

# Data Warehousing and Business Intelligence Project

on

Adidas Sales

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MSc/PGDip Data Analytics – 2018/9

Submitted to: Dr. Simon Caton

National College of Ireland  
Project Submission Sheet – 2017/2018  
School of Computing



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<b>Project Title:</b>	Adidas Sales

I hereby certify that the information contained in this (my submission) is information pertaining to my own individual work that I conducted for this project. All information other than my own contribution is fully and appropriately referenced and listed in the relevant bibliography section. I assert that I have not referred to any work(s) other than those listed. I also include my TurnItIn report with this submission.

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<b>Signature:</b>	
<b>Date:</b>	November 26, 2018

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Table 1: Mark sheet – do not edit

Criteria	Mark Awarded	Comment(s)
Objectives	of 5	
Related Work	of 10	
Data	of 25	
ETL	of 20	
Application	of 30	
Video	of 10	
Presentation	of 10	
Total	of 100	

# Project Check List

This section capture the core requirements that the project entails represented as a check list for convenience.

- ☒ Used L<sup>A</sup>T<sub>E</sub>X template
- ☒ Three Business Requirements listed in introduction
- ☒ At least one structured data source
- ☒ At least one unstructured data source
- ☒ At least three sources of data
- ☒ Described all sources of data
- ☒ All sources of data are less than one year old, i.e. released after 17/09/2017
- ☒ Inserted and discussed star schema
- ☒ Completed logical data map
- ☒ Discussed the high level ETL strategy
- ☒ Provided 3 BI queries
- ☒ Detailed the sources of data used in each query
- ☒ Discussed the implications of results in each query
- ☒ Reviewed at least 5-10 appropriate papers on topic of your DWBI project

# Adidas Sales

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## Abstract

The net sale, revenues of product category, GDP of regions and gross profit of Adidas is analyzed in this project for different regions and different time frames like quarterly, yearly. The main feature of this report is the analyzing the net sale of Adidas for ten years (2008 to 2017) of time span. Gathering the data and extracting it, transformation of the data, loading it in the database and deploying it into a cube using full automation is shown in this report. The main objective is to analyze the net sale of Adidas in order to form a better marketing and business strategy in the region where it is lacking behind to compete with it others competitors. By studying these data it would help Adidas on enhancing its sale worldwide. The net sale by product categories can also be analyzed and further it can be increased.

## 1 Introduction

Adidas is a multinational corporation which designs and manufactures shoes, clothing and accessories. It is one of the largest sportswear manufacturers in the world. The brand is famous internationally because of delivering the quality products and performance. There are many competitors of Adidas like Nike, PUMA, etc.

In this project the following requirement are addressed:

- (Req-1) To analyze the gross profit and net sales worldwide and calculating the percent gross profit margin.
- (Req-2) .To analyze the net sale of products here in this project three products are considered, they are Apparel, Footwear and Hardware.This can be done yearly and also quarterly.
- (Req-3) To analyze or compare the net sale of Adidas region wise.This analysis can be done yearly and also quarterly. In this project three regions are considered; they are US, Europe and China.

## 2 Data Sources

Four different data-sets are used from three different data sources for building this data warehouse project. The description of each data-set from each data source is given below:

Source	Type	Brief Summary
Statista	Structured	Used to get the net sale of adidas group product-wise and gross profit from year 2002 to 2017.
Kaggle	Structured	Used to get the net sale data of three different regions quarterly from quarter 1 of year 2000 to quarter 1 of year 2017.
PDF	Unstructured	Used to get the Net Sales in million euros worldwide from year 2008 to 2017.

Table 2: Summary of sources of data used in the project

## 2.1 Source 1: Statista

Data-set 1: The first data-set describes the gross profit in a million euros of Adidas’s group from year 2000 to 2017 worldwide. The gross profit data-set can be downloaded from: <https://www.statista.com/statistics/268417/gross-profit-of-the-adidas-group-worldwide-since-2000/>. This data-set provides two columns of information on Adidas gross profit. They are year and gross profit in a million euros.

These data-set addresses the business requirements listed in Section 1 in the following ways the comparison can be done with gross profit earned in the particular year with the net sale of the same year. Also, the percent gross profit margin can be calculated. By this analysis conclusion can be made, that in which year the gross profit was higher and in which year it was lowest.

Data-set 2: The Second data-set describes the net sales of Adidas’s group worldwide from year 2000 to 2017 by product category. This data-set can be downloaded from: <https://www.statista.com/statistics/250740/net-sales-of-the-adidas-group-worldwide-by-product-category/>. This data-set provides four columns of information on net sale product wise. These four columns are Year, net sales of footwear, apparel and hardware in million euros. However, relevant to this project, data-set is used to analyze the contribution of products of Adidas in the net sale by year worldwide. This data-set addresses the business requirements listed in Section 1 in the following way the contribution and comparison of products in the net sale can be made.

## 2.2 Source 2: Kaggle

From Kaggle one structured data-set is downloaded and the same is explained below: This data-set described the Adidas quarterly sales from Q1, 2000 to Q1 2017. The data-set can be downloaded from: <https://www.kaggle.com/kofi2614/adidas-quarterly-sales-forecasting/data>. This data-set provides seven columns of information on quarterly sales yearly in three different regions. However, relevant to this project, data-set is used to analyze the net sale of Adidas group region-wise here in this data-set there are three regions namely, US, Europe and China. This data-set addresses the business requirements listed in Section 1 in the following way, how much percent, each region has contributed net sale in a particular year.

## 2.3 Source 3: PDF

From PDF one unstructured data-set is scrapped. PDF can be downloaded from: <https://www.adidas-group.com/en/investors/financial-reports//2017/>. From this link the PDF of FY Result from Financial Report for year 2017 is downloaded. The PDF is of 238 pages. The relevant information that is the information on net sale of Adidas for year 2008 to 2017 is extracted that is scrapped. The scrapped data provides two columns of information. The columns are year having data from 2008 to 2017, and another column is of net sale of Adidas worldwide.

## 3 Related Work

Paper referred below describes the sales of Adidas and products sales which motivated to chose the topics. The references of review paper are provided below in reference section. The higher the demand of branded products is, the higher the income level becomes. Adidas is exclusive apparel provider. For example in one of the above mention papers, the survey is done. In this survey, physical education teachers were asked about the brand and product which should be preferred for sports. Among the sport teachers the Adidas brand have been found to be preferred more. In the survey the question was asked to sport teacher was Which brand do you generally use?and the given answer was for Adidas was 31.6 percentages, Nike with 29.3 percent and Hummel with 22.3 percent among the top three brands Adidas was the highest. As per the analysis Adidas is used by most of the sport teacher. Also, the sport brand products are preferred because of the high quality. After going through the papers the idea came to include the net sales of Adidas world wide. As the Adidas serves product with good quality to analyze this the net sale is included in the project product wise. Adidas is competitive company with a large global presence. It is ranked second in the sports apparel industry followed by Nike. Also in these papers the Adidas revenues are discussed. One of the major objectives of Adidas is to surpass Nike sale in upcoming years. In this research paper the revenues of Adidas in China are showed. Adidas sale in China are currently growing at 20 percent rate. Also, the strategic planning is explained in one of the papers which involves the increasing global sales and expanding its key growth market in North America, China and Russia. After reading these research papers in this project the worldwide net sale is used product wise and also region wise. To expand the warehouse project the drill down is used that is the world wide net sales of Adidas and its products can be analyzed quarterly and also for the particular year. Also in this project three regions are considered they are Europe, China and US. The analysis is done here to check how much is the contribution of net sale in each region's GDP.

## 4 Data Model

The data which has been chosen for this project describes the revenue of the Adidas. In the fact table there are only measures which are linked to dimensions.

Here dimension tables are DimYear and DimRegion. FactTable includes the following measures: GrossProfitMillionEuros, USGDP, EuropeGDP, ChnGDP, Footwear, Apparel, Hardware and NetSaleMillionEuros. In DimRegion the hierarchies are RegionID and YearRegion. Using this dimension and fact table, the Net-Sale is calculated Region-wise

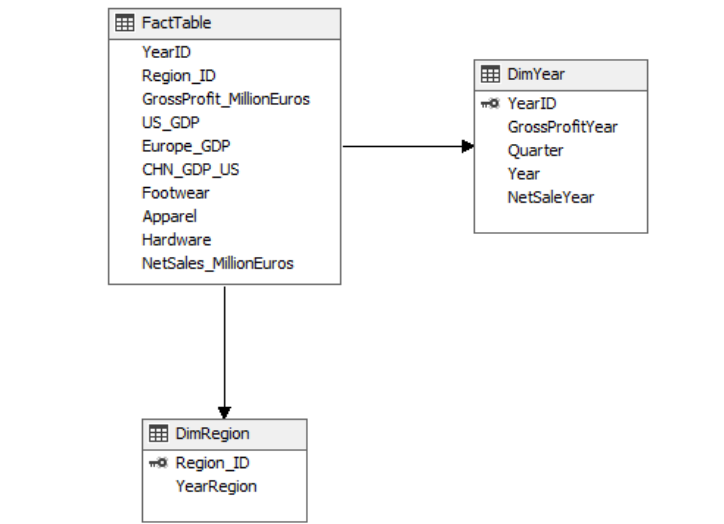


Figure 1: Start Schema

for the particular year. In DimYear there are multiple drill downs which are YearID, GrossProfitYear, Quarter, Year and NetSaleYear. Using this dimension and fact table, the Net-Sale and GrossProfit can be compared and calculated Quarterly and yearly using DimRegion. Also the net-sale can be compared product-wise and quarterly for the particular year and also for all the years from 2008 to 2017.

The comparison between the region's GDP of US, Europe and China with the net-sale can be calculated and compared quarterly using DimYear and DimRegion.



## 5 Logical Data Map

Table 3: Logical Data Map describing all transformations, sources and destinations for all components of the data model illustrated in Figure 1

Source	Column	Destination	Column	Type	Transformation
1	GrossProfit_MillionEuros	FactTable	GrossProfit_MillionEuros	Fact	Changed the column name of the base source file.
1	GrossProfit_Year	DimYear	GrossProfit_Year	Dimension	Changed the column name of the base source file and removed the rows having year less than 2008.
1	Footwear	FactTable	Footwear	Fact	Changed the column name of the base source file.
1	Apparel	FactTable	Apparel	Fact	Changed the column name of the base source file.
1	Hardware	FactTable	Hardware	Fact	Changed the column name of the base source file.
1	Year	DimYear	Year	Dimension	Changed the column name of the base source file and removed the rows having year less than 2008 .
2	US _GDP	FactTable	US _GDP	Fact	Changed the column name of the base source file and removed the columns which are not required.
2	Europe _GDP	FactTable	Europe _GDP	Fact	Changed the column name of the base source file and removed the columns which are not required.
2	CHN_GDP_US	FactTable	CHN_GDP_US	Fact	Changed the column name of the base source file and removed the columns which are not required.
2	YearRegion	DimRegion	YearRegion	Dimension	Split the column into two columns YearRegion and Quarter adding delimiter and removed the rows having year less than 2008 .
2	Quarter	DimYear	Quarter	Dimension	This column got created by splitting the YearRegion column.
3	Footwear	FactTable	Footwear	Fact	Changed the column name of the base source file.
3	Apparel	FactTable	Apparel	Fact	Changed the column name of the base source file.

*Continued on next page*

Table 3 – *Continued from previous page*

Source	Column	Destination	Column	Type	Transformation
3	Hardware	FactTable	Hardware	Fact	Changed the column name of the base source file.
3	Year	DimYear	Year	Dimesion	Changed the column name of the base source file and removed the rows having year less than 2008.
4	NetSales _MillionEuros	FactTable	NetSales _MillionEuros	Fact	Scrapped this table from PDF, added the column name.
4	NetSaleYear	DimYear	NetSaleYear	Dimension	Scrapped this table from PDF and changed the columns name.

## 6 ETL Process

The gathering of data from the different sources is explained above under data source. Here the ETL process is explained.

The Extract, Transform and Load Process is explained in below steps:

Step 1: The database is created in SSMS with the name Adidas.

Step 2: In SSIS the new project is created with name Adidas SSIS.

Step 3: The raw data is created in this step that means the data from csv files is loaded into respective tables in the database using data flow task in SSIS. This loading of data is done through automation. The automation is explained below. There are total four raw data table that is four csv files are loaded in four different tables. The four tables are RawDataGrossProfit, RawDataNetSale, RawDataProductwise, RawDataRegionwise.

Step 4: In this step all the four raw data are merged in one table (MergedTable) using Execute SQL Task in SSIS. In execute SQL task the join query is used to merge all the tables in to one table.

Step 5: The dimension are created in this step using data flow task in SSIS. In data flow task two dimension tables are created, for both the dimensions OLE DB source and OLE DB destination are used. The primary key is inserted in the table using SSIS, and data is stored in dimensions.

Step 6: The fact table is created in this step using execute SQL task in SSIS. In this task the join is used to join tables and insert the required data in the fact table. That is all the measures are included in the fact table.

After completing the above 6 steps the staging stage gets complete.

Automation: In the automation, the data is loaded in the tables of the database.

Firstly, for the unstructured the data from one PDF is scrapped and stored in data frame having two columns using R. The cleaning is done for this data that is unwanted rows are deleted from the table and the columns are renamed. Then this data frame is stored and converted in csv file. And the final csv file is loaded into the table (Raw Data) in the database.

Secondly, the data taken from Statista is on second sheet. This data from second sheet of excel files are extracted, cleaned that is all the necessary changes like changing the column names, deleting unwanted rows and columns are done using R and the final cleaned data is stored in csv file and loaded the same csv file in to the raw data table in the database.

For one data set the data from second sheet is extracted and loaded in data frame. In this data-set one column is divided into two columns; the column name year is split into the year and quarter using R. This data is cleaned using R all the unwanted rows and columns are removed and data is loaded in to table as raw data.

This automation script of R is loaded in SSIS using Execute Process Task. After execution of this task, the data is loaded in all the raw tables. Dimensions and fact tables are created once the raw data are loaded in data base as mentioned in above steps. Another Execute SQL task is loaded after execution of automation script task. This SQL task is loaded after automation script and before the loading of raw data in the tables. In this SQL task all the tables are getting truncated. This is used because after running the process second time the data which is present in tables should get deleted. To avoid duplicates of data the truncate is used.

Once the staging step is done the cube is deployed through SSIS.

Before starting the deployment the connection is made with SSIS and SSMS. For

making the connection the SSMS should be logging with Analysis Services and the dimensions and cube will be present under database. For making the connection, in SSIS under connection manager right click on the section of connection manager, select New Analysis Service Connection and create the connection. Enter the Data Source name as the server name of the system, and Initial Catalog is the name of the cube. After making the connection, connect the SQL task of FactTable to sequence container. In this sequence container, select Analysis Service Processing Task in this processing task the dimensions are selected this task is connected to another Analysis Service Processing Task in the same sequence container in this processing task the fact table is selected.

Now the staging and deployment of the cube is ready with full automation to load data in the data base.

## 7 Application

The approach and business requirement are addressed below with respect to the business requirements noted in Section 1:

For the first requirement the gross profit is compared with the net sale of Adidas for region 2008 to 2017. By this we can calculate the percent gross profit margin and analyze it like in which year the percent gross profit was higher and for which year it is lowest.

For the second requirement the sale of products; apparel, footwear and hardware are compared and calculated. This can be calculated quarterly from 2008 quarter 1 to 2017 quarter 1. By this the analysis can be done on the sales of different products.

For the third requirement the sales of the different regions; US, Europe and china are compared with the worldwide net sale this comparison of region sale can be done quarterly and also yearly. By this we can analyze which region has earned more in which quarter and in which year.

### 7.1 BI Query 1: what percent of the gross profit contribute to the net sale?

For this query, the contributing sources of data are: Source 1 that is data from Statista and source 3 that is unstructured data from PDF.

From source 1 the world wide gross profit (in a million euros) is taken and from source 3 the world wide net sale (in a million euros) is taken.

The general finding as illustrated in Figure 2, the blue bar represents the gross profit worldwide for year 2008 to 2017. The shadow behind the blue bar represents the net sale. The shadow which is darker in color that is dark grey color represents the 60 percent of net sale. The bar in light grey color represents 80 percent of net sale. And the pointers in black color represent the net sale of the particular year. From this bar chart we can analyze that how much the gross profit is contributed to the net sale.

Sheet 1

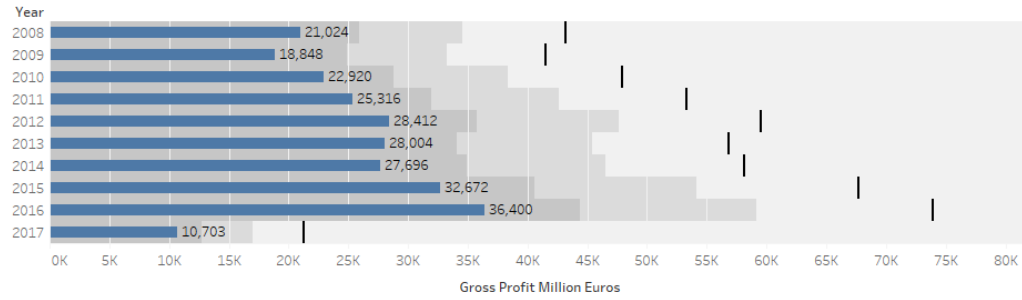


Figure 2: Results for BI Query 1

## 7.2 BI Query 2: which product is sold most quarterly for particular year?

For this query, the contributing sources of data are: Source 1 data-set 2 which is data from Statista and source 2 which is from kaggle. From source 1 the sale in a million euros of different products is taken and from source 2 the quarters and year taken.

The general finding is that as in below figure the quarters are represented by four colors. The sales for products of Adidas are show from the year 2008 Q1 to 2017 Q1. From this bar chart we can analyze that which product has calculated the more in net sale quarterly for the particular year.

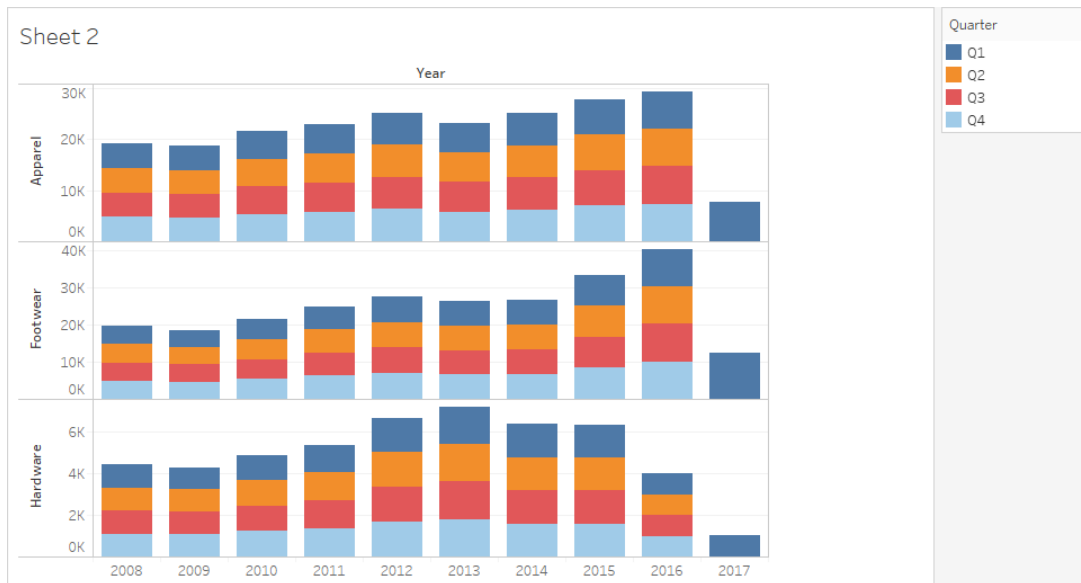


Figure 3: Results for BI Query 2

## 7.3 BI Query 3: which particular year the net-sale is contributing the most to the GDP of region?

For this query, the contributing sources of data are: Source 2 which is from Kaggle and source 3 which is unstructured. From source 2 the GDP of the different region and quarters are taken and from source 3 the net sale in million euros and year are taken.

The general finding is that as in below figure the quarters are represented by four colors. The net-sale and GDP of different region are show from year 2008 to 2017. From this bar chart we can analyze that in particular year how much the net sale is contributing the most to the GDP of different regions.

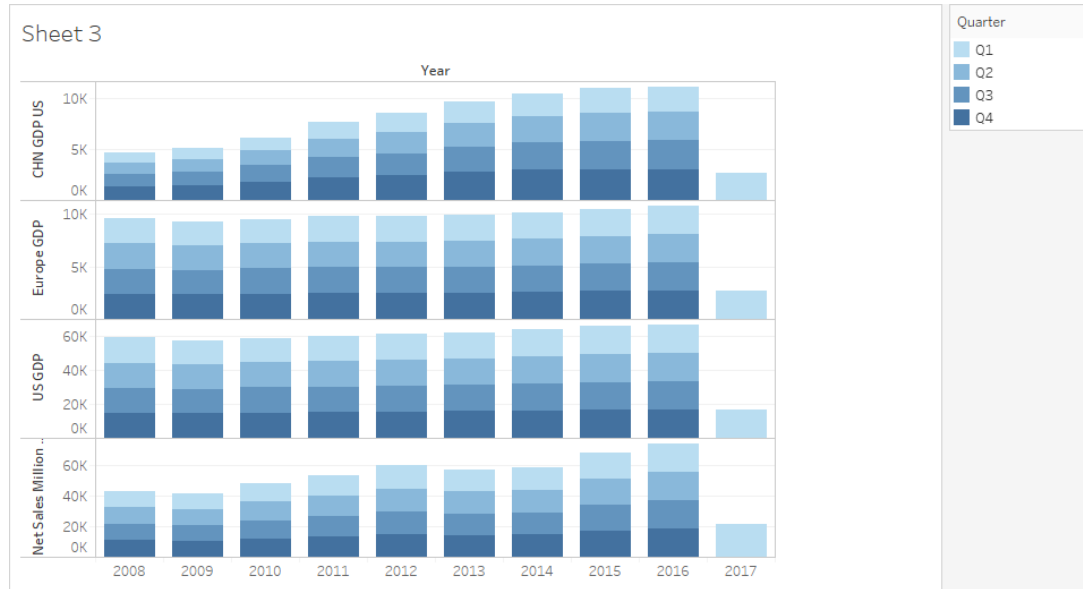


Figure 4: Results for BI Query 3

## 7.4 Discussion

In the literature research paper, the comparison of different sports brand is shown. The sales and strategies, business models are discussed. Also, the discussion of analysis on brand preference is done.

For BI query 1: As in this query the net sale and gross profit is compared and analyzed from year 2008 to 2017. According to the literature paper the preferred brand in all the sport brands is Adidas. The net sales world-wide and the percent gross margins are analyzed. The major objective of Adidas is to exceed the sales of Nike in the upcoming year. For this in query 1 the percent gross profit margin can be analyzed from year to year and then it can be compared with the sales of Nike. From this the sales increased in which year are compared with the sales of Nike.

For BI query 2: In this query the worldwide net sale of Adidas is compared with the sale of Adidas product. This analysis can be done quarterly and also yearly. In the literature paper it is discussed that the Adidas is known for its good quality products. It is exclusive apparel provider. The relation of this bi query comes here that due to its good quality products in this query the sales is compared between the different products of Adidas. The different products considered in this query are Footwear, Apparel and Hardware.

For BI query 3: In this query it is shown that how much the net sale is contributing to the GDP of regions. Here three regions are considered; US, China and Europe. In the literature research paper, the Adidas sales in China are discussed. Adidas in China are currently growing at the 20 percent rate. Also, it is also discussed that how the strategic plan involves increasing global sales and expanding its key growth market in North

America, Russian and China. Keeping the key growth market in mind the contribution of net sale in the regions GDP can be analyzed by this query.

## 8 Conclusion and Future Work

In this project the basic requirements were achieved. According to the first requirement the company can calculate the gross profit margin year wise. Also the comparison of gross profit and net sale is done like how much percent of gross profit is gained from overall net sale worldwide. According to the query and graph shown in figure 2 it is concluded and shown that the contribution of gross profit over the net sale for all the year from 2008 to 2017. According to the second requirement the comparisons of sales are done product wise. This comparison is made quarterly for the particular year. It is shown that how much net sale is earned for the particular product in which quarter of which year. According to the query and graph shown in figure 3 it is concluded that all the four quarter are represented with four different colors and the sales of different product is shown quarterly for year 2008 to 2017. According to the third requirement, the net sale generated worldwide is shown, and how it has added up in the GDP of the different region is compared. The contribution of net sale in regions GDP is shown quarterly for the particular year. According to the query and figure 4 it can be concluded that the quarters are shown by different colors and the contribution of net sale is shown for regions GDP for year 2008 to 2017.

In this project, worldwide sales could be further bifurcated only to three regions (US, Europe and China), data is not available for the rest of the regions in the world. This is the major limitation of the project.

As in this project the net sale is compared and calculated according to product category. In future the products can be further sub categorize the example the footwear can be drilled down to running shoes, sneakers, casual shoes, etc. In order to overcome the limitation of the project, net sale data of remaining the region over the world can be collected in future to have better analysis worldwide. Also, this major region could be further divided into sub regions like major or metropolitan cities (e.g. Ireland could be further divided into Dublin, Cork, Galway, etc.) in particular region to enhance and modify sale strategy. .

## References

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[9]'Adidas'(March 2018) 'Net sales of the adidas Group worldwide from 2002 to 2017, by product category (in million euros)' Available at: <https://www.statista.com/statistics/250740/net-sales-of-the-adidas-group-worldwide-by-product-category/> (Accessed 15 Oct 2018)

[10]'Kofi'(Feb 2018) 'ADIDAS quarterly sales' Available at: <https://www.kaggle.com/kofi2614/adidas-quarterly-sales> (Accessed 15 Oct 2018)

[11]'Adidas'(March 2018) 'FINANCIAL PUBLICATIONS' Available at: <https://www.adidas-group.com/en/investors/financial-reports//2017/> (Accessed 19 Oct 2018)

## Appendix

### R code example

```
#PDF Scrapping Unstructured
#install.packages("tabulizerjars")
library(tabulizer)
library(tidyverse)
tab1 <- extract_tables("C:/Users/Ranu/Desktop/adidas/Automation/annual_report")
tab1[280]
x1 <- cbind(tab1[[280]][0:1,2:11])
x1
colnames(x1) <- c("NetSales_MillionEuros")
dataX1 <- data.frame(x1)
Merged = dataX1[-c(10),]
x1 <- as.data.frame(Merged)
colnames(x1) <- c("NetSales_MillionEuros")
x1
x2=x1[order(-1:-10),]
x2
x2 <- as.data.frame(x2)
colnames(x2) <- c("NetSales_MillionEuros")
x2
x2$Year <- c("2008", "2009", "2010","2011","2012", "2013", "2014","2015", "2016")
x2
x2$ID <- 1:nrow(x2)
x2
colnames(x2) <- c("NetSales_MillionEuros","NetSaleYear","NetSale_ID")
write.csv(x2 ,"C:/Users/Ranu/Documents/R/NetSaleWorldwide.csv", row.names = FALSE)

#Kaggle cleaning Structured Data
```



```

File1 = read.csv(file= "C:/Users/Ranu/Desktop/adidas/Automation/Regionwise.
File1= File1[-c(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,
File1$ID <- 1:nrow(File1)
File1=as.data.frame(File1)
library(tidyr)
df <- data.frame(File1)
foo <- data.frame(do.call('rbind', strsplit(as.character(File1$date),'|',fix
colnames(foo) = c("Year","Quarter")
foo
Merged2 <- do.call("cbind", list(File1,foo))
Merged3 = Merged2[,-c(1)]
colnames(Merged3) <- c("US_GDP","Europe_GDP","CHN_GDP_US","Region_ID","YearR
write.csv(Merged3 ,"C:/Users/Ranu/Documents/R/NetSaleRegionwise.csv", row.na

# convert the Excel to CSV for Statista Dataset
# Install library
#install.packages("readxl")
library("readxl")
StatistaFile1 <- read_excel("C:/Users/Ranu/Desktop/adidas/Automation/GrossPr
StatistaFile1 <- data.frame(StatistaFile1)
#View(StatistaFile1)
StatistaFile1 <- StatistaFile1[-c(1,2),]
#install.packages("data.table")
library(data.table)
setnames(StatistaFile1, old = c('Global.gross.profit.of.the.adidas.Group.from
StatistaFile1 <- StatistaFile1[-c(1,2,3,4,5,6,7,8),]
StatistaFile1$GrossProfit_ID <- 1:nrow(StatistaFile1)
#View(StatistaFile1)
write.csv(StatistaFile1 ,"C:/Users/Ranu/Documents/R/GrossProfit.csv", row.na


# convert the Excel to CSV for Statista Dataset
# Install library
#install.packages("readxl")
library("readxl")
StatistaFile2 <- read_excel("C:/Users/Ranu/Desktop/adidas/Automation/Product
StatistaFile2 <- data.frame(StatistaFile2)
#View(StatistaFile2)
StatistaFile2 <- StatistaFile2[-c(1,2,3,4,5,6,7,8),]
#install.packages("data.table")
library(data.table)
setnames(StatistaFile2, old = c('Adidas.Group.s.global.net.sales.from.2002.t
StatistaFile2$Product_ID <- 1:nrow(StatistaFile2)
#View(StatistaFile2)
write.csv(StatistaFile2 ,"C:/Users/Ranu/Documents/R/SalesProductwise.csv", r

print("complete")

```

[\[PDF\] Annual Report 2017 - Adidas Group](#)  
[https://www.adidas-group.com/media/liefer.../annual\\_report\\_gb-2017\\_en\\_secured.pdf](https://www.adidas-group.com/media/liefer.../annual_report_gb-2017_en_secured.pdf)  
 Mar 2, 2018, ADIDAS ANNUAL REPORT 2017, PDF, ADIDAS ANNUAL REPORT 2017, ONLINE ...  
 the Responsibility Statement dated February 23, 2018.

DESCRIPTION	SOURCE	MORE INFORMATION	DESCRIPTION	SOURCE	MORE INFORMATION
<b>Source</b> Adidas			<b>Source</b> Adidas		
<b>Survey by</b> Adidas			<b>Survey by</b> Adidas		
<b>Survey name</b> Adidas - Annual Report 2017			<b>Survey name</b> Adidas - Annual Report 2017		
<b>Published by</b> Adidas			<b>Published by</b> Adidas		
<b>Source link</b> <a href="#">Adidas - Annual Report 2017, page 229</a>			<b>Source link</b> <a href="#">Adidas - Annual Report 2017, page 107</a>		
<b>Release date</b> March 2018			<b>Release date</b> March 2018		



**Kofi**

**ADIDAS Quarterly Sales Forecasting**

last run 10 months ago - R Notebook HTML - 1329 views  
 using data from [ADIDAS quarterly sales](#) - Public

6 voters

Notebook Code Data (1) Output Comments (6) Log **Versions (4)** Forks (6) [Fork Notebook](#)

Versions										View Diff
Version 4	✓	ADIDAS Quarterly ...	10 months ago	72s	0 B	R	Notebook	(+3/-3)	🔗	
Version 3	✓	ADIDAS Quarterly ...	10 months ago	86.1s	0 B	R	Notebook	(+7/-10)	🔗	
Version 2	✓	ADIDAS Quarterly ...	10 months ago	68.9s	0 B	R	Notebook	(+1/-1)	🔗	
Version 1	✓	ADIDAS Quarterly ...	10 months ago	70.8s	0 B	R	Notebook		🔗	

Figure 5: Release Date of DataSets