an exclusive right to commercially exploit the invention for a certain period of time (typically 20 years from the filing date of a patent application) An invention is any new and useful process, machine, manufacture, or material composition, or an improvement to one of this, developed by a human". (Pressman, 2018).

A patent is a set of exclusive rights granted by a state to a patentee (the inventor or assignee) for a fixed period of time in exchange for the regulated, public disclosure of certain details of a device, method, process or composition of matter (substance) (known as an invention) which is new, inventive, and useful or industrially applicable.

"A patent is a grant from a goverrment that confers upon an inventor the legal right to exclude others from making, using, selling, importing or ofering an invention for sale, for a fixed duration". (Pressman, 2018).

Governments expect that with new, patented information in the public domain, more scientists will be encouraged to innovate with knowledge of these technological and scientific advancements. This fact may be counterintuitive at first.

"You might argue that the public would actually benefit more if the inventor published their findings and shared their knowledge through the literary community. After all, the process would take less time and it is free. However, considering for example the patenting that occurs in biotechnology and the patenting of drug formulations, a company needs some assurance that they will have the exclusive right to a technology before they will invest millions in its development. Only a patent can give them this right". (Hunt, Nguyen & Rodgers, 2010)

The exclusive right granted to a patentee in most countries is the right to prevent or exclude others from making, using, selling, offering to sell or importing the claimed invention. The patentee may have to comply with other laws and regulations to make use of the claimed invention. So, for example, a pharmaceutical company may obtain a patent on a new drug but will be unable to market the drug without regulatory approval.

In most countries, both natural persons and corporate entities may apply for a patent. The entity or entities then become the owners of the patent when and if it issues. The ability to assign ownership rights increases the liquidity of a patent as property.

The grant and enforcement of patents are governed by national laws, and also by international treaties, where those treaties have been given effect in national laws. Patents are, therefore, territorial in nature.

2 Economic Rationale For Patenting

“Without a patent another company would be under no obligation to respect your idea. That is, they would be able to copy your idea without any compensation to you. With a patent you can stop other companies from marketing and selling your invention“. (Yang, 2017).

There are four primary justifications for granting patents: disclosure, innovation, production investment, and designing around.

First, in accordance with the original definition of the term "patent," it is argued that patents facilitate and encourage disclosure of innovations into the public domain for the common good. If inventors did not have the legal protection of patents, they may prefer or tend to keep their inventions secret. Awarding patents generally makes the details of new technology publicly available, for exploitation by anyone after patent protection ends, or for further improvement by other inventors. Furthermore, when a patent's term has expired, the public record ensures that the patentee's idea is not lost to humanity.

Second, it is broadly believed that patents provide incentives for economically efficient research and development (R&D). Many large modern corporations have annual R&D budgets of hundreds of millions or even billions of dollars. Without patent protection, R&D spending would be significantly less or eliminated altogether, limiting the possibility of technological advances or breakthroughs. Corporations would be much more conservative about the R&D investments they made, as third parties would be free to exploit any developments. This second justification is closely related to the basic idea underlying traditional property rights: why build a house if another person could freely occupy it?

Third, in many industries, once an invention exists, the cost of commercialization (testing, tooling up a factory, developing a market, etc.) is far more than the initial conception cost. Unless there is some way to prevent copies from competing at the

cost of production, companies will not make that productization (the act of modifying something) investment.

Fourth, many believe that patent rights create an incentive for companies to develop workarounds (a method for overcoming a problem or limitation in a program or system) to patented inventions, thereby creating improved or alternative technologies that might not otherwise have been developed.

One interesting side effect of modern day patent usage is that the small-time inventor can use the exclusive right status to become a licensor. This allows the inventor to accumulate capital quickly from licensing the invention and may allow rapid innovation to occur because he/she may choose to not manage a manufacturing buildup for the invention. Thus the inventor's time and energy can be spent on pure innovation, allowing others to concentrate on manufacturability.

3 Methodology Of The Research

Patents and the rights they grant, are seen as one of the most important issues in the strategic mangement of the business organizations. Under this general framework, it is important for us to understand the level of importance of the patents and the level of their management, in small and medium sized business organizations in Albania.

The aim of this research is *to investigate the level of importance of the patent/s in small and medium business organizations in Albania, as well as to find out if relationships between importance of the patent/s and other specified managerial issues related to the patent/s, are present in such organizations***.**

The objectives of the research are:

To indicate the importance of the patent as an asset for the business organizations

To indicate the level of management of the patents within companies

To indicate any presence of relationship between the "importance of the patent" and "other specified variables" like: change in the attention of company management, existence of the policy of the company to manage patent, development of the strategy of the company to manage patent, creation of the formal structure of the company to manage patent, application for patenting.

The research is based on the testing of the main Hypothesis, expressed as:

H0. Patent is not an important asset for the small and medium sized business organizations in Albania.

Ha: Patent is an important asset for the small and medium sized business organizations in Albania.

.....as well as, on the testing of five other Sub-Hypotheses, trying to find out if relationships, between "patent as an important asset for the business" and "some

other specified variables (activities pertaining to the management of the patent)", are present in such organizations**.**

H1: There is a positive correlation between the "patent as an important asset for the business" and "change in attention of company management".

H2: There is a positive correlation between "patent as an important asset for the business" and "existence of policy to manage patent".

H3: There is a positive correlation between "patent as an important asset for the business" and "development of strategy to manage patent".

H4: There is a positive correlation between "patent as an important asset for the business" and "creation of formal structure to manage patent".

H5: There is a positive correlation between "patent as an important asset for the business" and "application for patenting".

The methodology used for the research has its own dimensions like: *specification of the research subjects, tools used for the research, sampling, implementation plan, ethical issues and presentation of the research findings*. The research is based on primary and secondary data collection.

3.1 Specification Of The Research Subjects

Many companies in Albania see the patent/s as an important asset/s, so the conduction of such a research adds value to their management strategies. So, after defining the hypotheses, we started out the work about specification of the subjects that could be compatible to the purpose of this research. After distinguishing a number of companies of interest (SMEs in the Tirana region of Albania), we started to collect the required information from the managers of these companies.

The data for the study were collected from business organizations with activity in areas like: manufacturing, service, retailing, etc. The respondents were senior managers. This category was considered to be the best to target, because these individuals have the tendency to be closely associated with invention process, patenting practice, and its respective managerial decision making.

3.2 Tools Used For The Research

In order to collect the necessary information, analyze the data, and draw conclusions, a questionnaire composed of some basic questions were developed and delivered. The questionnaire was prepared to collect important data on different aspects of patent management practice. The analyses of the collected information would give us the necessary level of understanding about the issue in discussion. Data are analysed using SPSS program.

3.3 Sampling

Our original sampling consisted of 126 managers, in 126 companies, in the Tirana region of Albania. 126 questionnaires were delivered, and the questionnaires' return rate was 78.6%, or 99 collected questionnaires. However, the collected data could be considered as being representative.

3.4 Implementation Plan

The way we were organized helped us in reducing the time and costs required to perform the interviews. Data were collected during 2019, comprising a period of five years (last five years). Collected data were processed in order to prepare the findings and draw conclusions. There were not present any difficulties in distributing and collecting the questionnaire.

3.5 Ethical Issues

The information collected from the respondents was very important for analyzing and interpreting the findings. The names of the respondents (companies' managers) due to ethical obligations were not disclosed in this paper.

4 Results. Presentation Of The Research Findings

In this section research findings are presented.

4.1 Patent As An Important Asset(Univariate Analysis)

In order to test Hypothesis 0, Descriptive analysis is used.

In regard with the level of importance of the patent as an asset of the business, the results of the analysis are as following:

To the question "Are you aware of the concept of patent?", 100% of respondents answered "yes", (0% of respondents answered "no", 0% of respondents answered "do not know"), clearly indicating that all companies are aware of the concept of patent.

To the question "Do you know how to gain legal protection of the patent?", 100% of respondents answered "yes", (0% of respondents answered "no", 0% of respondents answered "do not know"), clearly indicating that all companies know how to gain legal protection of their patent/s.

To the question "Do you think that the patent is an important asset for your business?", 87.9% of respondents answered "yes", 9.1% of respondents answered "no", and only 3% of respondents answered " do not know", indicating that most of the companies are aware of the importance of their patent/s as business assets. However, there are companies (managers) thinking that their patent/s are not important.

To the question “Did the attention of company management (in regard with patent mangement), change over last five years?“, 78.8% of respondents answered “yes“, 18.2% of respondents answered “no“, 3% of respondents answered “ do not know“, indicating that in most companies management is continuously being focused on patent/s mangement.

To the question “Are there any policies of your company (management) to manage its patent, over the last five years?“, 39.4% of respondents answered “yes“, 51.5% of respondents answered “no“, 9.1% of respondents answered “do not know“, indicating that most of the companies do not own any policies to manage their patent/s.

To the question “Did your company (management) develop any strategies to manage its patent, over the last five years?“, 42.4% of respondents answered “yes“, 48.5% of respondents answered “no“, 9.1% of respondents answered “do not know“, indicating that in many companies patent is becoming part of their business strategies.

To the question “Did your company (management) create any formal structures to manage (that is, to identify, to protect, to promote or to comercialize) its patent, over the last five years?“, 30.3% of respondents answered “yes“, 66.7% of respondents answered “no“, 3.0% of respondents answered “do not know“, indicating that a few companies own formal structures envolved in the mangement of their patent/s.

To the question “Did your company filed any applications for patenting, over last five years?“, 54.6% of respondents answered “yes“, 42.4% of respondents answered “no“, 3.0% of respondents answered “do not know“, indicating that not all the companies applied for patenting during the specified period.

Examining the answers of the questions, it is clear that the weight of the percentages indicated by the respondents, is on the affirmative value of the evaluation, clearly showing the importance of the patent, and the importance of the activities pertaining to its management.

By using Arithmetic Mean, Standart Deviation and Variation Coefficient (CV) (as a standardized measure of dispersion of the above answers‘ frequency distribution, expressed as a percentage, and defined as the ratio of the standard deviation {\displaystyle \ \sigma } to the mean) of the results above, based on a scale of three values, “positive (yes)“, “negative (no)“ and “indifferent (do not know)“, (indicating the relativity of answers above), we see that the lowest value of the CV corresponds to the scale “positive“, with 60.2% of the business organizations. The results of the analysis above clearly indicate that hypothesis H0: Patent is not an important asset for the business organizations in Albania, is invalidated, that is, alternative hypothesis Ha: Patent is an important asset for the business organizations in Albania, is validated.

4.2 Relationship Between Patent As An Important Asset And Other Variables (Bivariate Analysis)

In order to test Hypothesis 1-5, first the Crosstabulations between the variables were computed in order to quantitatively analyze the relationship between variables, and than Pearson's chi-squared test was used in order to test the independence between variables. Correlation analyses was used to attempt rejection of the other sub-hypotheses.

No	Variable 1	Variable 2
H1	patent as an important asset for the business	change in attention of company management
H2	patent as an important asset for the business	existence of policy to manage patent
H3	patent as an important asset for the business	development of strategy to manage patent
H4	patent as an important asset for the business	creation of formal structure to manage patent
H5	patent as an important asset for the business	application for patenting

Table:1

Variables to be crossed.

For the crosstabulation “Do you think that the patent is an important asset for your business?“, and “Did the attention of company management (in regard with patent mangement), change over last five years?“, values of the table below show that the “Significance of the chi square“ value is greater than (0,363 > 0.05) “Accepted error“ value, indicating independence between the variables. Based on the Table 7. Correlations, values show that “Significance“ value is 0.812, indicating the existence of a statistically important relationship, and the “Pearson correlation“ value is 0.445, indicating that there is a medium, positive, linear correlation between the variables. Hence hypothesis H1: There is a positive correlation between “level of patent as an important asset for the business“ and “change in attention of company management“, is validated. That is, since patent is an important asset for the business, it has caused a change in the attention the company management pays on it.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4,333	4	,363
Likelihood Ratio	4,511	4	,341
Linear-by-Linear Association	,060	1	,807
N of Valid Cases	99		

Table:2

Chi-Square test for H1.

For the crosstabulation “Do you think that the patent is an important asset for your business?“, and “Are there any policies of your company (management) to manage its patent, over the last five years?“, values of the table below show that the “Significance of the chi square“ value is greater than (0,131 > 0.05) “Accepted error“ value, indicating independence between the variables. Based on the Table 7. Correlations, values show that “Significance“ value is 0.137, indicating the existence of a statistically important relationship, and the “Pearson correlation“ value is 0.378, indicating that there is a medium, positive, linear correlation between the variables. Hence hypothesis *H2:* There is a positive correlation between “level of patent as an important asset for the business“ and “existence of policy to manage patent“, is validated. That is, since patent is an important asset for the business, it has required the existence of a policy to manage it, in the company.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4,058	2	,131
Likelihood Ratio	5,580	2	,061
Linear-by-Linear Association	2,391	1	,122
N of Valid Cases	99		

Table:3

Chi-Square test for H2.

For the crosstabulation “Do you think that the patent is an important asset for your business?“, and “Did your company (management) develop any strategies to manage its patent, over the last five years?“, values of the table below show that the “Significance of the chi square“ value is greater than (0,503 > 0.05) “Accepted error“ value, indicating independence between the variables. Based on the Table 7. Correlations, values show that “Significance“ value is 0.508, indicating the existence of a statistically important relationship, and the “Pearson correlation“ value is 0.426, indicating that there is a medium, positive, linear correlation between the variables. Hence hypothesis *H3:* There is a positive correlation between “level of patent as an important asset for the business“ and “development

of strategy to manage patent“, is validated. That is, since patent is an important asset for the business, it has required the development of a strategy to manage it, in the company.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1,376	2	,503
Likelihood Ratio	1,760	2	,415
Linear-by-Linear Association	,477	1	,490
N of Valid Cases	99		

Table:4

Chi-Square test for H3.

For the crosstabulation “Do you think that the patent is an important asset for your business?“, and “Did your company (management) create any formal structures to manage (that is, to identify, to protect, to promote or to comercialize) its patent, over the last five years?“, values of the table below show that the “Significance of the chi square“ value is greater than (0,277 > 0.05) “Accepted error“ value, indicating independence between the variables. Based on the Table 7. Correlations, values show that “Significance“ value is 0.171, indicating the existence of a statistically important relationship, and the “Pearson correlation“ value is 0.257, indicating that there is a small, positive, linear correlation between the variables. Hence hypothesis *H4:* There is a positive correlation between “level of patent as an important asset for the business“ and “creation of formal structure to manage patent“, is validated. That is, since patent is an important asset for the business, it has required the creation of a formal structure to manage it, in the company.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2,568	2	,277
Likelihood Ratio	3,683	2	,159
Linear-by-Linear Association	2,020	1	,155
N of Valid Cases	99		

Table:5

Chi-Square test for H4.

For the crosstabulation “Do you think that the patent is an important asset for your business?“, and “Did your company filed any applications for patenting, over last five years?“, values of the table below show that the “Significance of the chi square“ value is greater than (0.834 > 0.05) “Accepted error“ value, indicating independence between the variables. Based on the Table 7. Correlations, values

show that "Significance" value is 0.618, indicating the existence of a statistically important relationship, and the "Pearson correlation" value is 0.795, indicating that there is a strong, positive, linear correlation between the variables. Hence hypothesis *H5:* There is a positive correlation between "level of patent as an important asset for the business" and "application for patenting", is validated. That is, since patent is an important asset for the business, it has required the application for patenting, in the company.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,364	2	,834
Likelihood Ratio	,605	2	,739
Linear-by-Linear Association	,274	1	,601
N of Valid Cases	99		

Table:6

Chi-Square test for H5.

Correlations between the variables are shown in the table below.

Correlation

		change in attention of company management	existence of policy to manage patent	development of strategy to manage patent	creation of formal structure to manage patent	application for patenting
patent as an important asset for the business	Pearson Correlation	,445	,378	,426	,257	,795
	Sig. (2-tailed)	,812	,137	,508	,171	,618

Table:7

Correlations.

Some important conclusions are given below.

Conclusions

Many small and medium sized companies in Albania are aware of the concept of patent and they know how to gain legal protection of their patent/s.

Most small and medium sized companies see their patent/s as very important for their businesses and in these companies management is continuously being focused on patent/s and patent/s mangement.

Despite tha fact that many small and medium sized companies see their patent/s as very important, many of them do not own any policies to manage their patent/s. Time after time companies have been applying for patenting and most of them see their patenting as very important.

Despite the fact that in many small and medium sized companies patent is becoming part of their business strategies, some of them own or created formal structures envolved in the mangement of their patent/s.

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