Web system and sales management in technology companies

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Abstract– The objective of this study was to know the relationship that exists between the web system and sales management in technology companies, through a systematic review between 2017 to 2022. Databases such as Scielo, Scopus, Ebsco and ScienceDirect were used for the study. The search for empirical studies in allowed the identification of 30 scientific articles directly related to the variables web system and sales management, the Prisma methodology was used; and after applying the exclusion criteria through the process in a flowchart were purged 19 studies for being within the exclusion criteria. As a result, 11 scientific articles were obtained for the analysis of our research. It is concluded that the companies that have implemented a web system achieved better results in sales management improving their profitability; this means that there is a significant relationship between the feasible ones because it has been found that the greater the investment in the use of these systems, the greater the sales management generating profitability.

Keywords-- Web system, management, sales, profitability.

I. INTRODUCTION

Globally, companies have become vital elements of growth, producing economy and work, in that order one of its business objectives is to provide customer satisfaction by improving product delivery, inventory control and sales management using computer systems [1]; [2]; [3].

Traditional companies fail due to insufficient use of systems in their business activities such as sales of technology equipment to their customers; therefore, it is vital to further strengthen business processes and prioritize business intelligence [4].

In that sense, it is worth noting that small businesses have become the backbone and the entrepreneurial spirit in a community, therefore they are vital for the rise of a stable economy because it offers improvements in the fields of technological acquisition, capital operation and expansion in terms of innovations. The market is unpredictable, so there is also the presence of more local and international competitors; and a scarce presence of human and also financial resource that threatens companies around the world that are engaged in the technological field [5].

It should be pointed out that most of the new companies in the market are starting their commercial activities and do not have sufficient resources to invest in the use of sales management systems, and are therefore limited to carrying out all their processes by hand on spreadsheets, which is a cause for concern [6]; [7]; [8].

In some countries, they have placed great importance on entrepreneurship, not only to support the creation of new businesses, but also to provide more job opportunities [9].

A New Zealand study on the impact of Internet connectivity on business productivity indicates that broadband adoption boosts business profitability by 7% to 10%; these effects are stronger in urban than in rural locations; and in high versus low knowledge intensity sectors [10]; [11]; [12].

On the other hand, a study conducted in Malaysia found that 1.3 million people belonging to the economically active population are involved in microeconomic operations, and that these activities allow for economic growth [13].

Previous research has shown the use of multiplatforms for product consultation, reports, stock control, and in this way to guarantee sales and obtain more customers in a competitive market [14]; [15]; [16].

Entrepreneurs are motivated and work very hard to move away from the poverty trap, government and other related entities should select and channel training programs to ensure the efficient use of systems in the management of their veins of enterprises [17].

Faced with this reality, the research question was formulated: what is the relationship that exists between the web system and sales management in technology companies between 2017 to 2022, and as the objective of this study was to know the relationship that exists between the web system and sales management in technology companies, through a systematic review between 2017 to 2022. For the study, the complete analysis of empirical articles was conducted after going through the criteria of inclusion, exclusion; and filters based on the research.

II. METHODOLOGY

The methodology used for the present research was a systematic review of the scientific literature and was based on the adaptation of the Prisma methodology [18]; [19].

Systematic reviews analyze empirical research and address a research question on one or more variables of interest [20].

In that order, the question for the development of the methodological process was: what is the relationship that exists between the web system and sales management in technology companies between 2017 to 2022, and as an objective was to know the relationship that exists between the web system and sales management in technology companies, through a systematic review between 2017 to 2022.

Study selection

The years 2017 to 2022 were taken into account, about studies related to the research "Web system and sales management in technology companies". The following inclusion criteria were considered:

a. Practical research articles on the Web system and sales management. In addition, all digital versions in English, Portuguese and Spanish. As for resources, the following databases were used: Scopus, ScienceDirect, Ebsco; and Scielo. This research made it possible to obtain 30 original scientific articles related to the study variables.

b. Publications of articles between the years 2017 to 2022; with the objective to know the relationship that exists between the web system and sales management in technology companies, through a systematic review between 2017 to 2022, during the last 5 years to address the problems raised in question.

c. For the start of the information search, the following were taken into account: the title and field of activity of the proposed topic. Keywords covering a broad aspect of the proposed topic were used: Web system, management, sales, profitability. The sample consisted exclusively of scientific articles related to the proposed variables.

For the development of the document search process, two steps were carried out:

a) First, a search was carried out in the databases Scopus, ScienceDirect, Ebsco and Scielo.

b) Secondly, the search string was filtered taking into account the title and keywords.

The following combinations were included in the search:

The search combination was used for Scopus
(TITLE-ABS-KEY ("Web System") AND TITLE-ABS-KEY (Web) AND TITLE-ABS-KEY ("Sales management") OR TITLE-ABS-KEY ("Web application") AND TITLE-ABS-KEY (Business) OR TITLE-ABS-KEY (Pymes))

The search combination was used for Scielo
Sistema web AND empresas comerciales
    Gestión ventas AND empresas

The search combination was used for Ebsco
Web application AND teaching
Web application AND Sales management
Web System AND Business OR Pymes

The search combination was used for ScienceDirect
Web application AND Business
Web System AND Sales management
    Pymes AND Gestion OR TIC

After collecting the scientific articles, the selected studies were coded.

TABLE I
DATA EXTRACTION METHOD

Study	Target	Conclusion
Network monitoring system	Propose a model involving a multi-agent architecture to optimize acquisition time.	A multi-agent system reduces data collection time by one-third of the usual.
Construction and development of organizational identity	Analyze the semiotic practices presented on the front page of the company's website.	The irruption of the Internet in the organizations influences the operational strategies, to position themselves as actors of the company to the context in which it is located.
Formalization of human management and productivity practices	To know the degree of formalization of human management activities and productivity.	Its relationship is productivity in the workplace; however, while it is an important factor in productivity, it does not directly guarantee better results.
Adoption of information and communication technologies	Establish a frame of reference from a business point of view, on the adoption of ICTs in SMEs.	The adoption of ICTs in SMEs contributes to the organizational, environmental and economic contexts.
Web system with integration and interoperability	Design a web system using the enterprise service bus.	It supports the development of information architectures and adapts to the new processes that occur in the organization.
Product analysis in SMEs	To know and detect the level of technological development of an industry close to becoming an Industry 4.0.	Knowledge of the specific products that make up Industry 4.0 would facilitate the definition of a technological adoption process.

Implementation and development of an integrated quality management system	Implement an integrated quality management system in order to achieve continuous improvement.	The research enabled the reorganization of key processes, which helps to track and monitor milestones and employee engagement.
Semantic web broker	Testing a semantic web runner for application protection against different conditions.	The study was able to detect certain race conditions in the applications in approximately 96.78% of the cases.
Impact of new tics as a loyalty medium	Explore the relationship of new technologies and the use of communication with consumer loyalty.	The research concluded that small and medium-sized companies can increase sales by knowing the time and satisfaction of consumers.
Exit value in equity-backed Technology startups	Analyze the impact of different exit options and human capital.	This study concluded that strategic exit decisions and human capital correlate with the value of emerging companies.
Digitalization, innovation and capacity absorption.	Increase awareness of the capabilities of companies to innovate and benefit from digital technologies.	As awareness of the possibility of digitization increases, so does the influx of entrepreneurs and funds.

III. RESULTS

The search for research articles was conducted in four specific databases:
Ebsco = 10
Scopus = 5
Scielo = 5
ScienceDirect = 10

This resulted in 30 original papers related to the research title "Web system and sales management".

Specifically, 10 research articles were identified in the Ebsco repository, 5 in the Scopus database, 5 in the Scielo repository and 10 in the ScienceDirect database.

Once the research articles were identified, 2 studies were eliminated due to access restriction.

As for the full-text articles excluded due to duplicity, none were found.

As a result, 28 research articles passed the eligibility test, but 12 had to be rejected after reading the title or abstract for not fitting the research topic. Unfortunately, after checking each of them in detail, 5 had to be excluded because their narrative did not focus on the study variables. After several

exclusion processes and a rigorous review, the final result included 11 scientific articles that have been the source of information for the present research. Five of them focused on explaining the different modeling techniques that exist for a non-relational database, three articles dealt with the differences between a relational and a non-relational database, and two articles focused on the importance of modeling in a database. The following image shows the flowchart of the sections described above.
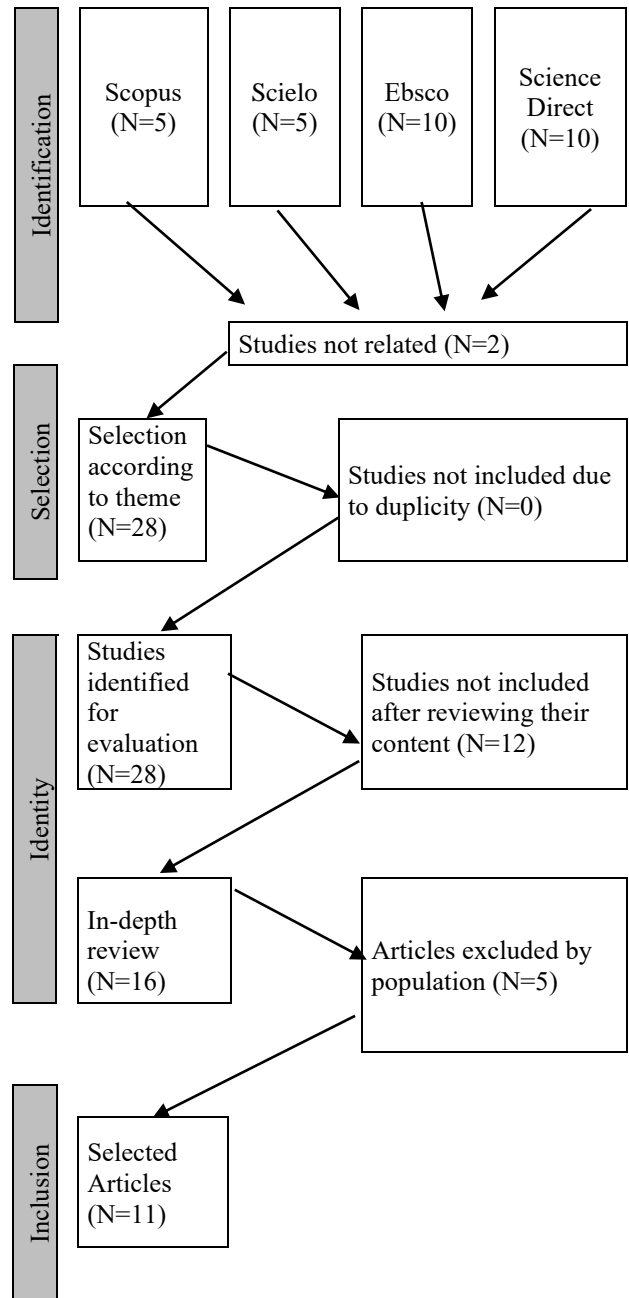

Fig. 1 Flowchart for item search and selection

Articles and publications

Based on the selected studies and according to the articles analyzed, 100% correspond to the area of systems engineering. According to the records made, 2 scientific articles correspond to the Ebsco database, 3 articles correspond to the Scopus database, 3 articles correspond to the ScienceDirect database and 3 scientific articles to Scielo.

TABLE II
ARTICLES AND PUBLICATIONS

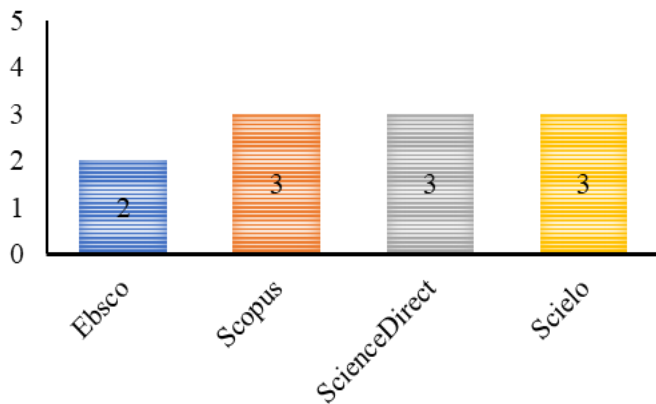| Database	Articles
Ebsco	2
Scopus	3
ScienceDirect	3
Scielo	3
Total	11

Fig. 2 Articles by Database

Year of publication

As indicated above, the research articles included correspond from the year 2017 to 2022; that is, the last five years. It is as follows, 1 scientific article in the year 2017, 2 from 2018, 2 from 2019, 0 in 2020, 0 from 2021 and 6 articles in the year 2022 respectively.

TABLE III
ARTICLES PER YEAR

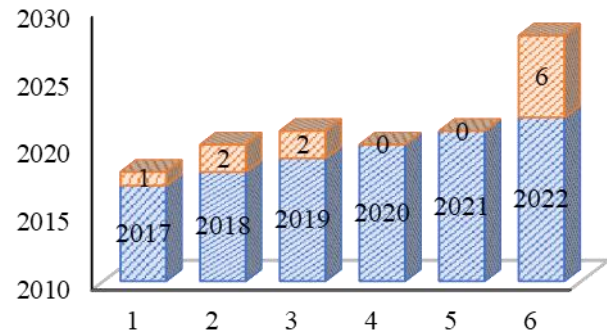| Publications by year	Number of items
2017	1
2018	2
2019	2
2020	0
2021	0
2022	6
Total	11

Fig. 3 Articles per year

Publications by language

In the analysis phase, according to the research criteria of the 11 selected scientific articles, the largest number are in English. This evidence allows us to infer that the research title is a very scarce topic in other languages and should therefore be worked on.

TABLE VI
PUBLICATIONS FOUND BY LANGUAGE

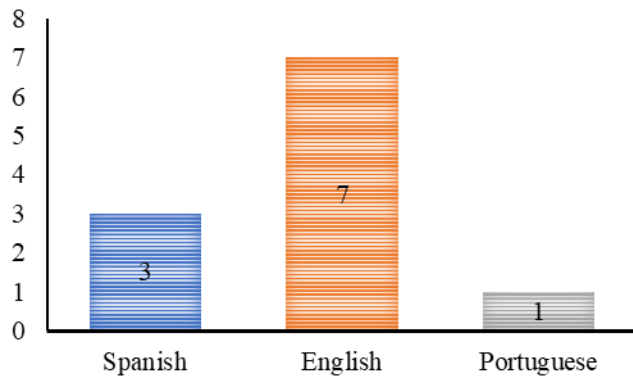| Publications found	Quantity
Spanish	3
English	7
Portuguese	1
Total	11

Fig. 4 Number of publications by language

IV. DISCUSSION

IT systems are strengthening business activities by reducing time in the sales process and aiming at customer satisfaction and brand loyalty for small, medium and large companies around the world [21]; [22]; [23].

Nowadays, more and more organizations are implementing new computer systems, strengthening sales, increasing profitability, better access during 24 hours to attend and send orders; achieving an efficient communication with our suppliers and customers [24]; [25]; [26].

The web system for sales management in technology companies allows you to make a quotation, see the availability of services, add a new user, choose brands and equipment of your preference, and register sales, organizing the system generally in two parts, the part that corresponds to the collaborators, and the part that is accessed exclusively by the users through the implemented Web site [27]; [28]; [29]; [30]; [31].

V. CONCLUSIONS

It is concluded that the companies that have implemented a web system achieved better results in sales management improving their profitability; this means that there is a significant relationship between the feasible ones because it has been found that, the greater the investment in the use of these systems, the greater the sales management will be generating profitability.

The web system for sales management in technology companies facilitates the quotation, observe the availability of equipment for sale, enter new users, and record sales made.

The web system can generally be organized in two. One is for the collaborators and the other for the users, thus guaranteeing better business administration.

In the analysis phase, according to the research criteria of the 11 selected scientific articles, the largest number are in English. This evidence allows us to infer that the title of the

research is a very scarce topic in other languages and that, therefore, it should be worked on.

It is important to note that there are limitations in the study, only covered it five years from 2017 to 2022 and worked with four databases.

For future studies, it is suggested to evaluate the possibility of performing a meta-analysis for greater robustness.

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