PMI® Project Management Institute: ¿Ayuda a la pequeña empresa mexicana de gestión de construcción a reducir sus errores? Caso Ceron®

PMI® Project Management Institute: does it help to the small Mexican company from construction management to reduce their mistakes? Ceron® case

PMI® Project Management Institute: Ele ajuda a pequena empresa de gestão de construção do México para reduzir os seus erros? Caso Ceron®

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Resumen

En México, el 75% de las pequeñas empresas fracasan antes de cumplir los dos años (Instituto Nacional de Estadística y Geografía, INEGI, 2016). Este tema afecta directamente a la economía de México, por lo cual el Instituto de Empresariado Eugenio Garza Sada del Tecnológico de Monterrey (ITESM) y la Escuela de Negocios EGADE (Escuela de Graduados en Administración y Dirección de Empresas) (Gasca, 2014), se les encomendó la tarea de realizar una investigación analizando empresarios que han fracasado en diferentes sectores. Se obtuvieron las cinco causas más comunes por las cual fracasan las pequeñas empresas mexicanas. Las principales causas fueron: ingreso insuficiente para subsistir y la falta de indicadores.

El objetivo principal de este trabajo es analizar las razones del fracaso de las pequeñas empresas mexicanas de dirección de obra, orientando a futuros proyectos el no repetir los mismos errores. ¿Existen metodologías administrativas de dirección de obra que ayude a las pequeñas empresas mexicanas en el desarrollo de proyectos exitosos? El PMBOK ® del PMI

® (Project Management Institute) es una guía de administración de Proyectos. El presente documento se enfoca en los servicios de administración de obra, enfatizando el entorno específico mexicano.

La implementación de la metodología de administración de proyectos se ve traducida en una reducción de sobrecargas y demoras de trabajo, definiendo el alcance del proyecto que contempla los cambios inesperados en el proceso, junto a la planificación real y los programas eficientes de ejecución, monitoreo y cierre en el proyecto. En pocas palabras, se transforma en un proyecto de calidad. El centro de la investigación y análisis de la presente investigación se centra en la pequeña empresa de dirección de obra Cerón®.

En conclusión, el presente trabajo pone en evidencia que el fracaso de las pequeñas empresas mexicanas de administración de obra, pudiera disminuir considerablemente, utilizando una metodología de administración de proyectos, en este caso se recomienda la metodología PMBOK® del PMI®. Al desarrollar la cultura de implementación en las pequeñas empresas mexicanas de esta metodología en la administración de proyectos en cada uno de los proyectos, el riego de fracaso se minimiza o anula.

Palabras clave: Proyecto, Fracaso de las pequeñas compañías mexicanas, PMBOK®, PMI®, gestión de proyectos y metodología de gestión de proyectos, gestión de la construcción.

Abstract

In Mexico, 75% of small businesses fail within two years (National Institute of Statistics and Geography, INEGI, 2016). This issue directly affects the economy of Mexico, because of this the Institute of entrepreneurship Eugenio Garza Sada of theMonterrey Institute of Technology and Higher Education (ITESM) and the EGADE Business School (Graduate School of Management and Business Administration) (Gasca, 2014), they were entrusted with the task of carrying out an investigation looking at entrepreneurs who have failed in different sectors. The five most common causes of failure in small Mexican companies were obtained. The main causes were: insufficient for subsistence income and the lack of indicators.

The main objective of this work is to analyze the reasons for the failure of small Mexican businesses in construction management, focusing on future projects, not to repeat the same mistakes. Are there administrative methodologies of project management that help small Mexican companies in the development of successful projects? The PMBOK® from PMI® (Project Management Institute) is a project management guide. This document focuses on the management services work, emphasizing the Mexican specific environment.

The implementation of the project management methodology is translated into a reduction of overload and work delays, defining the scope of the project which envisages the unexpected changes in the process, with real planning and efficient implementation programs, monitoring and closing the project. In a nutshell, it is transformed into a quality project. The center of research and analysis of the present research focuses on small business of Ceron® construction management.

In conclusion, this study shows that the failure of the small Mexican companies of construction management, could diminish considerably, using a project management methodology, in this case we recommend the PMI® PMBOK® methodology. Developing the culture of implementation in small Mexican companies of this methodology in the management of projects in each of the projects, the risk of failure is minimized or abandoned.

Key words: Project, Failure of smaller Mexican companies, PMBOK®, PMI®, project management and project management methodology, construction management.

Resumo

No México, 75% das pequenas empresas falham antes de seu segundo aniversário (Instituto Nacional de Estatística e Geografia, INEGI, 2016). Esse problema afeta diretamente a economia do México, para o qual o Instituto de Empreendedorismo Eugenio Garza Sada Tecnologico de Monterrey (ITESM) e da Escola de Negócios EGADE (Escola de Administração e Gestão) (Gasca, 2014) eles receberam a tarefa de conduzir uma investigação analisando os empresários que falharam em diferentes sectores. as cinco razões mais comuns que as pequenas empresas mexicanas falha obtidos. As principais causas foram: renda insuficiente para sobreviver e a falta de indicadores.

O objetivo principal deste trabalho é analisar as razões para o fracasso da gestão da construção pequena empresas mexicanas, orientando projetos futuros não repetir os mesmos erros. Existem metodologias de gerenciamento de projetos administrativos para ajudar as pequenas empresas mexicanas para desenvolver projetos de sucesso? O PMBOK ® PMI ® (Project Management Institute) é um guia de gerenciamento de projetos. Este documento se concentra no trabalho de serviços de gestão, enfatizando o ambiente específico mexicana.

A implementação da metodologia de gerenciamento de projetos é traduzido em uma redução de sobrecargas e atrasos trabalho, definindo o escopo do projeto, que inclui o inesperado no processo, com as mudanças de planejamento reais e implementação do programa eficiente, monitoramento e fechar o projeto. Em suma, ele se transforma em um projeto de qualidade. O centro de pesquisa e análise desta pesquisa centra-se na pequena empresa de gestão de construção Cerón®.

Em conclusão, este estudo mostra que o fracasso de pequenas empresas de gestão de obras mexicanas, poderia diminuir significativamente, utilizando uma metodologia de gerenciamento de projeto, neste caso, a metodologia PMI® PMBOK® é recomendado. No desenvolvimento da cultura de implantação em pequenas empresas mexicanas desta metodologia em gerenciamento de projetos em cada um dos projectos, o risco de falha é minimizado ou cancelados.

Palavras-chave: Falha Projeto de pequenas empresas mexicanas, PMBOK®, PMI®, metodologia de gestão de projetos e gerenciamento de projetos, gerenciamento de construção.

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Introduction

It is very common to find everywhere new ventures, unfortunately the failures are present in the majority of them. In Spain, 80% of the companies bankruptcy in the first five years in the United States of America companies have an average life of six years, while 30% fails to discharge its third year. In Latin America the situation is similar: in Argentina only 7% of enterprises becomes the second year of life and in Chile 25% of companies disappear in the first year (Velázquez, 2008).

Specifically in Mexico, there is a 75% of small businesses that fail before completing the two years of life. Definitely an alarming figure for pay special attention. There is an investigation conducted by the Institute of Entrepreneurship Eugenio Garza Lagüera of Tecnológico de Monterrey and the EGADE Business School (Gasca, 2014) where it is found as the first cause of failure "insufficient for subsistence income", in the financial area. A 65% of the entrepreneurs answered that yet and having had a good idea, did not leave enough money to maintain the accustomed standard of living. The second cause was in the administrative area, 50% of entrepreneurs fail for lack of indicators and lax financial forecast. Carol Enman, growth and expansion of business consultant, published in the journal Security Distributing & Marketing: "No company can be directed successfully only with pants. You can pay bills, covering wages and even live a dignified life. However, without a plan, you will not be prone to develop a valuable business viable and competitive" (Enman, 2014). As a third cause is the area of Marketing, in which failed successful mix of the 4P (Price, Product, Promotion and Place). The fourth cause of failure usually appears in the area of human resources, is the lack of proper leadership and lack of staff development in general. As a fifth and final cause, not so minor, are the external factors, which are headed by crime, insecurity and the economic crisis (Gasca, 2014).

There are a number of reasons why companies fail and one of them is lack of leadership, according to the PMI® (2014: 09) "the project manager is the person assigned to achieve the project objectives." (Hemlin and Olsson, 2011) through a variety of activities, such as group composition, resource acquisition, project management and organizational objectives, these will be successful in Their leadership.

The methodology used in the PMBOK® PMI® contains an ideal project management guideline for any company that has projects to develop. Specifically, this work aims to verify that projects using a project management guide based on the PMBOK® PMI® are by far the most successful projects. The methodology is applied to small construction management companies in Mexico, directly impacting on a project the groups of processes that go from the beginning, planning, execution, control and closure of each project, always keeping in mind the areas Integration, scope, time, cost, quality, human resources, communication, risk, procurement, and stakeholders that form the PMI® Basics Guide. (PMI®, 2014).

The research is carried out in the company Cerón®, headquartered in the State of Nuevo León, Mexico; Is a microenterprise dedicated to the Directorate of Work, has large areas of opportunity for change in its administrative procedures of the different departments. For this reason the company goes through difficult situations due to lack of quality in its services. These situations leave considerable footprint and economic losses. This company has several projects, each project leader, can decide whether to use some administrative methodology or not. The idea of analyzing this small business is to find factors that determine success or failure in the projects.

This study investigates, compares, and analyzes the potential for greater success using the PMBOK® basics guide. In the following sections we find four sections. The first section summarizes the literature involved in this article. The second part goes into the methodology and form of data collection, sometimes comparing other literature of the same approach, in the third section are the results. In the last section we find the conclusions obtained and recommendations.

Development of the model

Over time the focus has been on finding the factors that determine the success or failure of a project. Since 1967 Rubin and Seeling introduced these terms, followed in 1969 by Avots.

Among the most important basic factors are the project management factors, project factors, external factors, bidding method and human factor, all based on customer satisfaction (Forcada et al., 2008). The first stages are decisive for the success of the project, starting by declaring the scope of the project always taking into account time, cost and quality. It is also

suggested to take into account experiences of effectiveness in past projects and the degree of success focusing on improving the systems of administration, communication, planning and monitoring.

In March 2016 the company Cerón® carried out an investigation focused on the optimization of project management projects within your company. In order to find the main causes of failed projects, 12 professionals were surveyed, two project leaders, two project managers, two technical coordinators, two administrative coordinators, two Type 1 supervisors and two supervisors Type 2, in order to have a global vision. The profile does not require specific sex, which was indistinct. All the professionals had experience in different projects, as well as the know how to carry it out.

As a data collection instrument, a survey was conducted. This was presented in writing which included 10 questions related to the methods, processes, follow-ups and closures that are implemented in the company Cerón®, to carry out the project management. The survey was part of descriptive research, consisting of multiple-choice questions. That way the data was counted. Subsequent to the application of the survey, the grouping of the answers and the analysis of data were continued.

During the course of the survey the main question or general question was focused on answering the basis of the research and the subsequent questions to reinforce it. General question: what is the main cause why the project was not successful? In the next section the results and interpretation of the same are presented.

Results

As mentioned previously, 12 Cerón® professionals were surveyed with regard to the way in which the assigned projects were carried out in the small project management company. The results of the 10 questions are described below.

The first data to be investigated was the cause (s) of the project failures, The question was: what is the main cause why the project was unsuccessful? Respondents reported as the first cause the lack of a methodology or guide in scope, time, cost, quality, communication and risk control. Secondly, the definition of adequate resource estimation and duration of

activities was named, which became a deficient definition of goals and objectives. As a third cause, the form of re-works was named, which leads to generate more costs and poor quality due to the speed of the times. In the fourth term, leadership is named. It is important that the leader directs and effectively manages the work of the project, integrating the team as a single entity. Fifth was the lack of analysis on qualitative and quantitative risks. Sixth, we find poor communication in the project, deficiencies in the information process.

The second research question, which is very closely related to the result of the first question, is: is an implementation plan implemented in the projects? Fifty-eight percent of the respondents answered that in less than 50% of the projects an implementation plan is implemented, 34% answered that they always have an implementation plan and are implemented, while the remaining 8% answered that it is never implemented .

The third question was: are there any overruns in your projects? Fifty-eight percent of the respondents answered that less than 50% of projects have an overhead, while 25% is within the initial budget, the remaining 17% has an over-cost of between 50% and 100%.

The fourth question focused on project time: do projects exceed the proposed initial time? Fifty percent of the respondents answered that less than 50% of the projects exceed the initial times, while 25% is within the established time, 17% reported that there are projects that exceed the time between 50% and 100% , While the remaining 8% reported that there are projects that double the proposed time.

The fifth question focused on the history or knowledge of past projects so as not to make the same mistakes: do you consult any historical documentation on similar projects? 66% of respondents answered that there is no historical documentation available for consultation. 17% reported that they do have historical documentation and are consulted, while the remaining 17% reported that they do have documentation but are not consulted.

The sixth research question was related to the qualitative and quantitative risk analysis of the project. 50% reported that in less than 50% of the projects a risk analysis is performed, while 25% performed the analysis between 50% and 100% of the projects, 17% of the rest of the respondents reported that they did not A risk analysis is carried out in their projects.

In the seventh, those involved were asked: are controls carried out in the project processes focused on the initial scope of time, costs, quality and risk? Fifty percent of the respondents reported that they use standardized controls for all projects, 17% reported having different controls, but they are not in all areas, while 33% reported never having controls in the processes of Projects.

Moving on to the eighth point, focused a little more on the area of management methodology used in the company, they were specifically asked to name what methodology they use in their projects when conducting a management guide. 66% reported that they did not use any methodology in their projects, 17% reported using PRINCE2® (Projects IN Controlled Environments), while the rest replied that they use the PMBOK® PMI®.

The ninth point is related to the answer of point eight: if your previous answer was positive, inform in which percentage they implement PMBOK® methodology of PMI® in their projects. Fifty percent reported that the methodology was fully implemented throughout the project process, while the remaining 50% reported that they only used it in certain areas.

The last question was linked to answer nine: what percentage of the total number of projects using the PMBOK® PMI® methodology are considered success projects? 100% of the respondents reported that whenever they have used the PMBOK® PMI® methodology at its best, the projects have been considered successful.

Conclusions and recommendations

In this study the first thing to examine were the causes of failure in the projects of small construction management companies. Finding the lack of good project management as described (Campero and Alarcón, 2014). Companies require a guide describing the scope of each of the stages of the project. This lack of guidance causes that in general there are in Mexico 75% of companies that fail before reaching the two years as the (INEGI, 2016).

Particularly, the small construction management company Cerón®, whose sample was composed of 12 professionals, was analyzed. The result showed that the use of a project management methodology is very low, which is reflected in cost overruns, Jobs, frustrations, poor project quality and therefore project failure.

Respondents listed the following causes of failure, projects that exceed budgeted initial time, do not define scope correctly in times and costs, communication between areas is poor, most projects do not have a well-defined implementation plan, There is no good qualitative and quantitative risk analysis, they do not consult previous projects (history) avoiding repeat mistakes, monitoring during the whole process in the projects is very poor, always working on the urgent and not on the important, and Finally, it is evident that most projects do not have a methodology or project management guide, resulting in poor quality projects.

The results of the survey showed that on the occasions when PMBOK® project management methodology was implemented, the result was a successful project.

In recommendation with the result of the present study, it is accepted that the implementation of a project management methodology in small Mexican construction management companies would result in a successful project.".

Bibliographic Review

Proyect

Projects are made up of a set of activities in which physical and human resources are used to produce goods or services in a given time. The project has costs and benefits that can be identified (FAO, 2002). A project is temporary in the sense that it has defined start and end times, and therefore scope and resources (PMI®, 2014).

Project management

It is the application of skills, knowledge, techniques and tools to project specific activities to fulfill that a project requires (PMI®, 2014). The project administration or direction teaches to take advantage of planning and programming techniques to order the sequence and timing of actions, will provide the basis of analysis to predict the results we can expect from these complex resources depending on the type of organization . Command ability, staff adherence, and conflict avoidance will highlight the importance of knowing how to make decisions and then control the course of action. In summary, the development of the skills to manage will take into account the technical capacities applied to the project, so that the whole is efficient (Campero y Alarcón, 2014).

PMBOK®

El PMBOK®). Project Management has always been practiced informally, but began to differentiate itself as a profession in the mid-20th century. Today is the collection of processes and areas of knowledge generally accepted as best practices within Project Management (PMI®, 2014).

Table 1 (Annex) describes Project Management Processes by Areas and Process Group Management. It recognizes 47 project management processes, which are divided into 5 groups of basic processes and ten areas of knowledge.

PMI®

It is a non-profit organization founded in Pennsylvania, USA. Founded in 1969, more than 2.9 million professionals working together around the world, is located in 185 countries. It is the largest database of content on Project Management in the world. If you are part of the PMI® family you have an International Human System (HSI) that provides comparative research organizations, which are used to advise businesses and governments (PMI®, 2016).

Construction Management

It is the function that the professional performs by controlling the faithful interpretation of the plans and the technical documentation that forms part of the project, and the revision and extension of the certificates corresponding to payments of work in execution, including the final adjustment of the same ones (Butlow, 2004).

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ANEXO

Anexo 1

Áreas		Grupos de Procesos				
		Inicio	Planificación	Ejecución	Control	Cierre
	Integración	-Desarrollar el Acta de Constitución del Proyecto	-Desarrollar el Plan para la Dirección del Proyecto	-Dirigir y Gestionar el trabajo del Proyecto	-Monitorizar y Controlar el Trabajo del Proyecto -Realizar el Control Integrado de Cambios	-Cerrar el Proyecto o Fase
	Alcance		-Planificar la Gestión del Alcance -Recopilar Requisitos -Definir el Alcance -Crear la EDT		-Validar el Alcance -Controlar el Alcance	
	Tiempo		-Planificar la Gestión del Cronograma -Definir las Actividades -Secuenciar las Actividades -Estimar los Recurso de las Actividades -Estimar la duración de las Actividades -Desarrollar el Cronograma		-Controlar el Cronograma	
	Costos		-Planificar la Gestión de Costos -Estimar los costos -Determinar el Presupuesto		-Controlar los Costos	
	Calidad		-Planificar la Gestión de Calidad	-Realizar el Aseguramiento de Calidad	-Controlar la Calidad	
	Recursos Humanos		-Planificar la Gestión de Recursos Humanos	-Adquirir el Equipo del Proyecto -Desarrollar el Equipo del Proyecto -Dirigir el Equipo del Proyecto		
	Comunicación		-Planificar la Gestión de las Comunicaciones	-Gestionar las Comunicaciones	-Controlar las Comunicaciones	
	Riesgos		-Planificar la Gestión de Riesgos -Identificar los Riesgos -Realizar el Análisis Cualitativo de Riesgos -Realizar Análisis Cuantitativo de Riesgos -Planificar la Respuesta a los Riesgos		-Controlar los Riesgos	
	Adquisiciones		-Realizar la Gestión de Adquisiciones del Proyecto	-Efectuar las Adquisiciones	-Controlar las Adquisiciones	-Cerrar las Adquisiciones
	Interesados	-Identificar a los Interesados	-Planificar la Gestión de los Interesados	-Gestionar la Participación de los Interesados	-Controlar la Participación de los Interesados	