SmartDesk

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In this document I'm presenting a comprehensive analysis of Smart Desk, a global leader in the manufacturing and distribution of office furniture, with a focus on ergonomic and technologically advanced solutions. The analysis is structured into two key sections:

- Sales and Profit Analysis Overview: This section includes detailed SQL queries and data exploration to uncover insights into sales performance and profitability across regions and product categories.
- Business Case Study: A rigorous business case designed to address critical questions regarding country-level revenue and profit performance, culminating in strategic recommendations to drive growth and optimize market presence.

Smart Desk: Business Case

Sales and Profit Analysis Overview

Sales and Profit Analysis by Product Category for Adabs Entertainment in 2020

I performed an analysis of total sales and profit broken down by product category exclusively for the Adabs Entertainment account during the year 2020. I calculated the following totals:

SELECT *
FROM FORECASTS;
SELECT *
FROM ACCOUNTS;
SELECT *
FROM SALES;

SELECT
category,

SUM(maintenance) AS ventas_mantenimiento,
SUM(product) AS ventas_producto,
SUM(parts) AS ventas_partes,
SUM(support) AS ventas_soported,
SUM(total) AS ventas_totales,
SUM(units_sold) AS unidades_vendidas,
SUM(profit) AS total_beneficio_categoria
FROM SALES

WHERE account = 'Adabs Entertainment' AND year = 2020
GROUP BY category;



We observed that in 2020, the Adabs Entertainment account made purchases in the Chairs category, including maintenance, product, and parts, but not in support. A total of 3,530.49 units were sold, generating an approximate profit of \$605,772.

The account also made purchases in the Electronics category, with diversification across all four revenue streams (maintenance, product, parts, and support), generating an approximate profit of \$756K and a total of 3,571.43 units sold in 2020.

Comparison of Sales, Units Sold, and Profit Between Countries in the APAC and EMEA Regions

I compared the sales performance across the different countries within the APAC and EMEA regions, obtaining the following indicators: Average Revenue, Average Number of Units Sold, and Average Profit.

SELECT country, ROUND(AVG(total), 2) AS ingreso_promedio, ROUND(AVG(units_sold), 2) AS unidas_vendidas_promedio, ROUND(AVG(profit), 2) AS beneficio_promedio FROM ACCOUNTS AS a INNER JOIN SALES as s
ON a.account = s.account
WHERE region = 'APAC' OR region = 'EMEA'
GROUP BY country
ORDER BY ingreso_promedio DESC;



We observed that Singapore had the highest average revenue, along with a high average volume of units sold and a high average profit of \$1,150,704.

However, Sweden recorded the lowest average revenue, with an average of 1,785.03 units sold, generating an average profit of \$281,601.50.

Total Profit Analysis by Industry: Study of Clients in the Commitment Stage

I calculated the total profit for each industry and classified it as "High" if it exceeded \$1,000,000, or "Normal" if it did not. For this analysis, I only considered rows corresponding to accounts marked as Commit (deals close to closing) and with a total profit forecast greater than \$500,000.



We observed that the Consulting, Healthcare, Retail, and Technology industries have generated high profits, while Finance, Hospitality, and Law have generated normal profits (less than \$1M). This suggests that the first four industries represent a strong opportunity to close deals due to their high potential for generating significant revenue

Forecast vs. Actual Profit Evolution: Category-Level Trajectory Analysis

I calculated the profit forecast for the year 2022 and the actual profit for the first quarter of 2020 and the third quarter of 2021, grouping the results by product category. Additionally, I identified the oldest and the most recent opportunity within each category.

```
WITH vista_completa AS (
                            SELECT
          COALESCE(s.category, f.category) AS categoria,
                COALESCE(s.year, f.year) AS year,
                            s.quarter,
                 SUM(s.profit) AS beneficio total,
               SUM(forecast) AS pronostico_total,
      MAX(f.opportunity_age) AS oportunidad_mas_antigua,
      MIN(f.opportunity_age) AS oportunidad_mas_reciente
                      FROM SALES AS s
                  FULL JOIN FORECASTS as f
          ON s.category = f.category AND s.year = f.year
WHERE quarter = '2020 Q1' OR quarter = '2021 Q3' OR f.year = 2022
                        GROUP BY ALL
                      ORDER BY quarter
                      SELECT categoria,
            SUM(beneficio_total) AS beneficio_total,
           SUM(pronostico total) AS pronostico total,
               MAX(oportunidad_mas_antigua),
               MAX(oportunidad_mas_reciente)
                    FROM vista_completa
                    GROUP BY categoria
    ORDER BY beneficio_total DESC, pronostico_total DESC;
```



It is observed that the "Break room" category generated the highest total profit during Q1 2020 and Q3 2021, exceeding \$7 million, followed by "Desks" and "Electronics" with approximately \$3 million and \$2 million in total profit, respectively. Additionally, "Break room" has the highest expected profit, exceeding \$33 million. Within this category, there is a business opportunity that has been open for 2 days (the most recent). However, the oldest opportunity has been open for over a year (378 days).

BUSINESS CASE: Smart Desk Global Sales and Profit Analysis

INTRODUCTION

Smart Desk is a global leading company in the manufacturing and distribution of office furniture, specializing in ergonomic and technologically advanced solutions aimed at improving productivity and well-being in work environments. Thanks to its commitment to innovation and quality, the company has experienced significant international expansion in recent years, establishing operations in various strategic markets.

This global growth has created an increasing need to analyze sales and profit data in each country in detail, with the goal of adjusting commercial strategies, optimizing planning processes, and maximizing operational profitability. A thorough analysis of these data is essential to make informed decisions that ensure the long-term sustainability of the business by establishing different strategies tailored to each country.

BUSINESS GOAL

Which countries have experienced the highest growth in sales and profits from 2020 to 2021, and which represent the greatest opportunities to further expand our business?

Approach

To address this objective, a comparative analysis was conducted of revenue and profit figures by country for the years 2020 and 2021, with revenues segmented between products and services. This approach allows identification of not only the highest-growth markets but also those with the greatest potential for targeted commercial investment to drive business volume.

The analysis involved reviewing sales and profit data for each country in 2020 and 2021, with a focus on revenue sources to pinpoint key growth drivers and opportunities for deploying sales resources effectively.

Methodology

A comprehensive table was developed outlining sales activity by country for both years, including total revenue, revenue breakdown by product and service lines, and profit figures

Revenue was categorized as follows:

- Product Revenue: parts revenue + product revenue
- Service Revenue: maintenance revenue + support revenue

This structured analysis provides actionable insights to guide strategic decision-making and resource allocation for ongoing international expansion.

EXPLORATORY ANALYSIS

Analyst: Roger Gonzalez Sanchez

Exploratory Sales Analysis - Overview

I conducted an exploratory analysis of the sales and accounts tables covering the period from 2020 to 2021, which are the data sets I will be using.

ROUND(AVG(support+maintenance), 2) AS ingreso_medio_servicio, ROUND(STDDEV(support+maintenance), 2) AS desviacion_servicio, ROUND((desviacion_servicio/ingreso_medio_servicio), 2) AS coef_variacion,

ROUND(AVG(total), 2) AS ingreso_medio,
ROUND(AVG(profit), 2) AS beneficio_medio,
ROUND(STDDEV(total), 2) AS desviacion_ingresos,
ROUND(STDDEV(profit), 2) AS desviacion_beneficios,
MIN(year) AS venta_mas_antigua,
MAX(year) AS venta_mas_reciente
FROM SALES
WHERE year IN (2020, 2021);



- **Total number of clients:** We have a total of 86 clients with 121 rows, indicating that some clients have purchased different types of product categories.
- Average sales by type: We observe that the average product sales are higher than service sales, at \$1,115,278.52 versus \$326,960.98. Both categories show high deviations, but there is greater variability in service revenue data (coefficient of variation for product revenue = 0.69 vs. 0.82 for service sales).
- Average revenue and profit: For both years, we obtained an average revenue per sale of \$1,437,868.24 and an average profit of \$502,178.04. Regarding deviations, again we see high variability, indicating that sales figures differ significantly across transactions.

Exploratory Sales Analysis - By Country

For the exploratory analysis by country from 2020 to 2021, I first created a view summarizing sales by country. For each country (row), this view includes service revenue, product revenue, total revenue, total profit, and overall profitability (calculated as profit divided by revenue):

Smart Desk: Business Case

```
CREATE OR REPLACE VIEW sales_by_countries AS

WITH customers AS (

SELECT *

FROM ACCOUNTS

WHERE account_level = 'Customer'
)
```

SELECT year, c.country, SUM(product+parts) AS ingresos_productos, SUM(MAINTENANCE+SUPPORT) AS ingresos_servicios, SUM(total) AS ingresos_totales, SUM(profit) AS beneficios_totales, ROUND((beneficios_totales/ingresos_totales), 2) AS rentabilidad_total

FROM SALES as s
LEFT JOIN customers AS c
ON s.account = c.account
WHERE year IN (2020, 2021)
GROUP BY year, c.country
ORDER BY year, ingresos_totales DESC;

The SQL query for the exploratory sales analysis by country is as follows:

SELECT COUNT(DISTINCT(country)) AS num_paises,

COUNT(*) AS num_filas,

ROUND(AVG(ingresos_productos), 2) AS ingreso_medio_producto,

ROUND(STDDEV(ingresos_productos), 2) AS desviacion_producto,

ROUND((desviacion_producto/ingreso_medio_producto), 2) AS coef_variacion,

ROUND(AVG(ingresos_servicios), 2) AS ingreso_medio_servicio, ROUND(STDDEV(ingresos_servicios), 2) AS desviacion_servicio, ROUND((desviacion_servicio/ingreso_medio_servicio), 2) AS coef_variacion, ROUND(CORR(ingresos_totales, beneficios_totales),4) AS correlacion_ing_benef,

ROUND(AVG(ingresos_totales), 2) AS ingreso_medio, ROUND(AVG(beneficios_totales), 2) AS beneficio_medio, ROUND(STDDEV(ingresos_totales), 2) AS desviacion_ingresos, ROUND(STDDEV(beneficios_totales), 2) AS desviacion_beneficios,

ROUND((desviacion_ingresos/ingreso_medio), 2) AS coef_variacion_ing, ROUND((desviacion_beneficios/beneficio_medio), 2) AS coef_variacion_benef

FROM sales_by_countries WHERE year IN (2020, 2021);



Regarding the exploratory analysis by country from 2020 to 2021, we observe the following:

- We have operated in 15 countries, with the number of rows suggesting that some countries had no sales either in 2020 or in 2021.
- Average product revenue per country: \$5,622,862.54 with a standard deviation of \$7,734,406.92, highlighting that some regions have significantly higher product sales.
- Average service revenue per country: \$1,621,181.54 with a standard deviation of \$2,177,504.75, indicating that service sales vary greatly across regions.
- Coefficients of variation: The variation coefficient by country is much higher than by region, reflecting greater data variability at the country level compared to the regional level.
- Correlation between revenue and profit: There is an almost perfect correlation of 0.9995, meaning the relationship between these two variables is highly direct.
- Average revenue and profit per country: We observe average revenues of \$7,249,252.38 and profits of \$2,531,814.29, with high standard deviations and variation coefficients, suggesting some countries have generated significantly more revenue and profit than others.

ANALYSIS DEVELOPMENT

Sales by Country for 2020 and 2021 (Including Profitability Column)

This section presents a detailed breakdown of sales by country for the years 2020 and 2021, incorporating total revenue by products and services, profitability and total margins columns to evaluate the efficiency of revenue and profit generation across markets. This analysis provides insights into which countries are driving growth and delivering the highest returns, serving as a foundation for strategic decision-making and targeted commercial investments.



SELECT * FROM sales_by_countries;

During 2020, the countries with the highest total revenue were:

- United States with \$24,403,809
- France with \$16,724,124
- Germany with \$9,162,697

During 2021, the countries with the highest total revenue were:

- United States with \$44,179,349
- Germany with \$17,222,766
- France with \$9,942,873

Regarding profitability, the top-performing countries in 2020 were:

- Spain with 0.40 (40%)
- Australia and Portugal, both with 0.38 (38%)
- Austria with 0.36 (36%)

In 2021, the most profitable countries were:

- Mexico with 0.39 (39%)
- Australia with 0.38 (38%)
- Korea with 0.37 (37%)

Analyst: Roger Gonzalez Sanchez

To deepen our analysis, I developed a comprehensive query to extract the following key performance indicators for 2020 and 2021:

- Product revenue by country
- Service revenue by country
- Total revenue by country
- Total profits by country
- Country-level contribution as a percentage of total revenue and total profits (for each respective year)
- Year-over-Year (YoY) growth rates for product revenue, service revenue, total revenue, and profits

By including these last two points in the SELECT statement, we can easily identify which countries are our largest sources of revenue and profits, as well as those that have experienced the highest growth in both revenue and profitability.

```
WITH country_growth AS (
         SELECT
         country,
```

MAX(CASE WHEN year = 2020 THEN ingresos_productos ELSE NULL END) AS ingresos_prod_2020, MAX(CASE WHEN year = 2021 THEN ingresos_productos ELSE NULL END) AS ingresos_prod_2021, MAX(CASE WHEN year = 2020 THEN ingresos_servicios ELSE NULL END) AS ingresos_serv_2020, MAX(CASE WHEN year = 2021 THEN ingresos_servicios ELSE NULL END) AS ingresos_serv_2021,

MAX(CASE WHEN year = 2020 THEN ingresos_totales ELSE NULL END) AS ingresos_2020, MAX(CASE WHEN year = 2021 THEN ingresos_totales ELSE NULL END) AS ingresos_2021,

MAX(CASE WHEN year = 2020 THEN beneficios_totales ELSE NULL END) AS beneficios_2020, MAX(CASE WHEN year = 2021 THEN beneficios_totales ELSE NULL END) AS beneficios_2021,

ROUND(100 * ingresos_2020 / SUM(ingresos_2020) OVER(), 2) AS peso_ingresos_2020_pct, ROUND(100 * ingresos_2021 / SUM(ingresos_2021) OVER(), 2) AS peso_ingresos_2021_pct, ROUND(100 * beneficios_2020 / SUM(beneficios_2020) OVER (), 2) AS peso_beneficios_2020_pct, ROUND(100 * beneficios_2021 / SUM(beneficios_2021) OVER (), 2) AS peso_beneficios_2021_pct,

ROUND((MAX(CASE WHEN year = 2021 THEN ingresos_productos END) - MAX(CASE WHEN year = 2020 THEN ingresos_productos END)) / MAX(CASE WHEN year = 2020 THEN ingresos_productos END), 2) AS YoY_ingresos_prod, ROUND((MAX(CASE WHEN year = 2021 THEN ingresos_servicios END) - MAX(CASE WHEN year = 2020 THEN ingresos_servicios END)) / MAX(CASE WHEN year = 2020 THEN ingresos_servicios END), 2) AS YoY_ingresos_serv, ROUND((MAX(CASE WHEN year = 2021 THEN ingresos_totales END) - MAX(CASE WHEN year = 2020 THEN ingresos_totales END)) / MAX(CASE WHEN year = 2020 THEN ingresos_totales END), 2) AS YoY_ingresos, ROUND((MAX(CASE WHEN year = 2021 THEN beneficios_totales END) - MAX(CASE WHEN year = 2020 THEN beneficios_totales END)) / MAX(CASE WHEN year = 2020 THEN beneficios_totales END), 2) AS YoY_beneficios FROM sales_by_countries

GROUP BY country

SELECT country, peso_ingresos_2020_pct, peso_ingresos_2021_pct, peso_beneficios_2020_pct, peso_beneficios_2021_pct, YoY_ingresos_prod, YoY_ingresos_serv, YoY_ingresos, YoY_beneficios FROM country_growth ORDER BY peso_ingresos_2021_pct DESC, YOY_ingresos DESC;

A COUNTRY	# PESO_INGRESOS_2020_PCT	# PESO_INGRESOS_2021_PCT	# PESO_BENEFICIOS_2020_PCT	# PESO_BENEFICIOS_2021_PCT	# YOY_INGRESOS_PROD	# YOY_INGRESOS_SERV	# YOY_INGRESOS	# YOY_BENEFICIOS
Singapore								null
Sweden								null
United States								0.81
Germany								1.14
France								-0.42
Switzerland								2.94
Austria								0.74
Spain								1.27
Japan								null
Australia								-0.50
Argentina								null
Italy								2.25
Korea								null
Portugal								-0.48
Mexico	rull	1.04	null	1.18	null	null	nut	null

CONCLUSIONS

Analyst: Roger Gonzalez Sanchez

The **United States represents the largest share of total revenue** in **2021**, accounting for 43.81% of the company's total revenue that year, followed by Germany and France with 17% and 9.86% respectively. These three countries collectively contribute over 70% of the company's revenues in 2021, underscoring the importance of maintaining strong relationships with key clients in these markets.

However, while the U.S. remains the dominant market, its growth rate of 81% is moderate compared to other countries, which may indicate market saturation or limited demand expansion. The U.S. market should be viewed as a core stable revenue base for SmartDesk. Notably, among the top three, France is the only country that experienced a decline in revenue, warranting further investigation to determine whether this is due to increased competition, weakening demand, or internal sales performance issues.

- Within this group, Germany stands out with nearly 200% growth in service sales, signaling strong expansion potential in this segment.
- Conversely, although Switzerland, Spain, and Italy collectively accounted for just over 10% of total revenue in 2021, these regions demonstrated the highest percentage growth in total revenue (315%, 194%, and 183% respectively), representing significant opportunities for strategic investment and business development. To capitalize on these markets, volume growth initiatives such as bundled discount packages could be effective in driving sustained year-over-year revenue increases.
 - Spain led in service revenue growth with an impressive 389% increase, followed closely by Switzerland at 383%.
 - Switzerland also achieved the highest product revenue growth at 304%, with Italy and
 Spain following at 172% and 165% respectively.
- New Markets: Expansion into Japan, Argentina, Korea, and Mexico in 2021 accounted for nearly 10% of total revenues, highlighting these countries as promising growth markets. Increasing sales force presence and investment in these regions could accelerate business development.
- Markets with Declining or No Revenue: Notably, there were no recorded sales in Singapore and Sweden in 2021. Alongside countries with negative revenue growth such as France, Portugal, and Australia, it is critical to investigate whether these declines are due to external factors (e.g., reduced demand, intensified competition, macroeconomic challenges) or internal issues (e.g., changes in sales teams, leadership transitions, operational inefficiencies).

BUSINESS STRATEGIES

High-Revenue Countries (United States, Germany, France):

- Implement customer retention and expansion initiatives focused on cross-selling opportunities.
- Develop more advanced and granular segmentation to identify micro-niches with untapped growth potential.
- Adjust pricing and service offerings to mitigate market saturation risks.
- Specifically for France, given its high revenue but declining trend, conduct a thorough market analysis and launch targeted campaigns aimed at recovering lost customers.

High-Growth Markets (Switzerland, Spain, Italy):

- Increase investment in local sales teams to accelerate market penetration.
- Deploy targeted promotions on key products and services.
- Introduce volume-based discounts and bundled packages to boost recurring revenue.
 Additionally, create differentiated service-product bundles tailored to customer needs.

New Markets (Japan, Argentina, Korea, Mexico):

- Execute strategies to accelerate expansion by strengthening local commercial teams.
- Enhance sales training programs to ensure that sales representatives and account managers possess deep product and market knowledge.
- Implement "early win" tactics to secure quick success stories, such as offering free samples or significant volume/package discounts combining products and services, to solidify market presence.

<u>Declining or Closed Markets (Singapore, Sweden, France, Portugal, Australia):</u>

- Conduct an in-depth root cause analysis to determine whether declines are driven by internal factors or external market conditions.
- If internal issues are identified, consider restructuring the sales organization and relaunching pilot campaigns.
- If external or macroeconomic factors predominate, evaluate the strategic viability of temporarily exiting these markets until conditions improve.