

Donation Analysis of Hire Heroes USA

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Summary

The financial prosperity of Hire Heroes was our focus since its inception in order to deconstruct the Non-Profit giving and provide recommendations to increase company's revenue year over year. Donations are the primary source of proceeds that fund both the current and future offerings of employments and services for US military members, veterans, and their military spouses to succeed in the civilian workforce. Through an in-depth analysis of the constituent and fundraising data we analyzed the contributors to its financial performance and present consequential illustrations of the critical success factors that will fuel the strategic growth of Hire Heroes.

1) Problem and Motivation

Our military veterans and their spouses suffer from higher rates of unemployment, in comparison to the national average rate of unemployment. Hire Heroes USA was enacted to address this specific societal predicament, by providing no-cost employment services to veterans and their spouses participating in the civilian workforce. Hire Heroes, like any other enterprise, requires the financial means to deliver the benefit of employment services to those in need. As a Non-Profit they rely on the philanthropic giving of members of society to cover its investments and expenses. Specifically, we want to understand the key factors that lead to a robust financial performance for Hire Heroes USA, to provide evidence-based recommendations that will continue to ensure the growth of services and realization of its vision. As Hire Heroes USA is a 501(c) charitable organization, the vast majority of its revenue is derived through donations. Hire Heroes USA's annual earnings constitute the funds that cover the operational expenses and investment necessary to meet its mission.

2) Approach

To understand Hire Heroes USA's historical giving, we mainly concentrated on five of the tables from Hire Heroes USA Salesforce database, specifically 'RecordTypes', 'Campaigns', 'Accounts', 'Contacts', and 'Opportunities'. We chose these tables for their significance in offering insights into potential and awarded donations, fundraising efforts, and information collected for those who donated to Hire Heroes. To efficiently explore this data, these tables were unnormalized to form a singular table in which to query the data. Every table that derives from Hire Heroes Salesforce Database contains a 'RecordTypeId' variable, that is a foreign key to an 'ID' that is a primary key to 'RecordType' table, whose relationship offers additional details for every Salesforce record. To join the RecordType table with every other table within Salesforce, the trailing three characters of its primary key 'ID' required truncating in order to exactly match the 'RecordTypeId' present in every Salesforce record. The 'Opportunities' table, representing uncaptured and awarded donations, also contained the foreign keys to the other pivotal tables of interest. The 'CampaignId' field within 'Opportunities' is the foreign key to the 'Campaign' table, representing donations associated with a special fundraising effort. The 'AccountId' within the 'Opportunities' table is a foreign key to the 'Account' table, representing donations received by a particular entity. Through an examination of the field names, we have come to assume at one time, or another, Hire Heroes made use of Salesforce's Nonprofit Success Pack (NPSP) for nonprofit donation management. Based on this assumption, when 'npe01_One2OneContact__c' is not null, this field from the 'Accounts' table would be a foreign key to a 'Contact' that incorporates NPSP's Household Account model.

The main variables leveraged from the dataset that were incorporated into our analysis were the dollar amounts of each donation, the tuple of fiscal quarter and year of the donation, the types of accounts, and the account's primary geographic location (via billing zipcode, city, state, and country). The Account's billing zipcode, city, state, and country required extensive cleaning as many of these fields contain partial sets of information, and there also existed a range of inconsistencies for specifying a state and country (as there existed a mixture of names and abbreviations). Fiscal quarter/year of donations were compared to equivalent dates also present within each donation record to check for errors since in one of the records the year given was 2024 (a future year yet to occur), while the remaining years present for the record were all for the year 2014.

Beyond just the variables we were given, we also created a set of new variables, to assist in our analysis. Specifically, we employed a new classification converting the continuous variable for the dollar amount of donations into one of eight categories, based on the eight donation ranges which donors are classified and thanked for their contributions in Hire Heroes Annual Reports (Hire Heroes USA). Another essential variable we devised was a revised donation type classification. While Hire Heroes has a number of fields classifying the type of donation such as 'Type', 'Donation_Type__c', and 'LeadSource', when we were examining donations by 'Grants' we discovered, what we've come to believe, that in or around 2016, Hire Heroes went through a database schema change, as the variable primarily tracking 'Grant' to that period in time stopped and another variable started recording 'Grants' after 2016, and yet a third was used to further provide the distinction if they were 'restricted' or 'unrestricted' grants. For this reason, to reconcile the complete history of Hire Heroes donations, we reclassified donations types in four categories 'Contributions', 'Grants', 'In-Kind' and 'Fundraising', since these classifications are main components of revenue breakdown reported in Hire Heroes Annual Report (Hire Heroes USA 16). The third variable we created was an identifier for the entity making the donation. While every donation was associated with a corresponding account, accounts could represent subsidiaries of larger organizations which was represented in the schema through a Parent Account relationship. In this case, the account was an individual household, and there also exists a relationship with the 'Contact' table for the primary contact of the household account. As such we established an ordered ranking to identify the donating entity (if present/valid) by ordering by Contact ID, Parent Account ID, and then finally defaulting to the donation's Account ID.

4) Tools and Analytics

Our focus analyzing Hire Heroes USA giving has been through descriptive analytics. Our primary tool for visually describing our analysis has been with Tableau. To prepare and understand the dataset, we first converted all tables supplied to comma-separated value (CSV) files so that we could use a suite of BASH command line tools (e.g. 'grep', 'awk', 'head', 'cat' and 'sort') to search for patterns and relationships found within the tables/text files, to fill in the gaps of our understanding of the data. For cleaning and de-normalising the data, SQLite was employed so that SQL statements could be scripted to transform the data for importing into Tableau efficiently.

5) Results

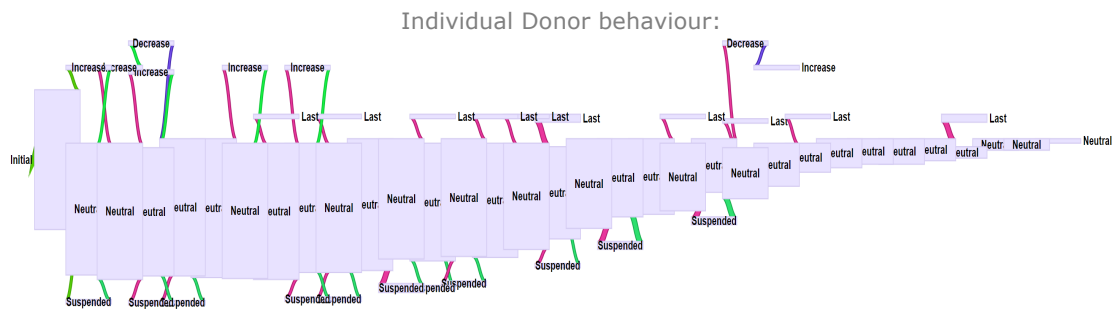


Image 1(a)

In the above illustration -Image 1(a) a higher number "monthly" recurring donations don't change. (e.g. they initial give \$10, and that goes on a month to month), and that is represented by "Neutral". The notation of "Last" is interesting because it represents a donor that was a recurring donor that discontinued giving gifts. The significance of this demonstrates that when monthly donations might stop, this shows donors stopping after 8 months, 10 months, 13 months, 15 months, 16 months, 17 months, 21 months, 23 months, 25 months and (2) donors stopping after 30 months. The "Suspended" notation denotes when giving changes from say \$10 -> \$0 -> \$10, this insight can potentially mean two things: a) There is an error in the data (a month is missing/not recorded) or b) The donor paused their monthly donation (chose not to give that month). "Suspensions" happen infrequently but there may be a pattern.

Lastly, the attributes "Increase" and "Decreases"; clearly, this picture shows an increasing/decreasing monthly donation are sporadic. However, if it occurs, an increase typically happens in the first couple of months once the gifts start and we do see that decreases happen significantly less than increases.

Grants Donations Bins/Revenue Generated:

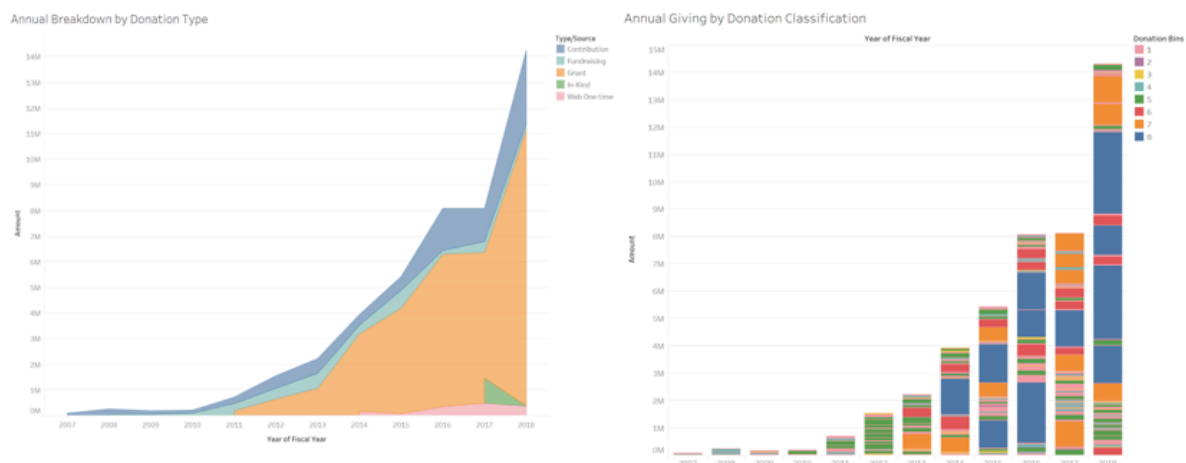


Image 2(a)

Image 2(b)

Annual Donations/Grants Heat Maps:

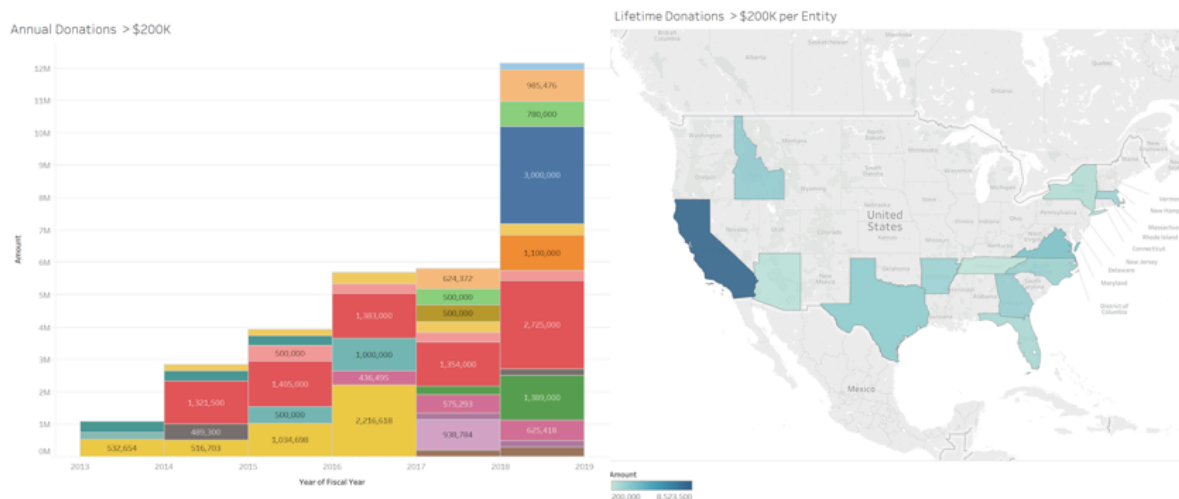


Image 3(a)

Image 3(b)

Using Hire Heroes Income Statement-2017, which is the last available at the time of analysis, we have been able to compare the revenue from donations as calculated from the income statement of the report with that of our own calculations from the data ("Rating for Hire Heroes USA." 2018), and what we have seen is a coinciding value of \$8.1 Million USD. Further, when we compare the makeup of the donation by type for 2017, by categories of 'Contributions', 'Grants', 'Fundraising', and 'In-Kind', we find that our ratios are within a few percentage points of those found in the 2017 annual report. The discrepancies here, for the most part, can be attributed to our assumptions of how the donations are classified and had we provided the classifications or its definitions would only further improve the accuracy of our analysis.

We were able to build off this donation type classification, this then can be applied, broken down by these categories, their amounts attributed to the gross annual donation, as illustrated in Image 2(b). This illustration reveals that before 2010, the majority of revenue was in the form of individual and corporate contributions, However, starting in 2011, the primary source of revenue came through 'Grants'; and is the contributing factor to why revenue growth is exponentially increasing year over year.

If we apply the new variable 'donation amount classification' also to the plot of annual gross donation amounts, as seen in Image 2(b), we see that starting in 2013 the bulk of contributions comprising of categories 6 through 8, or donations above \$100,000. In subsequent years we see both the size and number of these contributions increasing (except 2017), which accounts for the vast majority of the revenue for each year. Further, if we look only at donations greater than \$200,000 (which would require disclosure to the IRS through Form 990) and apply the new variable 'Donating Entity' to the plot of annual gross donations, as seen in image 3(a), we discover that only a handful of donors are responsible for nearly two-thirds of the annual gross donations year over year.

Further, we see the significant donors have consistently given year over year, and for the most part, these donations have increased. Finally, when this same information is attributed with the geographic billing locations of the donating entity, we can generate a heatmap by U.S. state for the total donations by state. We can assess it in image 3(b), where California, Florida, Texas are states where the top donors for Hire Heroes have contributed, and this is true both for the last year(2017) as well, for which we had financial statements.

Based on these insights, as individual donor contributions have been miniscule compared to the Grant endowments, our recommendation to Hire Heroes would be to continue to invest and hire additional staff that has experience in writing Grant proposals, and cultivate a strong understanding of donor relations. To nurture existing relationships with top donors but also to seek out new opportunities with corporate endowments/foundations/governments that provide grants with payouts at or higher than USD 1 Million. Employing this strategy for the near future should primarily fund the operations, offering opportunities and growth of Hire Heroes.

6) References

Hire Heroes USA. "2017 Annual Report." 2018.

Internal Revenue Service (2017). Form 990: Return of Organization Exempt from Income Tax: Hire Heroes USA.

"Rating for Hire Heroes USA." Charity Navigator, Nov. 2018,
www.charitynavigator.org/index.cfm?bay=search.summary&orgid=7838.