



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Master

Date

Sunday

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Course Code

(PMG510)

Project Risk Management

Instructions:

- اخر موعد للتسليم هو يوم السبت 08-05-2021 في تمام الساعة 9 مساءً.
- الإجابة متاحة باللغة الإنجليزية أو اللغة العربية مع مراعاة أن تكون المصطلحات العلمية باللغة الانجليزية.
- يتم تسليم المشروع في صيغة ملف pdf مع الالتزام نموذج الجامعة ولن تقبل أي مستندات أخرى.
- يجب مراعاة أقسام البحث الرئيسية (مقدمة Introduction، دراسات علمية سابقة Literature Review، طريقة البحث Methodology، النتائج والمناقشة Results and Discussion، وأخيراً المراجع References. وان كان هناك ملحقات Appendices يتم إضافتها)
- يجب الالتزام بـ Theme موحد كما يلي:
- حجم الخط 12.
- نوع الخط Arial.
- لون الخط أسود.
- المسافة بين الأسطر line spacing 1.5
- عدد صفحات البحث (لا يقل عن ثلاث صفحات ولا يزيد عن ست صفحات).

Instructor's Name: Eng. Mosaab M. Hamed

Project:

Risk Identification and Analysis (Based on the project you chose in APM)

The objective of this report is to identify project risks, prepare a risk probability matrix, and carry out an analysis of selected risks. Referring to the project you select in **Advanced projects management APM course**, your task is to prepare a risk management plan that identifies potential risks in **the selected stage of the project** and identify risk management strategies.

From the course content and readings, you know that the overall purpose of risk planning is to anticipate possible risk events and be ready to take appropriate action when risk events occur—to eliminate or reduce negative impacts on the project.

You may wish to begin this exercise with a brainstorming about potential risks to get candidate risks “on the table” for consideration. And then identify and refine that wording for risks that have some realistic chance of occurring in this stage. For example, potential weather problems present a real obstacle to completing field data collection by the planned completion date. It is also an issue that the project manager will ultimately have to plan for, as opposed to other issues such as a major disaster (e.g., your office burning down), is not a high-enough probability event that requires much time in planning. As described below, you will select several of the identified risks and carry out a risk analysis.

You will use the distilled list of risks to make a risk probability/impact matrix. The matrix will have at least three categories (high/medium/low) for probability and impact.

Remember that it is important to name risks effectively—use words that describe the risk event and point to the impact on the project (e.g., “injury of field technician disrupts data installation work”).

After completion of the risk matrix, document a risk analysis for the selected risks. This detailed documentation for that selected risk will include:

- a description of the risk and potential impacts (schedule, quality of work, cost, etc.) on the project.
- indicators or triggers that would be monitored to help identify the risk as early as possible.
- specific risk response strategies to take.

Using probability and impact matrix calculate the **Expected Monetary Value (EMV)** for all risks that have the impact in terms of cost \$\$.

Best of luck...

المشروع:

التعرف على المخاطر وتحليلها (بحث مبني على مشروعك الذي اخترته في مادة ادارة المشاريع المتقدمة)

الغرض من هذا التقرير هو التعرف على المخاطر المحيطة بالمرحلة التي تختارها المرحلة من مراحل مشروعك (نفس المرحلة التي اخترت التطرق لها في مشروعك لمادة إدارة المشاريع المتقدمة Advanced project management) حيث أن مهمتك هي تحضير خطة متكاملة لإدارة المخاطر تشمل التعريف بالمخاطر المحتملة التي تحيط بتلك المرحلة وتحضير مصفوفة احتمالية المخاطر ومن ثم القيام بالتحليل لهذه المخاطر المختارة وتحديد استراتيجيات ادارة المخاطر المناسبة لكل خطر على حدة.

من محتويات المقرر والمصادر الأخرى المتاحة أصبحت تعلم الان أن الغرض العام لمرحلة التخطيط للمخاطر هي توقع أحداث المخاطر المحتملة والتجهز لاتخاذ ردة الفعل المناسبة عند وقوع الخطر – لمنع أو تقليل الآثار السلبية على المشروع.

قد تحبذ بداية هذا البحث بعصف ذهني عن ماهية المخاطر التي قد تحيط بتلك المرحلة من مراحل مشروعك, وذلك للحصول على قائمة بتلك المخاطر. ومن ثم تحديد وتصفية هذه القائمة للوصول إلى قائمة مختصرة بالمخاطر التي لها فرصة واقعية أكبر في الحدوث. على سبيل المثال: المشاكل الجوية المتوقعة والتي تمثل عقبة حقيقية أمام اكتمال جمع البيانات من المواقع في أو قبل الوقت المحدد، هذه تعتبر مشكلة على مدير المشاريع أن يضعها في الحسبان. من ناحية أخرى، فإن المخاطر غير الواقعية مثل الكوارث الطبيعية والأعاصير (تلك التي تسبب حريقاً بمكتبك وفقدان الأوراق المهمة) ليست لها احتمالية وقوع عالية وبالتالي لاتستدعي تضيق الكثير من الوقت في التخطيط لها. كما سيتبين لك، ستقوم باختيار عدة مخاطر من تلك التي قمت بالتعرف عليها لتحليلها.

ستقوم باستخدام هذه القائمة المختصرة لعمل مصفوفة المخاطر (الاحتمالية/الأثر). المصفوفة ستحتوي على الأقل على ثلاث تصنيفات (عالي/متوسط/منخفض) للإحتمالية والأثر.

لاتنس استخدام أسماء تصف طبيعة المخاطر بصورة فعالة – قم باستخدام كلمات تصف الحادثة الخطرة وتشير الى أثرها على المشروع (مثل: إصابة أحد الفنيين في الموقع مما يؤثر على أعمال التركيب).

بعد انتهاءك من مصفوفة المخاطر، قم بتوثيق تحليلك للمخاطر المختارة. هذا التسجيل المفصل للمخاطر يجب أن يتضمن:

- وصف للخطر واثاره المحتملة (الجدولة، جودة العمل، التكلفة، الخ)
- المؤشرات والمحفزات التي يجب مراقبتها للمساعدة في التعرف على هذا الخطر قبل وقوعه
- تفصيل للاستجابة المقترحة للتصدي لهذا الخطر

باستخدام مصفوفة الاحتمالات والتأثير ، احسب **القيمة النقدية المتوقعة (EMV)** لجميع المخاطر التي لها تأثير من حيث التكلفة \$\$.

مع تمنياتي بالتوفيق..

Introduction

4 years ago, I was in Cleveland city of Ohio and I was addicted to a tea house place called *ALJABRA*. which provides many different of beverages and cousin dishes from over all the Mediterranean concepts. So, I have always thought to establish a such place like it in my home town in Saudi Arabia and make *ALJABRA* as its ideal. This project will express the risk of opening a tea house in Jizan and how do I manage the risks that may occur? How do I identify the risks and what are the plans of solving the difficulties that may happen?

The risk has been defined as a “The combination of the probability of an event and its consequence.” And the consequence can be range between either positive or negative. (IRM) Additionally, sometimes there is a third possibility of risk that related to uncertainty of outcomes (Hopkin, 2018). Project risk management focuses on identifying, developing and analyzing strategies for how to respond to the project efficiently and effectively. On the other hands “the goal of risk management is not to be avoided risks at all costs, but to make sure it will be well informed decisions as to what risks are worth taking to respond these risks in appropriate manner”. (Marchewka, 2014).

List of some types of risk that may occur to this project:

- Financial risk
- Construction risk
- Construction quality risk
- Operating risk
- Design risk

Literature Reviews:

Risk management can be identified in first phase of risk management processes of the project which can lead to effective risk management solutions. (Tchankova, 2002) Risk management will need to anticipate some type of risks that may face in the project and develop appropriate risk mitigation and financing strategies for them, however, ignorance is not an option for new sustainability risk when it happens. As Anderson expresses “since many sustainability risks are new and emerging, the best strategies for dealing with corporate sustainability might not be apparent. But in a world where the rules of business are changing faster than ever, now is not the time for ignorance”. (Anderson, 2006)

Dealing with project risks by using type of controls such as directive, preventive, detective and corrective, when the impact and the likelihood of the risk may occur depending in stages of the project and how to solve and use the type of control in that time. The project manager has to put in his mind all the possibilities of risk and how to respond to it and what is the mitigation plan or action for each one by following:

1. The deviation of risk management plan

2. The impact and what is the action of response and mitigate plans
3. Alternative response strategies that may use to keep the project stable
4. Risk matrix and other technic may use to make response plan

Methodology:

In this project we will go through some processes such as 8Rs and 4Ts. Which are leading to find probabilities of risk and its mitigate. The most effective way to not losing or wasting time is to make a brain storming for my project which directs me to identify some possible risks that we may face on establishing a tea house in Jizan. Making a list of possible risks are recommended.

Risk that this project will focus on:

1. Choosing the district of location in Jizan city (cheap area leads to less incomes OR active areas which are expensive lead to high incomes possibility)
2. Choosing unexperienced contractor to construct the tea house (has no history)
3. Adding more facilities and decorations (cost a lot)
4. Choosing inadequate materials of constructions (lead to lose more money and re-habitations plan may happen)
5. COVID-19 period time and other pandemic (leads to decrease the incomes)
6. Choosing a good chief (leads to worthy reputation)
7. Making well menu (leads to good diversity of choosing)
8. Comfortable dining area (increase the loyalty of costumer)

After categorization some of the risks possibilities that have mentioned above, the risk matrix should be used (to determine the probability and the impact of each risk on the list). Then the risk register should be done. (low = 0 to 0.29, medium = 0.3 to 0.69 and high = 0.7 to 1.00).

Table 1

No.	Risks possibility	Probability	Impact
1	Choosing a cheap district of location in Jizan city (cheap area leads to less incomes OR active areas which are expensive lead to high incomes possibility)	0.40	0.80
2	Choosing unexperienced contractor to construct the tea house (has no history)	0.35	0.60
3	Adding more facilities and decorations (cost a lot)	0.35	0.25
4	Choosing inadequate materials of constructions (lead to lose more money and re-habitations plan may happen)	0.10	0.70
5	COVID-19 period time and other pandemic (leads to decrease the incomes)	0.75	0.70
6	Choosing an unskilled chief (leads to a pathetic reputation)	0.40	0.70
7	Making an uninteresting menu (leads to weak diversity of choosing)	0.25	0.50
8	Uncomfortable dining area (decrease the loyalty of costumers)	0.10	0.50

Moreover, collecting and evaluating the risks, then to evaluate the severity which leads to have a well thinking of the response plans for all risks as individually and trying to mitigate the impacts. To make a good calculating, this project has to use risk matrix and Bow-Tie to find the response plan.

Figure 1

Probability	0.7 - 1	High	High	Medium
	0.3 – 0.69	High	Medium	Low
	0 – 0.29	Medium	Low	Low
		0.7 - 1	0.3 – 0.69	0 – 0.29
		Impact		

Figure 2

It is about the project's risks according to table 1

Probability	0.7 - 1	5	6	
	0.3 – 0.69	1	2	(3 and 8)
	0 – 0.29	4	7	
		0.7 - 1	0.3 – 0.69	0 – 0.29
		Impact		

Figure 3

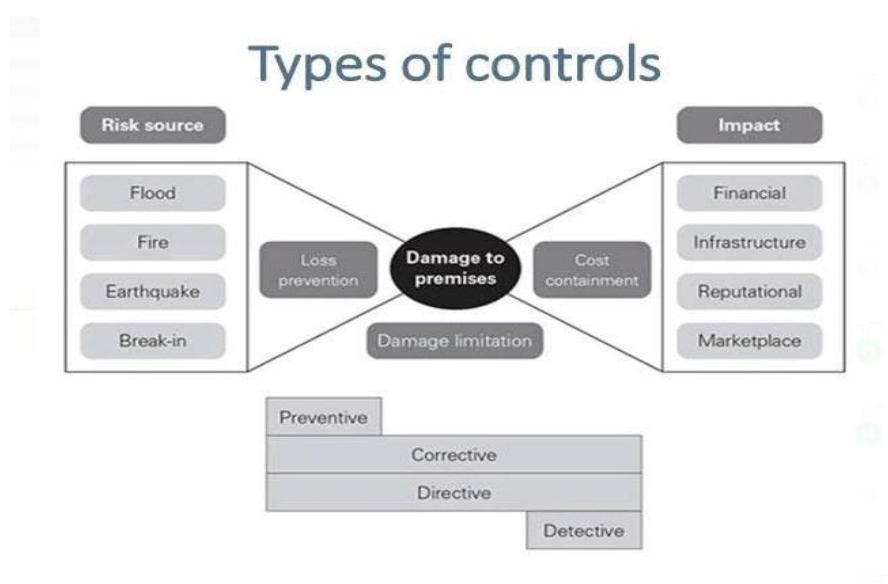


Table 2

No.	Risk Possibility	Probability	Impact	Severity	Response Plan	Mitigate Action
1	Choosing a cheap district of location in Jizan city	0.40	0.80	High	Deciding to study all commercial districts in Jizan to find better place	Choosing an attractive area that have many brands and good deal for Tea house's budget
2	Choosing unexperienced contractor to construct the tea house	0.25	0.60	Medium	Deciding to find better contactors to develop the Tea house infrastructure	All the Tea house needs is to evaluate all contactors by their previous works and reputations
3	Adding more facilities and decorations	0.35	0.25	Low	Looking for more providing suppliers and their price	Trying to attract customers by good facilities
4	Choosing inadequate materials of constructions	0.10	0.70	Medium	Sometimes it has to follow the role of value for money which may lead to bad outcomes	Trying to find the best material suppliers and take the one which has better discount or offers
5	COVID-19 period time and other pandemic	0.75	0.70	High	It has to have contact the ministry of health and other government sectors to try to avoid more losses	Providing take away food and making a schedule discount plans for its cousins and dishes to make stability of incomes during that time
6	Choosing an unskilled chief	0.40	0.70	High	Sometimes it may happen because the CV you read and no time to have a trainee time for employee	Improve his skills by making an opening time for trying and develop the menu according to Jizan's culture
7	Making an uninteresting menu	0.25	0.50	Low	Usually before making any menu the owner and the manger has to have a better look to every competitors' menus	Try to NOT making more items in the menu until the Tea house place puts its food on the ground and it has a gradually increasing reputation
8	Uncomfortable dining area	0.10	0.50	Low	Usually trying to find a better provider and designer to give a good information about the materials that will be used in the dining area	Developing and making a contract with a good cleaning company to mitigate and keep the dining area as it is in a perfect way

Result:

On this section firstly to focus on the risk mitigation as it is seen on table 2 and to identify the mitigation which describes actions that owner's representative that take to reduce the impact of identified risks if they occur. (The National Academies press, 2005) Then, the EMV cost has to be calculated for this type of project such Tea House Place. The numbers that may be seen are not the exact cost but it is as an estimating prices based on the experience that I had before. Furthermore, the potential impact on the plan is 207500 SR while the contingency cost is 74125 SR as it can be seen on table 3.

Table 3

No.	Risk	probability	Impact cost by SR	Risk contingency by SR
1	Choosing a cheap district of location in Jizan city	0.40	25000	10000
2	Choosing unexperienced contractor to construct the tea house	0.25	75000	18750
3	Adding more facilities and decorations	0.35	40000	14000
4	Choosing inadequate materials of constructions	0.10	12500	1250
5	COVID-19 period time and other pandemic	0.75	35000	26250
6	Choosing an unskilled chief	0.40	5000	2000
7	Making an uninteresting menu	0.25	2500	625
8	Uncomfortable dining area	0.10	12500	1250
	Total		207500	74125

Discussion

In the table 2, the response plan result can be shown and how to mitigate the risk by sometimes developing or in another hand looking for discount and some offers. It is an essential to focus on the red and orange colors on the table than the green one and be aware of that risks more than the greens. Focusing on red and orange because of the high probability of happening and the impact that may occur which needs to face it and solve it before it may happen. Additionally, on table 3 the result of risk cost on the budget can be seen. The higher number was for not choosing a good and experience contractor who might save the project's money, which has one of the higher impact but not on the probability of happing. Thus, the highest one of probability was Covid-19 period time and other pandemic which takes that because it might collapse the project or at least put it in a weak shape. On the other hand, the highest impact was choosing a cheap district of location in Jizan city which might lead you to obtain less of incomes all year. At the end, making a good study for your business can help you to avoid wasting money and time for your project or the project that you are responsible of.

Reference

1. P.Hopkin. *Fundamentals of Risk Management Understanding, evaluating and implementing effective risk management* 5th Edition 2018
2. Marchewka. *Information Technology Project Management Providing Measurable Organizational Value* 5th Edition 2014
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5. Dan. R. Anderson. The critical importance of sustainability risk management 2006