**User Guide**

**Sample Only**

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**Revision 2.0**

**Dynamo**

# ISMT E-130 – Spreadsheet Models for Managers

**COURSE PROJECT**

## “Dynamo”User guide

Overview

 Our team will model the expected net profit under two different business scenarios for a Magazine/Newspaper company. The model will detail expected sales and costs for these scenarios over a 3 year time period broken into quarters. The business objective of this model will be to decide which strategy will maximize profits for the magazine company. The Model’s users are the Business Manager, Bank Officer, Business Analyst, Finance Department, Accounting Department, and investors in the company.

Description of the two scenarios

Scenario1 - There is stable demand & costs for magazines and newspapers and there is no financial crisis.

**Scenario2 -** There is a financial crisis projected to last at least 3 years and pricing are increasing.

Dynamo-Scenario1.xls and Dynamo-Scenario2.xls consists of the following worksheets:

* [Info – Information about the project name, revision number, Excel version used and name of the team members and their email address.](#Limitations)
* IP – Contains the input stream, parameters for the users to enter. They are color coded to differentiate.
* Rev – Calculates the revenue for retail and distribution business model and also calculates the total revenue.
* HireStream – Calculates the Total Staff Cost including the cumulative cost for Clerk, manager and the Truck Driver.

* [InvAlys – Provides Inventory analysis for Retail and Distribution business models.](#Scenario1)
* Exp – Calculates the Expenses including Non Salary, Staff cost and Inventory expenses.
* [IncomeStatement – Calculates the Operating Expenses for Retail and Distribution model. Calculates the net Income per Qtr.](#Charts)
* [CashFlowAnalysis – Calculates the Beginning and Ending Balances.](#Charts)
1. **Location and meaning of input parameters and input streams**

 **Input Streams:**

The IP worksheet allows the user to input the following input streams:

* NewStoresOpenedPQ – Number of new stores opened per Quarter for 3 years.
* NewDistributionLocationsPQ – Number of distribution warehouse locations opened per Quarter for 3 years.
* PercentageIncrAllCosts – Percentage increase in the cost.

 **Parameters:**

The parameter block consists of various blocks which are utilized in calculating the Income Statement. All the parameters are located in the “IP” worksheet.

* CumNewStores – Cumulative number of stores per Qtr.
* CumDistribution – Cumulative number of warehouse per Qtr.
* CumIncrCosts – Cumulative increase in cost in percentage.
* Retail Operation per Location – Provides the sales price for each of the magazine type and also average sales per Qtr.
* Distribution Revenue per Location – Provides the sales price for each of the magazine type and also average sales per Qtr.
* SalesPercentage, DistSalesPercentage provides the sales percentage.
* LaborCostPerHour – Provides labor cost per hour for Clerk, manager and Truck Driver.
* Non-Salary Retail Expenses One Location PQ – Provides details about rent, utilities, Insurance and Non Salary expenses for the Retail store.
* Non-Salary Distribution Expenses One Location PQ - Provides details about rent, utilities, Insurance and Non Salary expenses for the distribution Warehouse.
* Tax Rate – Assumed as 34%
* AveUnsold – The average unsold percentage of the inventory.
1. **Location and meaning of outputs**

 The output stream is located in the “Income Statement” and “CashFlowAnalysis” worksheet.

* + NetIncomePQ – Provides the Net Income per Qtr. This is calculated using Operating Profits and the Taxes.
	+ End Bal – The ending Balance is calculated using the difference between the sum of Beginning balance and the cash from Income and the sum of Non Tax cash expenses and Tax paid expenses**.**
1. **Guide to Visual Cues**
	* The input streams are colored in “Turquoise”.
	* The parameters are colored in “Yellow”.
	* All the calculations are colored in “White”.

Input streams and the parameters sections all have blue title bars labeling these sections. The individual parameter blocks have light blue shading, located on the “IP” tab. Abbreviations that are used in the model include PQ, for Per Quarter, Cum for Cumulative, Dist for Distribution, Mgr for Manager, Exp for expense, and Ave for Average. Examples of these are CumDistribution for Cumulative Distribution, AveSalesPQ for Average Sales per Quarter, DistPrice for Distribution Price, MgrHoursPQ for Manager Hours per Quarter, and AveDistPQ for Average Distribution per Quarter.

1. **Step-by-Step use of the model**

 The parameters required for the worksheets involved in the model need to be changed in the “IP” worksheet.

1. **Rev:**

 Parameters used for the Revenue Analysis are:

**SalesPrice**

Sales Price includes the price for the News Papers, tabloids, News magazines, Fashion Magazines and Sports Magazine. The sales Price is specific for the Retail Business.

**AveSalesPQ**

Average Sales per Quarter for Retail includes: How many magazines sold each quarter and is calculated using the number of days per week published, open weeks per quarter and number of quarters.

**DistPrice**

Distribution Price includes the price for the News Papers, tabloids, News magazines, Fashion Magazines and Sports Magazine. The Dist Price is specific for the Retail Business. Distribution price is sales price multiplied by 50% & increased by 20%.

**AveDistPQ**

 Distribution per quarter is 60% of AveSalesPQ. These need not be changed as it is calculated through the formula.

1. **HireStream:**

 Hiring Stream calculates the Cost per Hour and Cost per Qtr for Clerk, Manager and the Truck Driver. Parameters used for the Hiring Stream Analysis are:

**ClerkPerStore**

 Users should specify how many Retail Clerks is on duty during open hours.

**StoreOpenHoursPerWeek**

Total open hours per week can be changed based on the location of the store.

**OpenWeeksPQ**

Total open weeks per Quarter can be changed based on the holiday season.

**MgrHoursPQ**

User can modify the Manager hours per week, which will be reflected in the Manager hours per quarter.

**WareHouseManager**

 The cost per hour for the Warehouse manager can be modified by the user.

**TruckDriver**

The cost per hour for the Truck Driver can be modified by the user.

1. **InvAlys:**

 Inventory Analysis calculates the Retail and Distribution Inventory cost. Parameters used for the Inventory Analysis are:

**SalesPercentage**

Sales percentage for the Retail stores can be changed by the user to the desired percentage.

**DistPercentage**

User can set the markup percentage for the distribution sales.

1. **EXP:**

Expense Analysis calculates the Retail and Distribution Expenses. Parameters used for the Expense Analysis are:

**RetailNonSalExpPQ**

User can modify the Retail store rent, Utility expenses, Insurance and Advertisement. The total of these expenses contribute to the Retail Non Salary Expenses per Quarter.

**DistNonSalExpPQ**

User can modify the Warehouse rent, Utility expenses, Insurance and Advertisement. The total of these expenses contribute to the Distribution Non Salary Expenses per Quarter.

1. **IncomeStatement:**

Income Statement calculates the Operating Expense for the Retail and Distribution model. It also calculates the Net Income per Qtr and also Net Income per Year for Retail and Distribution Business model. Parameters used for the Expense Analysis are:

**Revenue**

User can modify the total revenue per Quarter by changing other parameters related to Revenue like Sales price, Distribution price.

**Operating Expense**

User can modify the operating expense by changing the expenses related to the operating cost for Retail and Distribution Business.

**TaxRate**

The user can modify the Tax rate based on the state and the tax percentage applicable for that state.

1. **CashFlowAnalysis:**

**BegBalance**

The user can modify the Beginning Balance for the Quarter by changing the Tax percentage which is being utilized in calculating the Income statement.

**EndBalance**

The ending Balance is calculated using the difference between the sum of Beginning balance and the cash from Income and the sum of Non Tax cash expenses and Tax paid expenses. All these amounts can be modified based on the user input stream in the “IP” worksheet.

**Appendix:**

**Input Streams for Scenario 1 and Scenario 2:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Input Streams Scenario1** | **Yr1 Q1** | **Yr1 Q2** | **Yr1 Q3** | **Yr1 Q4** | **Yr2 Q1** | **Yr2 Q2** | **Yr2 Q3** | **Yr2 Q4** | **Yr3 Q1** | **Yr3 Q2** | **Yr3 Q3** | **Yr3 Q4** |
| NewStoresOpenedPQ | 1 | 0 | 1 | 1 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 1 |
| NewDistributionLocationsPQ | 20 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 0 | 0 |
| PercentageIncrAllCosts | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| **Input Streams Scenario2** | **Yr1 Q1** | **Yr1 Q2** | **Yr1 Q3** | **Yr1 Q4** | **Yr2 Q1** | **Yr2 Q2** | **Yr2 Q3** | **Yr2 Q4** | **Yr3 Q1** | **Yr3 Q2** | **Yr3 Q3** | **Yr3 Q4** |
| NewStoresOpenedPQ | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| NewDistributionLocationsPQ | 20 | -5 | 0 | 0 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| PercentageIncrAllCosts | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.0  |

**Parameters:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Retail Operations Per Location | NewsPapers | Tabloids | NewsMag | FashionMag | SportsMag |
| SalesPrice |  2.00  |  4.00  |  4.50  |  5.00  |  5.00  |

|  |  |
| --- | --- |
| SalesPercentage | 50% |
| DistPercentage | 20% |
| DistSalesPercentage | 60% |

|  |  |
| --- | --- |
| LaborCostsPerHour |   |
| RetailStoreClerk | 15 |
| WareHouseManager | 25 |
| TruckDriver | 30 |

|  |  |
| --- | --- |
| Retail Labor |   |
| ClerkPerStore | 1 |
| StoreOpenHoursPerWeek | 84 |
| OpenWeeksPQ | 13 |
| WareHouse Labor |   |
| MgrHoursPerWeek | 50 |
| MgrHoursPQ | 650 |
| WareHouseOpenWeeksPQ | 13 |

|  |  |
| --- | --- |
| Non-Salary Retail Expenses One Location PQ |   |
| StoreRentPQ | 30000 |
| StoreUtilitiesPQ | 10000 |
| RetailInsPQ | 3000 |
| ContractServPQ | 6000 |
| RetailAdPQ | 500 |

|  |
| --- |
| Non-Salary Distribution Expenses One Location PQ |
| WarehouseRentPQ | 7500 |
| UtilitiesPQ | 1800 |
| InsurancePQ | 1350 |
| OutsourceServPQ | 2500 |
| TruckCostsPQ | 3000 |

|  |  |
| --- | --- |
| Taxes |   |
| Tax Rate | 34% |

|  |  |
| --- | --- |
| Unsold Inventory |   |
| AveUnsold | 10% |