TITLE OF YOUR BACHELOR THESIS

R&D & Financial Performance in the Fast Food Industry: Case of McDonald's

Bachelor Thesis

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Objective of the Thesis

The objective of this thesis is to examine whether McDonald's investment in research and development (R&D) contributes positively to its financial performance. R&D is often associated with technology-intensive industries and its effectiveness in the fast-food sector is less understood. The thesis aims to assess the relationship between R&D spending and two key financial indicators: revenues and net income. Moreover, the thesis will also incorporate SG&A expenses as a control variable in order to enhance the model fit. The study provides a clearer picture of the direct and indirect impacts of R&D. Ultimately, the objective is to generate practical recommendations for McDonald's innovation strategy.

Abstract

This thesis seeks to investigate the impact of McDonald's research and development (R&D) expenditure on its financial performance. The thesis focuses on revenues and net income. Despite its utility as a strategic tool, R&D's role remains less explored in the fast food industry. The thesis will use McDonald's financial data and employs quantitative case study methodology, applying multiple regression analysis to assess the relationship between R&D spending, revenues, and net income, SG&A expenditure included as a control variable.

The findings indicate that R&D expenditure does not have a statistically significant positive effect on either revenues or net income during the study period. In fact, the results suggest a weak negative association, highlighting that short-term financial performance is largely driven by SG&A rather than R&D. This implies that R&D in McDonald's may contribute more indirectly, such as supporting long-term operational efficiency and digital transformation.

The study concludes that McDonald's should continue to invest in R&D but align these efforts with strategic priorities such as health, sustainability and technology. At the same time McDonald's should focus on improving the integration of innovation outcomes into marketing campaigns to enhance measurable financial returns.

Key words

McDonald's, Research and Development (R&D),Financial Performance, Revenues, Net Income, SG&A Expenditure, Regression Analysis, Innovation Strategy, Fast-Food Industry, Strategic Management

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1. Introduction

In the modern competitive landscape of business it is not uncommon to read about companies seeking to find new ways for competitive advantage via spending a lot of money on their research and development strategy. Adopting a research and development strategy is a commons strategy nowadays; the reason is that this strategy is able to provide companies with a competitive edge like no other strategy. Consider porter's generic strategies, in order to achieve maximum differentiation, the research and development strategy is advised to be adopted. "i) process R&D investments increase with the degree of product differentiation and firms invest more in product R&D when they can do process R&D than when they cannot; (ii) Bertrand firms have a stronger incentive for product R&D whereas Cournot firms invest more in process R&D; and (iii) cooperation in product R&D promotes both types of R&D relative to competition whereas cooperation in both types of R&D discourages R&D relative to cooperation in just product R&D" (Lin and Saggi, 2002).

Thus, the research and development strategy is used to gain differentiation over the competition. The R&D strategy consists of research and development and there is a distinction between these two processes that must be highlighted in order to give the reader information about the nature of this strategy. Research is defined as "a learning process. This is when we try to define the ways that things work and truly understand them. This is the time for wide open questions" (Forbes, 2018). On the other hand, development is "about achieving function. This is when we consider how we can bend the natural order of the universe to our will, to serve our purpose. This is the time for narrow focus" (Forbes 2018).

1.1 McDonalds

McDonalds is an American multinational company that operates in the fast food industry. The company is popular for its franchises all over the world and has a very strong brand equity which his represented by its Yellow M logo. The company has 210000 employees and operates in 100 countries and has around 37,000 outlets globally. In 2018, the total revenues of McDonalds

were $21 billion with a total net income of $5 billion which improved form 2017 where it was approximate $4 billion (Annual Report McDonalds, 2018).

1.2 Research Rationale

Firstly, the rationale is discusses the purpose of choice of McDonalds – in general, the R&D strategy is more popular in the tech industry and is not really seen as a popular industry for a restaurant. In reality, McDonalds is very serious about its R&D strategy that it is spending around $2.4 billion on R&D development in 2018. The company's management explains that "Our development plans also include the opening of about 1,000 new McDonald's restaurants, 75 percent of which will be funded by our expanded network of developmental licensees and affiliates around the world" (QSR, 2018). According to Craf (2018), Healthcare and technology are the largest industries that sped on R&D and restaurants and retailers are not even on the list when compared ot the spending on R&D by healthcare companies for instance.

That makes the decision of McDonalds to utilize the R&D strategy to be particularly interesting. In other words, does this strategy work for a company in the restaurant industry to spend that much money on R&D? Hammad (2012) argues that the R&D strategy is not considered an effective strategy for companies that do not engage in product development activities and thus are more appropriate for tech companies. On the other hand, researchers such as Cassiman (2006) argued that the R&D strategy is a necessary component for any company operating the modern business environment. In other words, in order to achieve a competitive advantage, regardless of the industry, companies must adopt at least a degree of the R&D strategy.

Therefore, this brings the discussion back to the business rationale or the research problem that this case wants to investigate and that is to understand whether adopting the R&D strategy for a company such as McDonalds is considered an effective strategy? Does it really work? Shouldn't McDonalds think of ways to market its product or the change the ingredients of the products? The McDonalds problem is caused by environment pressures via changes from the social and political environment via the changes of how people perceive fast food and the regulations that are impacting these industries. Is the R&D strategy the effective way to deal with this issue? The ramifications of such a strategy can be hard on McDonalds and that's why it makes sense to investigate whether this strategy has been effective or not. In other words, McDonalds can lose

grip on the market today by concentrating on the wrong strategies and at the same time McDonalds can spend a lot of money on issues and areas that can improve its cost structure, increase its sales rather than spend it on R&D.

The spirit of this dissertation is at the business strategy aspect of business. According to Johnson et al., (2016), identifying the strategic direction of the company is one of the most important activities that the management can involve itself in. investigating and assessing the business environment is an important element that can lead to improved decision making processes that can allow the company better spend on strategies.

1.3 Research Aim

The aim of this research is to investigate the impact of the R&D strategy expenditure of McDonald's on its financial performance.

1.4 Research Objectives

- Assess the usage of R&D by McDonalds
- Assess the financial performance of McDonalds
- Investigate the impact of R&D expenditure on financial performance of McDonalds
- Provide recommendations for McDonalds concerning its usage of the R&D strategy

1.5 Research Questions

1. What is the impact of R&D expenditure on total revenues?
2. What is the impact of R&D expenditure on net income?

1.6 Hypotheses

1. There is a significant positive relationship between McDonald's R&D expenditure and its total revenues.
2. There is a significant positive relationship between McDonald's R&D expenditure and its net income.

2. Theoretical Foundation

The academic interest in the impact of R&D on corporations has been insignificant and wide lately since the expenditure on R&D has been soaring lately. The total spending on R&D in 2023 reached $3 trillion (WIPO, 2024) ; About 10 countries account for 80% of spending. As part of the Sustainable Development Goals (SDGs), countries have pledged to substantially increase public and private R&D spending as well as the number of researchers by 2030" (UNESCO, 2018).

For instance, researchers such as Sougiannis, (1994), Toivanen et al., (2002), Pindado et al. (2010) and Duqi and Torluccio, (2011) analyzed the impact of R&D expenditure eon corporate value. This type of research papers were very popular because they analyzed the idea that the R&D would improve the value of the company and would trigger investors to buy the stocks of the company. Note that the other researchers early on such as Sougiannis (1994) found an insignificant correlation even though the same method was used by the researchers and the same methodologies were used. Perhaps the research was the behavior of the stock market – for instance, Duqi and Torlucio(2011) made an analysis of the post economic recession period were the majority of the company was actually improving slightly after they have collapsed already. This assessment brings to light the importance of analyzing the research of the empirical papers in light of the context that they have been created in.

But the impact of R&D spending on the financial performance is seen from a different perspective. Researchers found that the impact of R&D on future performance is very variable and not really stable. For instance, Pandit et al., (2009) found that "the connection between R&D efforts and future earnings is easier to be perceived by embedding information about the productivity of a company's R&D outlays." Kothari (2002) was another paper that attempted to investigate this issue and found that there are consistent issues with the idea that as the R&D expenses increase the volatility of future earning and financial performance becomes further more variable. Amir et al., (2007) further investigated this issue and found that: "The authors discovered a positive link between R&D and the volatility of potential earnings intensely manifested within R&D-intensive industries. In addition, the authors indicated the absence of any significant difference in the association of R&D and CAPEX with the future earnings volatility in non-R&D intensive sectors."

Mojtahedzadeh and Abedi (2010) was another interesting and important research papers that concentrated on the impact of R&D on the financial performance of companies. The research paper was done on companies in the UK. The main importance of this paper is that it has a similar model which was used by the researcher of this paper – the sample of the hypothesis that has been used are shown below.

- A significant relationship between R&D expenditure and the volume of sales within a
- A powerful connection among R&D spending and the reduction of total expenditure within a company
- A substantial relationship between R&D investments and the persistence of abnormal earnings.

The first research correlation is the most valuable but it must be highlighted that the impact on total expenditure was an interesting issue that could have been include in this desertion. The impact of R&D expense must be taken from the perspective of costs – in other words, the test in this case was to assess whether the R&D expenses have been going towards total cost reduction strategies and that is a good measure to test for. But according to Pandit et al., (2011) the choice of the research hypothesis should always be in light of the business strategy that companies are adopting – that is only reflected in Pandit et al., (2011) since that was the only paper that adopted the firm level analysis (the case study strategy) in their methodology. While the other research paper that have been highlighted in this paper were mainly concentered with the industry level analysis. The conclusion of the paper by Mojtahedzadeh and Abedi (2010) argued that the "results from testing the hypotheses have reflected that R&D increases sales and expenses as well; moreover the persistence of abnormal earnings shall increase but would have no impact on market value."

Note that the research made by Mojtahedzadeh and Abedi (2010) was mainly concerned with comparing the possible result between two different industries: the pharmaceutical industry and the non-pharmaceutical industries. The purpose of this comparison is to calibrate for the argument that pharmaceutical companies have a specific reaction to R&D since the industry itself is concerned with the constant development of the products and therefore R&D in the pharmaceuticals industry is treated differently than in any other industry. The results actually confirm this argument where it can be seen that the correlation strength for the relationship

between R&D expenditure and total sales volume in the pharmaceutical industry is higher than the one in the non-pharmaceutical companies.

Table 3: Estimated Values of Coefficients in Pharmaceutical Companies

	Coefficient	t-Static	P-Value	D-W	2.253081
α	112206.1	15.63471	0.0000	F-Static	24.98373
R&D expenditure	0.107038	4.998373	0.0000	P-Value	0.000002
R^2	0.161202				
Adj-R^2	0.154750				

Table4: Estimated Values of Coefficients in Pharmaceutical and Non-Pharmaceutical Companies

	Coefficient	t-Static	P-Value	D-W	1.877590
α	-164728.7	-8.212345	0.0000	F-Static	26.84292
R&D expenditure	54362.97	2.609600	0.0093	P-Value	0.000000
R^2	0.041434				
Adj-R^2	0.039891				

Figure 1. Regression results for Mojtahedzadeh and Abedi (2010)

3. Methodology

3.1 Introduction

Research methodology is a fundamental part of the research process since it describes the detailed account of the research. The research methodology describes how the research will go on collecting data, what the researcher will consider acceptable knowledge and how the researcher will analyze the data and reach the conclusions (Saunders, 2011). The importance of the research methodology is that it provides a critical basis for the readers – the readers are able to assess the results on the basis of how the results were made and that paves the way for clearly showing the limitations of the research and thus putting the results in perspective.

The research onion is one of the most popular tools used to analyze the methodology. The research onion is a layered figure that shows the decision that the researcher must make in order to make the methodology of the research.

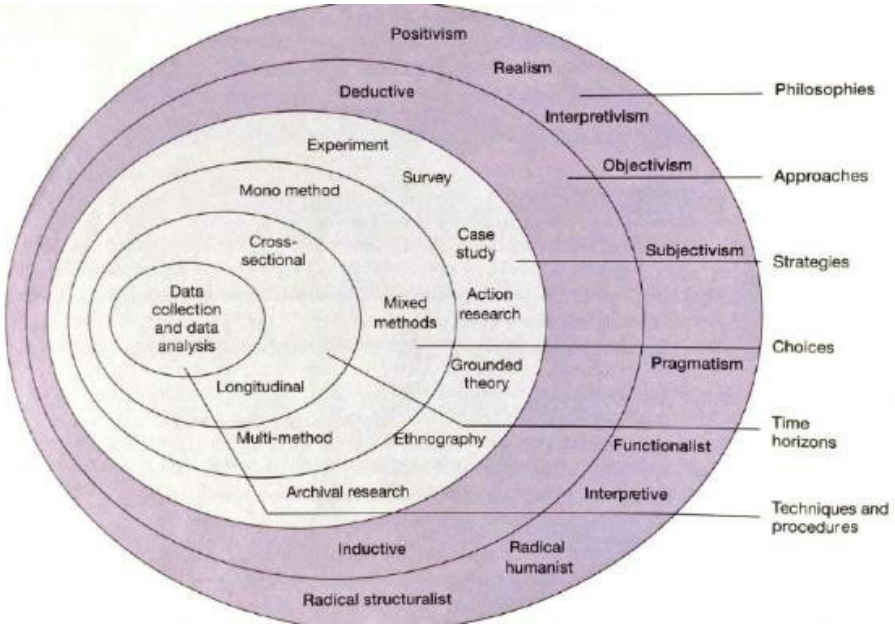

Figure 2. The research onion (Saunders, 2009)

3.2 Philosophy

The research philosophy is the first element to be discussed in the methodology. The research philosophy is made up of three factors: epistemology, axiology and ontology. The most relevant

aspect to be studied when dealing with research is the epistemology – the epistemology is the analysis nature of knowledge or what the researcher will accept as acceptable knowledge. In other words, in the epistemological choice, the researcher will decide what he/she will consider acceptable knowledge and there are three choices to consider: positivism, realism and interpretivism (Saunders, 2011). Positivism is defined as the scientific approach where the researcher only accepts knowledge that is proven via natural phenomenon – usually numbers are often referred to in this case. Interpretivism is the research stance that argues that knowledge can result from the interaction of human with eh society and thus knowledge can be relative – this is often the stance that is used in qualitative research where inductive approaches are adopted (Zikmund, 2013).

The research philosophy which is chosen for this dissertation is the positivist approach. There are many reasons as to why researcher would promote the usage of the positivist approach and some of these are the need to remain credible and create an image of non-biasedness for the researchers who will be benefiting from the paper such as the management of McDonalds in this case for example. The positivist approach is also based on another decision which is already made in this paper and that is the decision to make a quantitative paper where the data which will be used will be numerical in nature and that usually means that the choice for the researcher is already made in terms of the philosophy since the positivist research usually promotes he usage of numerical data in order to analyze fixed and numerical results rather than using interpretative notions (Saunders, 2011).

For example, using the revenues which are provided by McDonalds as a source of information for analysis will definitely mean that the researcher is unbiased and the data is acceptable since the data is not interpreted by the researcher and it is provided by the company which his being analyzed and therefore that means that the results are acceptable and representative.

3.3 Approach

The research approach is another fundamental issue that needs to be analyze din the research methodology. The research approach discusses the sources of finding the research question and the research aim. In other words, the researcher has to decide whether the approach to the research

is going to be via the inductive approach or the deductive approach. For instance, in the inductive approach the researcher does not know the research questions that are going to be used in the research paper (Zikmund, 2013). For example, the research is still new and the field is still developing and therefore the researcher is not aware of the research variables that are appropriate to testing and therefore the overall objective of an inductive research is to find the research question or the research hypothesis in the end. Therefore, the conclusion would be concerned with the nature of the research questions and to find the possible variables that need to be tested – such research is exploratory in nature (Saunders, 2011).

On the other hand, the deductive research occurs when the researcher is aware of the research variables and the issues that need to be tested. In the deductive approach, the researchers' objective will be to create generalizations from existing hypothesis. The purpose of research is testing variables and deciding whether the relationship which is realized between two variables is acceptable or not and can it be generalized or not (Bell et al., 2018).

This research paper adopts the deductive approach since the research is already aware of the potential relationship between the kwon variables. As seen in the literature review, all of the papers which have been cited used the deductive approach since the inductive approaches not provide any new insights in this case. The patterns which shows that there is a potential correlation between spending on R&D and revenues has been sustained and deified in previous research papers such as Vanderpal (2015).

3.4 Research Choice

Research choice is a choice made between quantitative and qualitative research. The quantitative research is based on the data that the researcher will collect numerical data for analyzing the research question while the qualitative research choice occurs when the researcher uses ordinal data for analysis. For instance, ordinal data can be data that is collected form observations, experiments nor interviews – the researcher will collect the transcripts and will then analyze them and collect the information that would answer the question which the researcher has presented (Saunders, 2011). On the other hand, the quantitative choice argues that the researcher will collect numerical data that represent the variables and then would analyze them via

mathematical or statistical tools that would create a relationship between the proposed variables the result would be the creation of links between those variables (Zikmund, 2013).

For example, Vanderpal (2015) tested the relationship between spending on R&D and the financial performance indicators which are all naturally quantitative variables. For example, the financial performance variables are variables that can be easily measured via numerical element such as the total revenues of the company, net income, or the costs of the company. These are the quantitative elements that can be sued to test these variables. Thus, the nature of this research hinges on the quantitative approach essentially and therefore it is the logical decision to take. Therefore, this research paper adopts the quantitative approach for analyzing the research question.

3.5 Research Strategy

There are many research strategies that the research onion proposes as seen in the figure above. These strategies are designed to explain to the reader how the data will be collected as well as defining the style in which the data will be collected (Bell et al., 2018). For example, the research strategies can range from case studies, experiments, ethnographies, desk research, archival research and many others. The choice for the research strategies is primarily base on the need of the research –the researcher can require the data collected from a survey via a quantitative and therefore the research strategy that will be used will be a survey (Zikmund, 2013). At the same time, the researcher might find that the case study is a requirement that needs to be concentrated on in the research since the researcher wants to investigate the impact of a specific relationship in a case study analysis (Saunders, 2011).

The case study strategy was deemed applicable for this research paper since it will uncover the main issues that represent the case of McDonalds. The researcher found by analyzing the literature that there is a lack of consensus on the nature of the relationship between R&D and financial performance since the majority of the papers investigated this impact on industry level and on country level. That meant that researchers were mixing data and we remixing companies from various fields and industries and that resulted in the creation of a lack of consensus (Ho et al., 2005). Therefore, the case study analysis will create a clearer picture about the relationship between R&D and financial performance for McDonalds and in this way the researcher can investigate this impact (which lacks consensus) in a specific company and in a specific time period

which means that the results will be able to generalized for this company and the recommendations can be made effectively and thus ending a great limitation in this field that prevented previous researchers form generalizing the results.

3.6 Data Collection

Data collection is a core element in the research methodology and that is for several reasons – the data collection process description is the main area in which the reader will assess the researcher's work in terms of collecting the information which was used to answer the research questions. This paper is specifically important for the research papers which relied on primary data for analysis. There are two types of research data for analysis and they are the primary and the secondary data. The primary data is data collected form the source, the primary data is used to assess research question where secondary data does not exist or it is not representative enough. Primary data is unique and more represented since it is real time and not historical in nature and finally, primary data is unique for the researcher and thus it is not available for public use.

On the other hand, secondary data is public data that is available from the existing reports in the field, the internet or public libraries. In other words, secondary data is data that is available for the public and that is mainly historical in nature. This type of data is useful for research which has variables that can be easily measured by existing data such as financial performance data available in annual reports in corporations for example (Saunders, 2011). In this research paper, the researcher chose the secondary data as a source for analyzing the existing research variables.

The data will be collected from that Annual Report of McDonalds, this will be the main source of data for the financial data concerning the variables such as the R&D expenditure, total revenues and net income. This information is acceptable from the company' s annual report and that its good because it hints to the readers that he data is trust worthy – at least from the assumption ha the annual reports of the company which are audited by the government and by separate auditing companies are considered reliable and trustworthy. But in general it isn't easy to get an alternative to this type of data – in other words, the researcher will find it impossible to collect data form internal sources of the company for example.

Therefore, the data collection process which will be adopted for this research paper is the secondary data via the document review strategy for data collection. Thus, the research will be collecting data from the Annual Reports of McDonalds.

3.7 Variables

- Dependent variable: Spending on R&D by McDonalds by year in billions
- Independent variable: Total revenues in billion and annual net income per year in billion
- Control Variable: SG&A expenditure

It is important to note that McDonald's does not report R&D expenditure as a separate line item in its financial statements. Instead, the figure used in this analysis reflects the "miscellaneous" or "other operating expenses" category, which may also include non-R&D items such as administrative or brand development costs. Therefore, the variable used here represents an approximation of R&D-related spending rather than a precise isolated R&D measure. This limitation should be considered when interpreting the regression outcomes.

3.8 Data Analysis

Data analysis discusses the method in which the researcher will analyze the data which was collected. The multi-linear regression tool will be used for the analysis. The byproducts of the multi-linear regression are the p-value and the Pearson collection value. The p-value must be less than 5% in order for the researcher to reject the null hypothesis which argues that there is an insignificant correlation between the variables – in other words, the failure to reject the null hypothesis means that the research variables are connect with each other by chance and therefore the relationship does not have any significant meaning and cannot be accepted. The formula for the linear regression is shown in the table below. The linear regression analysis will be done via the MS Excel Data Analysis tool.

4. Results

Data Collected

Year	R&D Expenditure (B$)	Total Revenues (B$)	Net Income (B$)	SG&A Expenditure (B$)
2020	3.52	19.21	4.73	6.8
2019	2.58	21.08	6.03	7
2018	2.38	21.03	5.92	6.9
2017	2.56	22.82	5.19	7.2
2016	1.85	24.62	4.69	7.5
2015	1.86	25.41	4.53	7.4
2014	1.85	27.44	4.76	7.6
2013	1.74	28.11	5.59	7.8
2012	1.6	27.57	5.47	7.7
2011	1.67	27.01	5.5	7.6
2010	1.62	24.08	4.95	7.3

Table 1. Data Table(McDonald's Annual Report: 2010,2020)

Note: McDonald's does not release its R&D expenditure as a separate item on its financial statements. The data collected refers to miscellaneous expenditure on balance sheet.

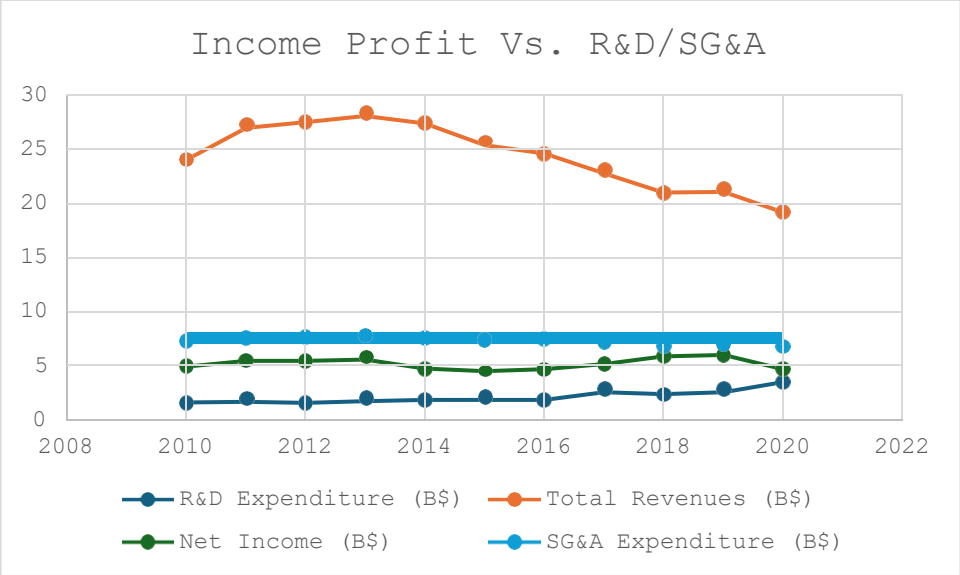

Figure 5- Income Vs. R&D/SG&A

Correlation Matrix

Variables	R&D Expenditure (B$)	SG&A Expenditure (B$)	Total Revenues (B$)	Net Income (B$)
R&D Expenditure (B$)	1	–0.842	–0.863	0.013
SG&A Expenditure (B$)	–0.842	1	0.983	–0.124
Total Revenues (B$)	–0.863	0.983	1	–0.106
Net Income (B$)	0.013	–0.124	–0.106	1

- R&D vs. Revenues (r = –0.86) : strong negative correlation, which suggests that higher R&D spending is associated with slightly lower short-term revenues.
- R&D vs. Net Income (r = 0.01) : almost no correlation which supports regression finding that R&D has little short-term effect on profitability.
- SG&A vs. Revenues (r = 0.98) : very strong positive correlation which confirms that SG&A drives sales growth.
- R&D vs. SG&A (r = –0.84) : strong negative correlation which means when SG&A increases R&D tends to decline.

Regression Table 1 : R&D/SG&A on Revenue (Researcher)

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.985484							
R Square	0.97118							
Adjusted R Square	0.963975							
Standard Error	0.578355							
Observations	11							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	2	90.1734	45.0867	134.7907	6.90E-07			
Residual	8	2.67595	0.33449					
Total	10	92.8494						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-33.2123	8.46591	-3.9231	0.004399	-52.73475	-13.69	-52.7	-13.69
SG&A Expenditure (B$)	8.018346	1.0103	7.93663	4.62E-05	5.6885986	10.35	5.689	10.348
R&D Expenditure (B$)	-0.60985	0.57232	-1.0656	0.317719	-1.9296178	0.71	-1.93	0.7099

Regression Table 2 : R&D/SG&A on Net Income (Researcher)

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.20979							
R Square	0.04401							
Adjusted R Square	-0.195							
Standard Error	0.56866							
Observations	11							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	2	0.1191	0.0596	0.1842	0.83523			
Residual	8	2.58697	0.3234					
Total	10	2.70607						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	10.2165	8.32396	1.2274	0.2546	-8.9786	29.4116	-8.979	29.41
SG&A Expenditure (B$)	-0.6017	0.99336	-0.606	0.5615	-2.8924	1.68898	-2.892	1.689
R&D Expenditure (B$)	-0.2757	0.56272	-0.49	0.6374	-1.5733	1.02197	-1.573	1.022

5. Discussion

5.1 R&D & Revenue

This regression analysis explores whether McDonald's investment in research and development (R&D) has a measurable effect on its revenues with SG&A expenses included as a control variable. The overall model fit is very strong, as shown by the R Square of 0.97, meaning that the two variables together explain almost all of the variation in McDonald's revenues over the period studied. This might suggest that both play important roles, however, the coefficients provide different insights.

The coefficient for R&D expenditure is -0.61 with a p-value of 0.318. From a statistical perspective this is not significant, meaning that it cannot be conclude that R&D spending has a meaningful effect on revenues within the timeframe of this dataset. The negative sign indicates that higher R&D spending is associated with slightly lower revenues in the short run. However, this relationship is weak and not reliable. In other words, the data does not support the hypothesis that increases in R&D directly raise McDonald's annual sales.

On the other hand, SG&A shows a very strong and positive effect (with a coefficient of 8.01 and a highly significant p-value). This means that most of the explanatory power in the model is being carried by SG&A rather than R&D. Including SG&A as a control variable is important, because it shows that the apparent lack of impact from R&D is not due to the lack of variable bias. Even when the effect of marketing and administrative costs are taken into consideration in driving sales, R&D itself does not emerge as a predictor of revenue.

Thus, it could be inferred that R&D at McDonald's may not directly translate into sales growth in the way that advertising and promotion do. Instead, R&D investments (such as developing digital ordering platforms and improving kitchen efficiency) is likely to create value in indirect or long-term ways. For example, they may reduce operational costs and enhance customer satisfaction. These effects are harder to capture in annual revenue figures, especially over a relatively short time horizon of ten years.

5.2 R&D & Net Income

The above regression table explores whether McDonald's R&D spending contributes meaningfully to its net income, with SG&A again added as a control variable. Unlike the earlier results for revenues, the findings here are very weak. The R Square is only 0.04, meaning that R&D and SG&A together explain just 4 percent of the variation in net income over the period studied. R&D has a negative but statistically insignificant effect on net income. The coefficient is -0.28 with a p-value of 0.64, well above any reasonable threshold for significance. This suggests that increases in R&D spending are not associated with increases in profitability, at least within the timeframe and data sample analyzed. In fact, the negative sign points to the possibility that R&D might even reduce short-term profits and this makes sense because R&D is usually treated as an expense before any benefits are realized. For a company like McDonald's, whose innovations (such as digital delivery systems or menu trials) require upfront costs and long rollout periods reflects the long-term nature of R&D investments.

Similarly, SG&A has no significant effect on net income in this model. Its coefficient is -0.60 with a p-value of 0.56, which again indicates no reliable impact. SG&A drives revenues and also represents a major expense line. This dual role means that even though marketing and administrative costs boost sales, they may not automatically translate into higher profitability, especially when cost pressures from other areas are present. Overall, the results suggest that R&D does not have a measurable short-term impact on profitability for McDonald's. Its benefits may relate to improving efficiency or protecting market share. In other words, R&D may not increase net income directly, but it could prevent declines over time by helping McDonald's adapt to consumer trends and technological change. This supports the argument that R&D's value should be evaluated on a longer horizon rather than annual profit margins.

H1: There is a significant positive relationship between McDonald's R&D expenditure and its total revenues.

The regression results do not support this hypothesis. The coefficient for R&D on revenues was negative (–0.61) and statistically insignificant ($p = 0.318$). This means that increases in R&D spending were not associated with higher sales during the study period.

H2: There is a significant positive relationship between McDonald's R&D expenditure and its net income.

The second regression model also fails to support this hypothesis. The coefficient for R&D on net income was again negative (–0.28) and statistically insignificant ($p = 0.64$). This suggests that R&D spending did not improve profitability and may even reduce it temporarily, as investments in R&D processes such as digital systems or kitchen upgrades increase costs before returns are realized.

The findings therefore mirror the state of McDonald's in the past decade. Sales have been stabilized largely by aggressive marketing, global expansion and rebranding strategies, while R&D investments have supported more underlying changes that improve operations and customer perception. The discussion suggests that investors and managers should not expect R&D to directly boost quarterly revenues or profits but should view it as a strategic tool for long-term sustainability. From the perspective, the regression results confirm the reality of McDonald's position as a brand driven by marketing but sustained by innovation in the background.

5.3 Limitations

One of the key limitations of the regression analysis relates to the sample size as there are only 11 data points used by the researcher which is considered relatively small for multiple regression modeling. This impacts the statistical power of the model and consequently makes it difficult for the researcher to identify meaningful and generalizable relationships between the variables. Therefore, the findings of this regression model must be interpreted as indicative trends rather than generalizable casual relationships. Moreover, another limitation relates to the impact of external factors on the financial data retrieved. Some of these external factors include economic cycles and strategic shifts whose impact might be exaggerated in the data analysis when the time span is short. Future research into this matter with extensive data will provide increased robustness and conclusions. Moreover, another limitation relates to the accuracy of the R&D expenditure variable dataset. McDonald's does not disclose R&D spending as a separate item on its financial statements. The researcher derived these values from the "Miscellaneous" data, which includes variables such as R&D.

6. Conclusion

This dissertation sought to explore the underlying relationship between investment in R&D and the effect it has on the financial performance in the case of McDonald's. The two main variables chosen by the researcher were revenues and net income in measuring the financial performance. The regression models integrated other explanatory variable (SG&A). The results of the regression models provide insights into the future innovation strategy despite the indicative nature of the results.

The first regression model revealed that R&D expenditure has a weak and statistically insignificant effect on revenues. Moreover, the results rather suggest that increased R&D spending might even cause a reduction in revenues on the short term. Both R&D and SG&A did not explain changes in profitability and the R Square was extremely low. There are two major inferences which can be extracted from these results. Firstly, McDonald's revenues are mainly driven by marketing and operational spending rather than R&D. secondly, the R&D expenditure does not yield immediate financial returns for the brand. Given McDonald's business model, these results are aligned with expectations, as McDonald's tends to focus on the gradual integration and improvement of services in long term efforts, and therefore, these improvements and investment require time to implement and manifest solid results. (Amir et al., 2007). This can also be confirmed by the conditions of McDonald's reported sales, which have been fluctuating in recent years as it adapts to the new consumer preferences and rising costs (Yildirim, 2024). The company's investments in sustainable packaging and digital platforms to improve consumer experience have played a significant role in intensifying the marketing efforts and the brand promotion.

6.1 Recommendations

1. Refocus R&D on strategic priorities

The first recommendation is to shift the focus from R&D investment as a short term financial return tool, to a rather long term investment in the competitiveness. In short, it shouldn't be seen as a revenue driver, rather a competition tool. R&D should be a tool to address the emerging challenges in the industry such as sustainability, health concerns and consumer

satisfaction. This focus will help align R&D with future risks and opportunities instead of attempting to generate immediate sales.

2. Strengthen integration between R&D and SG&A

The second recommendation relates to improving the linkage between innovation and marketing. The results of the analysis indicate that SG&A is a clear driver of revenues, however, the inability to convert the R&D efforts into consumer stories may be behind the masking of R&D benefits. For example, healthier menus and digital ordering innovations should be marketed and advertised more aggressively in order to enhance convenience and personalization. This integration will allow McDonald's to generate more financial value from its R&D and at the (Cassiman & Veugelers, 2006).

3. Improve measurement and communication of R&D Outcomes

This recommendation relates to improving the measurement of the R&D performance through the introduction of clear and effective metrics. One of the limitations of the current analysis relates to the fact that R&D expenditure was only measured as a financial input. McDonald's can for example introduce R&D outputs in the form of new product launches or reduced environmental impact. This can highlight the impact and value of R&D despite financial shortcoming in the short term, which can help improve brand value and shift the focus away from financial impact (Sougiannis, 1994).

Reference List

Amir, E., Guan, Y. and Livne, G., 2007. *The association of R&D and capital expenditures with subsequent earnings variability.* Journal of Business Finance & Accounting, 34(1–2), pp.222–246.

Anagnostopoulou, S.C., 2008. *R&D expenses and firm valuation: A literature review.* International Journal of Accounting & Information Management, 16(1), pp.5–24.

Bell, E., Bryman, A. and Harley, B., 2018. *Business research methods.* Oxford: Oxford University Press.

Bertlein, H., 2018. *McDonald's U.S. restaurant sales fall after five quarters of gains.* Reuters. Available at: https://www.reuters.com/article/us-mcdonalds-results/mcdonalds-u-s-restaurant-sales-fall-after-five-quarters-of-gains-idUSKBN1571P6 [Accessed 10 July 2025].

Blodget, J., 2018. *McDonald's could double wages for employees and just make less money.* Business Insider. Available at: https://www.businessinsider.com/mcdonalds-could-double-wages-for-employees-and-make-less-money-2013-7 [Accessed 12 July 2025].

Cassiman, B. and Veugelers, R., 2006. *In search of complementarity in innovation strategy: Internal R&D and external knowledge acquisition.* Management Science, 52(1), pp.68–82.

Duqi, A. and Torluccio, G., 2011. *Can R&D expenditures affect firm market value? An empirical analysis of a panel of European listed firms.* In: Bank Performance, Risk and Firm Financing. London: Palgrave Macmillan, pp.215–241.

Forbes, 2018. *What's the difference between research and development?* Available at: https://www.forbes.com/sites/quora/2018/06/14/whats-the-difference-between-research-and-development/#3c1415253c99 [Accessed 15 July 2025].

Givoly, D. and Shi, C., 2008. *Accounting for software development costs and the cost of capital: Evidence from IPO underpricing in the software industry.* Journal of Accounting, Auditing & Finance, 23(2), pp.271–304.

Ho, Y.K., Keh, H.T. and Ong, J.M., 2005. *The effects of R&D and advertising on firm value: An examination of manufacturing and non-manufacturing firms.* IEEE Transactions on Engineering Management, 52(1), pp.3–14.

Hammad, A., 2012. *Examination of the marketing communication strategy of McDonald's in the UK: Its impact on consumer buying behaviour and the factors contributing to brand success.* Unpublished study.

Hsieh, P.H., Mishra, C.S. and Gobeli, D.H., 2003. *The return on R&D versus capital expenditures in pharmaceutical and chemical industries.* IEEE Transactions on Engineering Management, 50(2), pp.141–150.

Johnson, G., Whittington, R., Scholes, K., Angwin, D. and Regnér, P., 2016. *Exploring strategy.* Harlow: Financial Times Prentice Hall.

Kenton, J., 2018. *Financial performance.* Investopedia. Available at: https://www.investopedia.com/terms/f/financialperformance.asp [Accessed 12 July 2025].

Kenton, J., 2019. *Research and development (R&D).* Investopedia. Available at: https://www.investopedia.com/terms/r/randd.asp [Accessed 12 July 2025].

Kothari, S.P., Laguerre, T.E. and Leone, A.J., 2002. *Capitalization versus expensing: Evidence on the uncertainty of future earnings from capital expenditures versus R&D outlays.* Review of Accounting Studies, 7(4), pp.355–382.

Kowitt, K., 2017. *Fallen arches: Can McDonald's get its mojo back?* Fortune. Available at: http://fortune.com/2014/11/12/can-mcdonalds-get-its-mojo-back/ [Accessed 9 August 2025].

Lin, P. and Saggi, K., 2002. Product differentiation, process R&D, and the nature of market competition. European Economic Review, 46(1), pp.201-211.

McDonald's Corporation, 2016. *Annual Report 2016.* Available at: https://corporate.mcdonalds.com/content/dam/sites/corp/nfl/pdf/2016%20Annual%20Report1.pdf [Accessed 12 July 2025].

McDonald's Corporation, 2018. *Annual Report 2018.* Available at: https://www.annualreports.com/HostedData/AnnualReportArchive/m/NYSE_MCD_2018.pdf [Accessed 12 July 2025].

McDonald's Corporation, 2020. *Annual Report 2020.* Available at: https://corporate.mcdonalds.com/content/dam/sites/corp/nfl/pdf/2020%20Annual%20Report.pdf [Accessed 12 July 2025].

Mojtahedzadeh, V. and Abedi, Z., 2010. *The effect of research and development (R&D) expenditures on firm value.* International Review of Business Research Papers, 6(6), pp.187–200.

Pandit, S., Wasley, C. and Zach, T., 2009. *The effect of R&D inputs and outputs on the relation between the uncertainty of future operating performance and R&D expenditure.* Unpublished working paper.

Pandit, S., Wasley, C.E. and Zach, T., 2011. *The effect of research and development (R&D) inputs and outputs on the relation between the uncertainty of future operating performance and R&D expenditures.* Journal of Accounting, Auditing & Finance, 26(1), pp.121–144.

QSR, 2018. *McDonald's to invest $2.4 billion on upgrades in 2018.* QSR Magazine. Available at: https://www.qsrmagazine.com/news/mcdonalds-invest-24-billion-upgrades-2018 [Accessed 12 July 2025].

Saunders, M., 2011. *Research methods for business students.* 5th ed. New Delhi: Pearson Education.

Seber, G.A. and Lee, A.J., 2012. *Linear regression analysis.* Hoboken, NJ: John Wiley & Sons.

Sougiannis, T., 1994. *The accounting-based valuation of corporate R&D.* The Accounting Review, 69(1), pp.44–68.

The Economist, 2018. *Why McDonald's sales are falling.* The Economist. Available at: https://www.economist.com/the-economist-explains/2015/01/14/why-mcdonalds-sales-are-falling [Accessed 12 July 2025].

UNESCO, 2018. *R&D global expenditure.* Available at: http://uis.unesco.org/apps/visualisations/research-and-development-spending/ [Accessed 12 July 2025].

Vanderpal, G., 2015. Impact of R&D expenses and corporate financial performance. VanderPal, GA (2015). Impact of R&D expenses and corporate financial performance. Journal of Accounting and Finance, 15(7), pp.135-149.

WIPO, 2024. *End of year edition – Against all odds, global R&D has grown close to USD 3 trillion in 2023.* Available at: https://www.wipo.int/web/global-innovation-index/w/blogs/2024/end-of-year-edition [Accessed 12 July 2025].

Yildirim, M., 2024. Changing Nutrition Trends and McDonald's Product Strategies: The Rise of Plant-Based Products and Their Impact on Consumer Behaviour.

Zikmund, W.G., Babin, B.J., Carr, J.C. and Griffin, M., 2013. *Business research methods.* Boston, MA: Cengage Learning.

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