

Analysis of 2010 Rochester-City Pawn Shop Transactions

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Note: To maintain confidentiality the analyses included in this working paper do not contain any specific reference to individuals or businesses.

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The following report analyzes 2010 data on Rochester pawn shops. Within this paper, pawn shops are listed by pseudonym based on their level of business for 2010. Although many pawn shops may be legitimate businesses, questions of crime and stolen property have become a focus on some pawn shops recently; with the Monroe County Sheriff/FBI raid on Rochester Pawn Brokers, Inc. and several other pawnshops late last September, there is a noted concern of whether these businesses are being utilized to fence stolen property and the frequency to which this occurs. It is for this reason that an analysis of local pawn shops could be fruitful. Pawn shops are second-hand businesses where people may bring goods to either be sold for cash or loaned for a short period of time. Due to limitations in how the data was recorded, our analysis cannot delineate between individuals who pawned and individuals who sold items to the shops; “pawner” will be used to describe any individual who sold or pawned an item.

Almost 24,000 transactions occurred within Rochester pawn shops in 2010 – transactions being instances where an individual either pawned or sold an item. Among the 24,000 transactions there were instances of very-active and not-so-active pawners. For this reason, the data will be analyzed by looking at pawners as a whole as well as looking specifically at the most active pawners. The twenty most frequent pawners all sold 30 or more items during this one-year period. The twenty pawners who received the most amount of money for their items were also briefly examined.

Furthermore, although there are currently 41 registered pawn shops in Rochester, some pawn shops recorded much higher transactions than others. Fourteen shops recorded fewer than ten transactions for the year – six recorded only one. It is highly probable that several of these shops were the result of typographical errors – in three out of the fourteen shops the addresses were not able to be found. Additionally, Doing Business As information was available for 36 of the pawn shops; of these, 72% opened within the last decade.

Current Legislation

Most pawnbrokers in business in Rochester today opened within the last ten years. Due to questions of criminal activity, pawn shops now have a special status in which they are required to report all the items that are purchased by them. Thus, in order to conduct business, these pawnbrokers are required to obtain and maintain a yearly license from the Chief of Police as well as report their daily transactions to him. This reporting is done by hand and faxed to a person in the department who consolidates and organizes data electronically. However, the Rochester Police Department is moving towards electronic reporting.

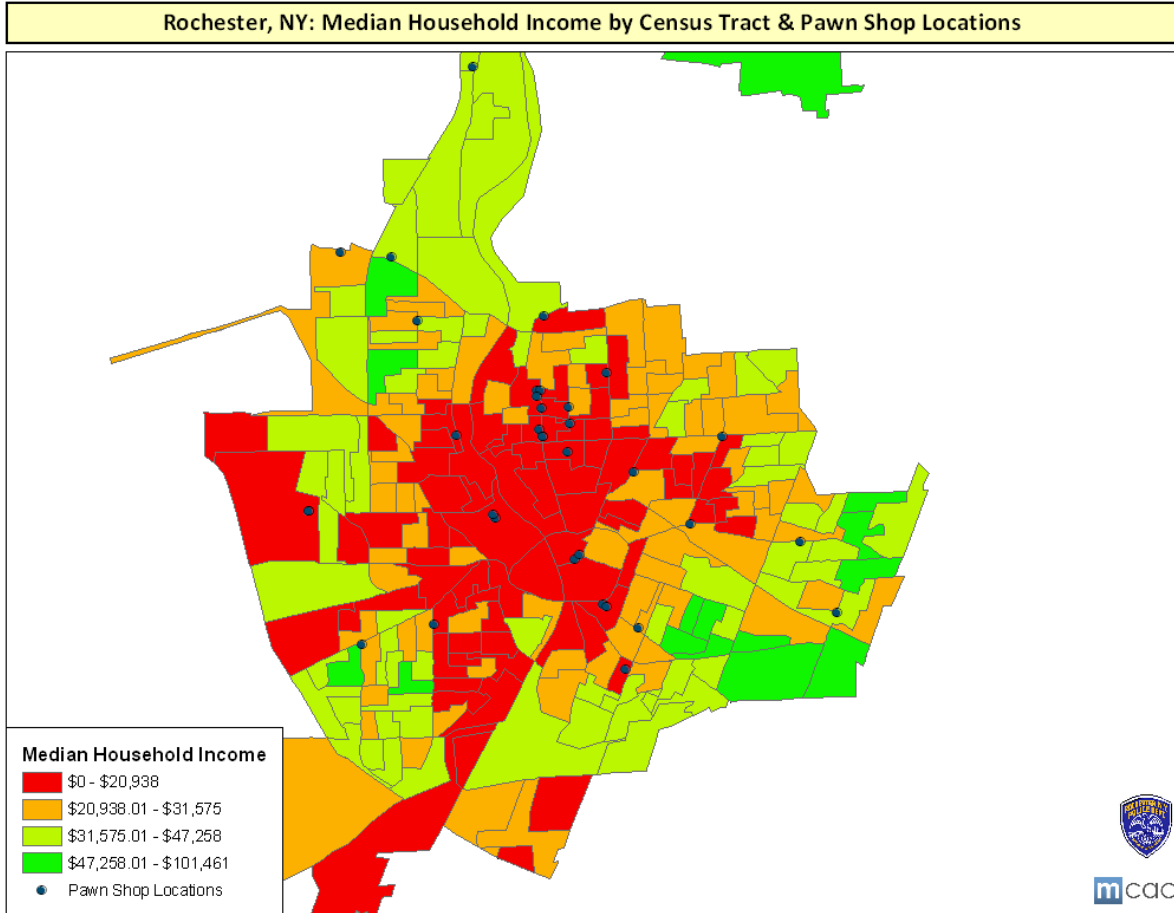
In order to maintain this license, pawnbrokers are required to hold all items they receive for a period of five days. Pawnbrokers are also required to acknowledge that they are not allowed to receive any property from individuals who are known by the pawnbrokers to be thieves.

1. Where are pawn shops located within the city? (n = 32)

There are a total of 41 pawn shops included in this analysis; unfortunately, addresses were only available for 38 of the pawn shops, 35 of which were located within Rochester-city. Two pawn shops were listed as operating within the same address and another two were unable to be located in county records. So, although this analysis contains data on all 41 shops, only 32 shops are

represented below. Data from the 2000 census indicates that most pawn shops operate within Rochester’s poorest neighborhoods. It should be noted that on one particular half-mile stretch of N. Clinton Avenue there were a total of eight pawn shops.

Chart 1: Median household income by census tract and current pawn shop locations



2. How many transactions were completed by pawn shops over one year?

A total of 23,712 transactions including 31,260 items were purchased by pawn shops in 2010. The 41 listed pawnbrokers spent just over \$2 million in purchasing used goods, 85% (nearly \$1.7 million) of that was spent by the top ten most active pawn shops. Thus, 31 pawn shops made up for the remaining \$300,000 in purchasing. This is also illustrated in the daily average number of items taken in by pawn shops. Assuming shops are open 6-days a week, daily purchases for the top ten shops range from 26 items a day to only 3; the average for the remaining 31 shops was found to be less than one item per day. Clearly, there are differences in the level of business done by pawnshops in that a small number of shops dominate the market.

Table 1: Total number of items purchased by ten busiest pawnbrokers, 2010

Pawnbroker	Items Purchased, 2010	Daily Average (6-day week)
Pawnbroker-01	8,176	26.12
Pawnbroker-02	3,667	11.72
Pawnbroker-03	3,077	9.83

Pawnbroker-04	2,667	8.52
Pawnbroker-05	1,962	6.27
Pawnbroker-06	1,905	6.09
Pawnbroker-07	1,592	5.09
Pawnbroker-08	1,295	4.14
Pawnbroker-09	1,113	3.56
Pawnbroker-10	989	3.16
All Others (Average, n = 31)	155.38	0.50
Total:	31,260	99.87

2. How much money do pawners typically get for their transactions?

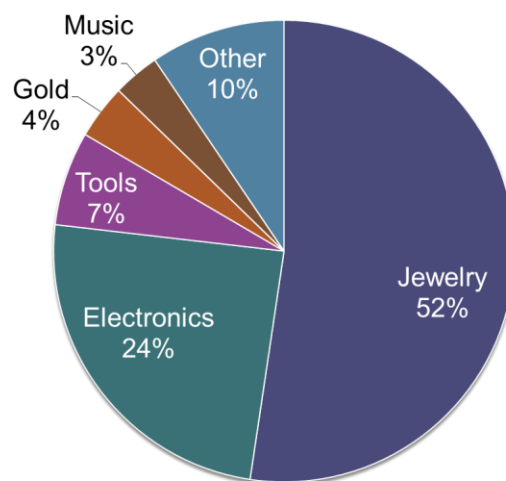
As pawn shop rates of transaction vary, it is not possible to discern the actual value of all items pawned in 2010. However, one commonly mentioned percentage is 25% of the item's actual value. Thus, if pawners get approximately twenty-five cents on the dollar for their goods, the resale value of items purchased by pawnbrokers would be close to \$8 million.

3. What types of items are pawned?

All Pawners

A total of 23,712 transactions occurred in 2010. 14,874 individuals were engaged in these transactions. The most commonly pawned piece of jewelry was rings. Other commonly pawned items include: chains, bracelets, tools, and videogame systems. Categories where fewer than 1,000 items were pawned were condensed into 'Other'. Media, the largest 'Other' category, had 480 transactions; other categories included in 'Other' were miscellaneous, sports, small appliances, health & hygiene, gift cards, coins, building supplies, clothing, silver, unknown, kitchen goods, large appliances, transportation, toys, security, books. Some of the more unusual items pawned included a surprisingly large number of gold teeth, nunchucks, a pachinko machine, a flame thrower, and a Delorean time machine.

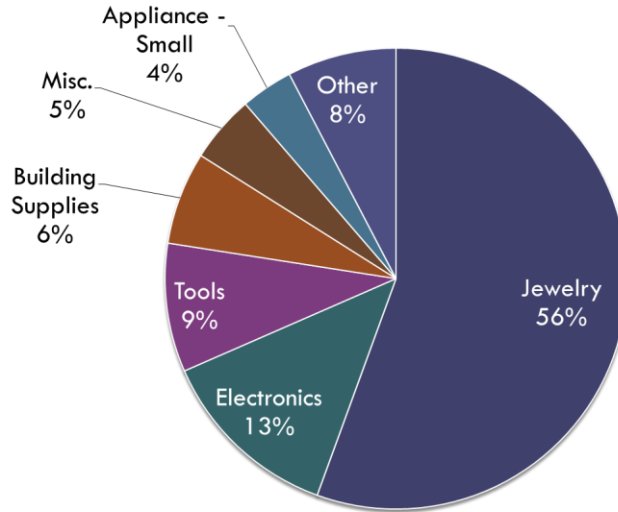
Chart 2: Breakdown of all items purchased by pawn shops, 2010 (n = 31,260)



Active Pawners

A total of 954 items were purchased in the 643 transactions that occurred among the 20 most active pawners in 2010. Small appliances and building supplies were more frequently pawned among active pawners than all pawners. One frequent pawner sold a large number of brand new kitchen mixers that were unique to Macy's, however, no Macy's within Rochester had sold them – although 26 mixers were listed as missing.

Chart 3: Breakdown of items purchased by pawn shops from Active Pawners, 2010, (n = 954)



5. When do people pawn items?

All Pawners

In order to promote the ease of comparison between this and the frequent pawners chart, the 146 items pawned on Sunday were removed from chart 4. As is seen below, more items are pawned in the beginning of the week than towards the end, as shops have reduced hours over the weekend. February appeared to be a month with a lower number of items pawned than the other months. Other than February, there appears to be no seasonality in regards to pawning.

Chart 4: Total number of items pawned by day of week, 2010

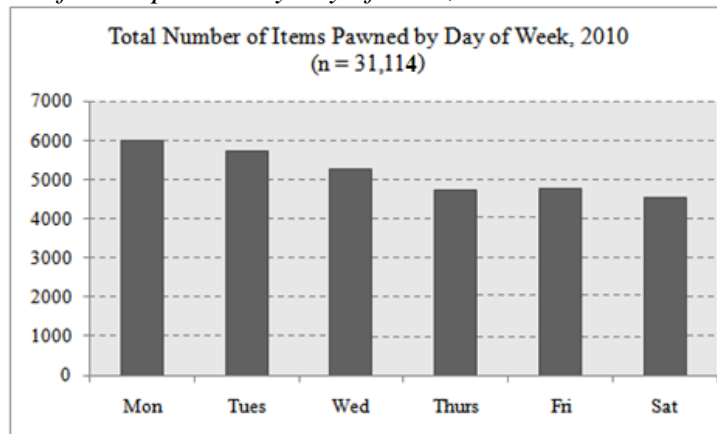
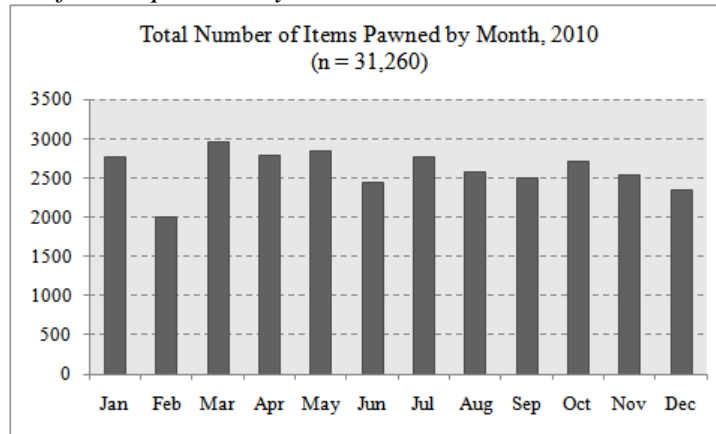


Chart 5: Total number of items pawned by month, 2010



Active Pawners

As is seen below, the 20 most active pawners tend to pawn most often on Mondays; December seems to be a relatively quiet month for the active pawners. Some of the peak months include: January, February, March, and July.

Chart 6: Active Pawners: Total number of items pawned by day of week, 2010

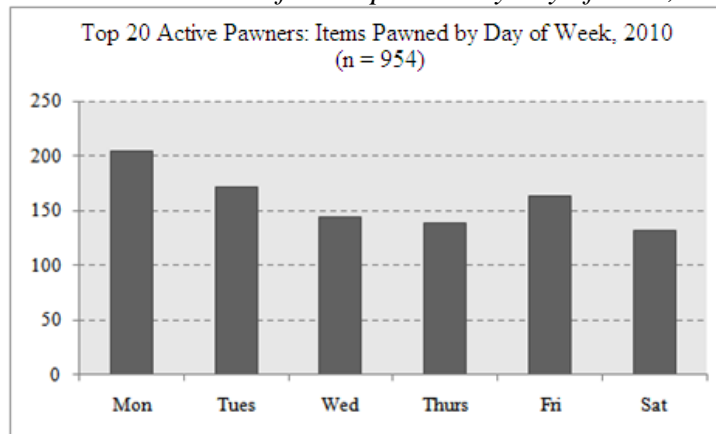
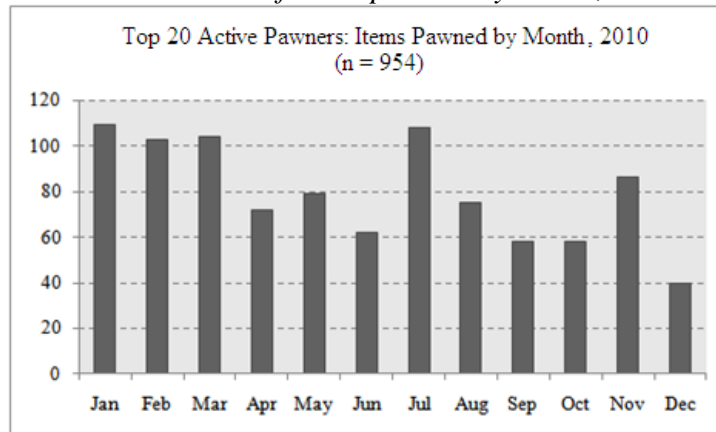


Chart 7: Active Pawners: Total number of items pawned by month, 2010



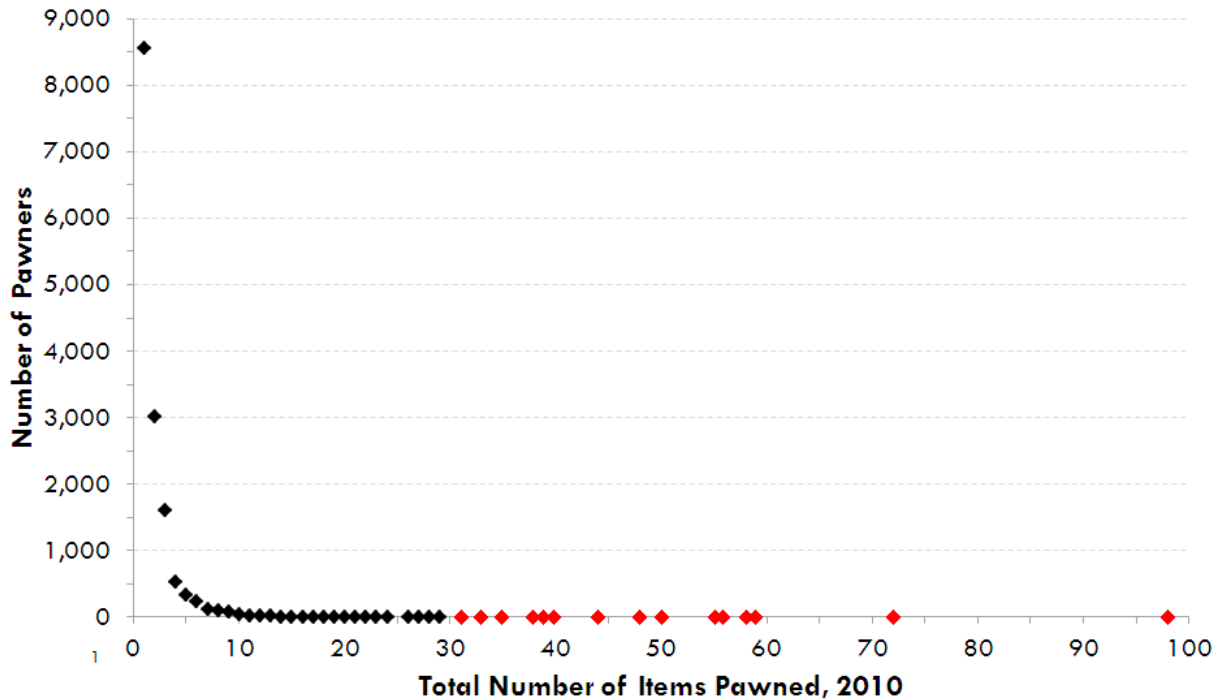
The increase in pawning in January through March and July and November among the 20 most active pawners was not present in Chart 5. In examining these five months, it appeared that one

or two of the active pawners pawned a large number of items in those months which, due to the small sample size, made it much easier for such a noted differentiation to occur.

5. How many items do people pawn a year, typically?

Chart 8 contains the total yearly instances of pawning for the 14,874 uniquely identified pawners. For 2010, 13,202 individuals (88.8%) pawned 3 items or fewer. Of those, 65% pawned only one item in 2010. The 20 most active pawners are towards the right of the 30 item marker—despite accounting for only 1/10th of 1% of all pawners, they sold 3% of all goods in 2010.

Chart 8: The distribution of items sold among all pawners



6. What is the criminal history among pawners?

Active Pawners

Two separate analyses of the criminal history of the 20 most active pawners were conducted. Searching individual cases indicated that 19 of the 20 most active pawners had been arrested within Monroe County – as indicated by the MoRIS numbers. Twelve of the 20 had theft-related charges.

Looking individually at the case histories of the top 20 most active pawners indicated that 7 of the twenty were female. The average age for the top 20 pawners was found to be just over 48 and ½ years, with all of the 20 most active pawners being between the ages of 30 and 60.

Research indicated that frequent pawners have a high degree of drug use, and anecdotal evidence indicated that we should be seeing individuals charged with prostitution. We were able to obtain drug-, prostitution-, and theft-related charges for 67% of the top 200 pawners and 95% of the top 20 pawners.

Table 2: Drug-, Prostitution-, and Theft-Related Charges against the 20 most active pawners

Charge	Percent of Charges
Theft	94%
Drugs	5%
Prostitution	1%
Total:	93

Among the top 20 pawners there appear to be very few drug- or prostitution-related charges when compared to their theft-related charges.

Top 200 Pawners

An analysis of all charges levied against the near 15,000 unique pawners would be a daunting task so we examined only the top 200 pawners by items sold. Table 3 provides the total number of drug-, prostitution-, and theft-related charges among the top 200 pawners.

Table 3: Drug-, Prostitution-, and Theft-Related Charges against the 200 most active pawners

Charge	Percent of Charges
Theft	79%
Drugs	18%
Prostitution	3%
Total:	399

As seen above, there is a great deal more variation in the proportion of theft-related crimes to drug- and prostitution-related crimes. This may be indicative of the top 20 being “professional” thieves, while the less frequent pawners are more likely to suffer from drug addiction.

7. Do shops specialize in certain items?

Pawnbroker-01 is a highly specialized shop – 95% of all items they purchased last year were pieces of jewelry. Interestingly, the heaviest pawner of 2010 pawned solely to Pawnbroker-01; 40 of the 118 pieces of jewelry she pawned were rings.

Table 4: Breakdown of items purchased by Pawnbroker-01, 2010

Category	Amount Purchased, 2010
Jewelry	94.32%
Gold	4.87%
Other	0.81%
Total:	8,176

Pawnbroker-07 has the appearance of being an eclectic shop as no single item appears to make up the majority of its transactions. However, 213 of the 269 Health & Hygiene items pawned in 2010 went to Pawnbroker-07. Between June and November of 2010, one man pawned at least fourteen teeth-whitening stripes or kits to Pawnbroker-07 – as well as at least eleven toothbrushes. A concerning point regarding Pawnbroker-07 is how many large transactions occurred including multiple of the same item described as “new.” While an item being described as such is not a damning indication of its illegitimacy, the fact that over the course of one week in July a single individual pawned thirty items labeled as “new” to Pawnbroker-07 – including twelve faucets and twelve carbon-monoxide detectors – may raise concerns regarding the legitimacy of these new products.

Table 5: Breakdown of items purchased by Pawnbroker-07, 2010

Category	Amount Purchased, 2010
Electronics	22.49%
Jewelry	17.46%
Health & Hygiene	13.38%
Tools	12.44%
Gift Cards	9.92%
Appliance - Small	5.84%
Misc.	4.90%
Building Supplies	4.46%
Other	9.11%
Total:	1,592

8. A second way to examine item specialization

In 2010, a total of 177 gift cards were pawned. The owner of Pawnbroker-07 was also the owner of Pawnbroker-17, which was shut down by the IRS in the early part of 2010. So, when looking at the table below, one pawnbroker purchased almost 99% of all gift cards pawned in 2010. That would constitute item specialization.

Table 6: Breakdown of pawn shops who purchased gift cards, 2010

Pawnbroker	Gift Cards Purchased, 2010
Pawnbroker-07	158
Pawnbroker-17	17
Pawnbroker-05	1
Pawnbroker-04	1
Total:	177

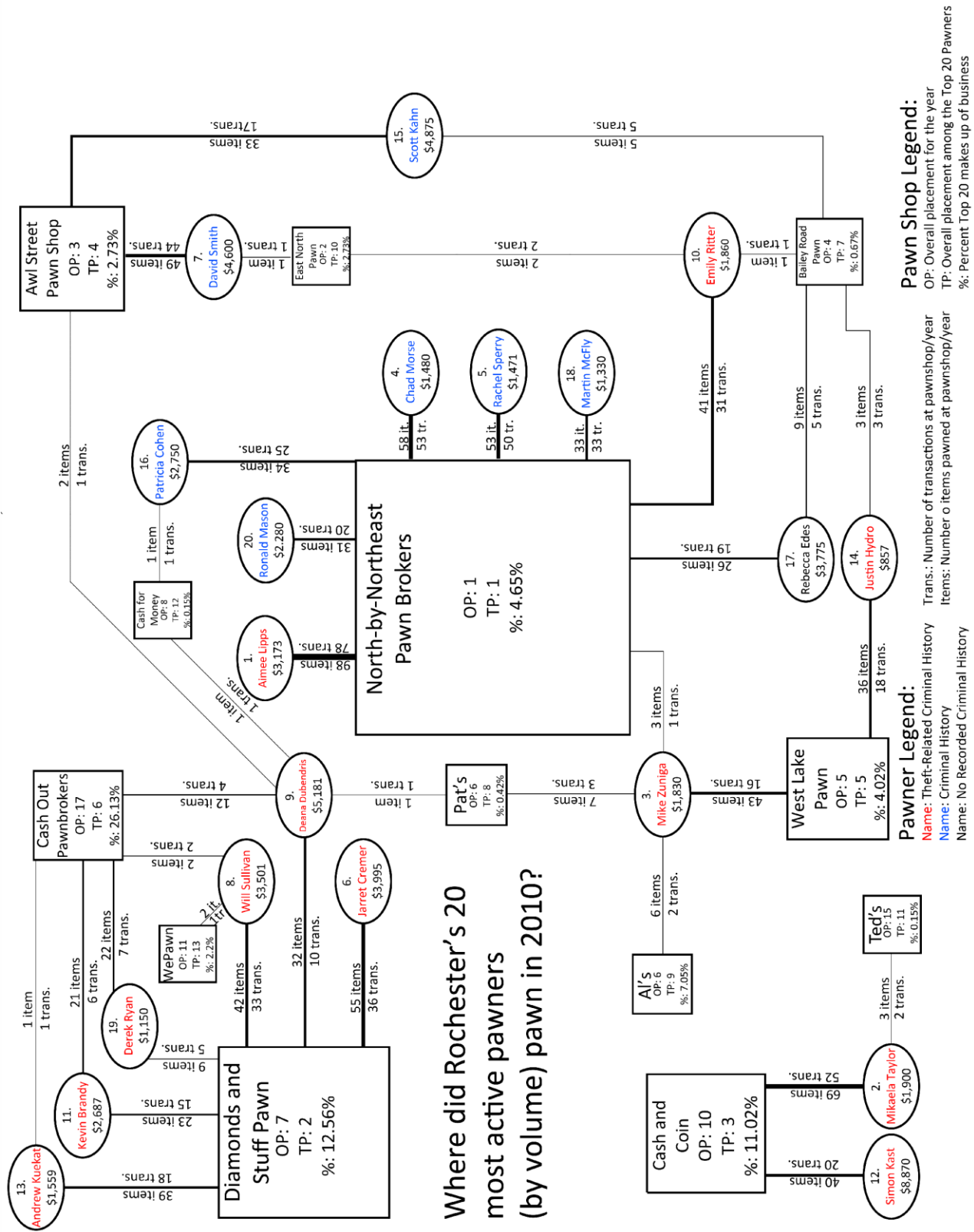
9. Where did Rochester's 20 most active pawners (by volume) pawn in 2010?

This chart is a non-confidential version of a chart drafted up for the Rochester Police Department. It displays where the twenty most active pawners of 2010 (by volume of items pawned) pawned, how many items and transactions they had with each store they pawned, their overall placement within the top 20, how much money they earned, and their criminal history. Names in red (1, 2, 3, 6, 8, 9, 10, 11, 12, 13, 14, 19) are individuals who have a theft-related criminal history. Names in blue (4, 5, 7, 15, 16, 18, 20) have a criminal history of some kind. Names in black (17) have had no recorded criminal history.

The squares within the flowchart are each of the pawn shops that the 20 most active pawners frequented. Within each pawnshop are numbers indicating the overall placement of the pawn shop for the year (among the 41 shops), its overall placement within the shops frequented by the top 20 pawners, and the percentage of business the top 20 makes for that pawn shop. The size of the pawnshops reflects the total amount of items they received from the 20 most active pawners for the year, the thickness of the lines reflects the total number of items given in each transaction.

Perhaps the most telling thing about this flowchart is that all six of the top 20 pawners who pawned at either Cash Out Pawnbrokers and Diamonds and Stuff Pawn has a theft-related criminal history.

Chart 9: Where did Rochester's 20 most active pawners (by volume) pawn in 2010?



Where did Rochester's 20 most active pawners (by volume) pawn in 2010?

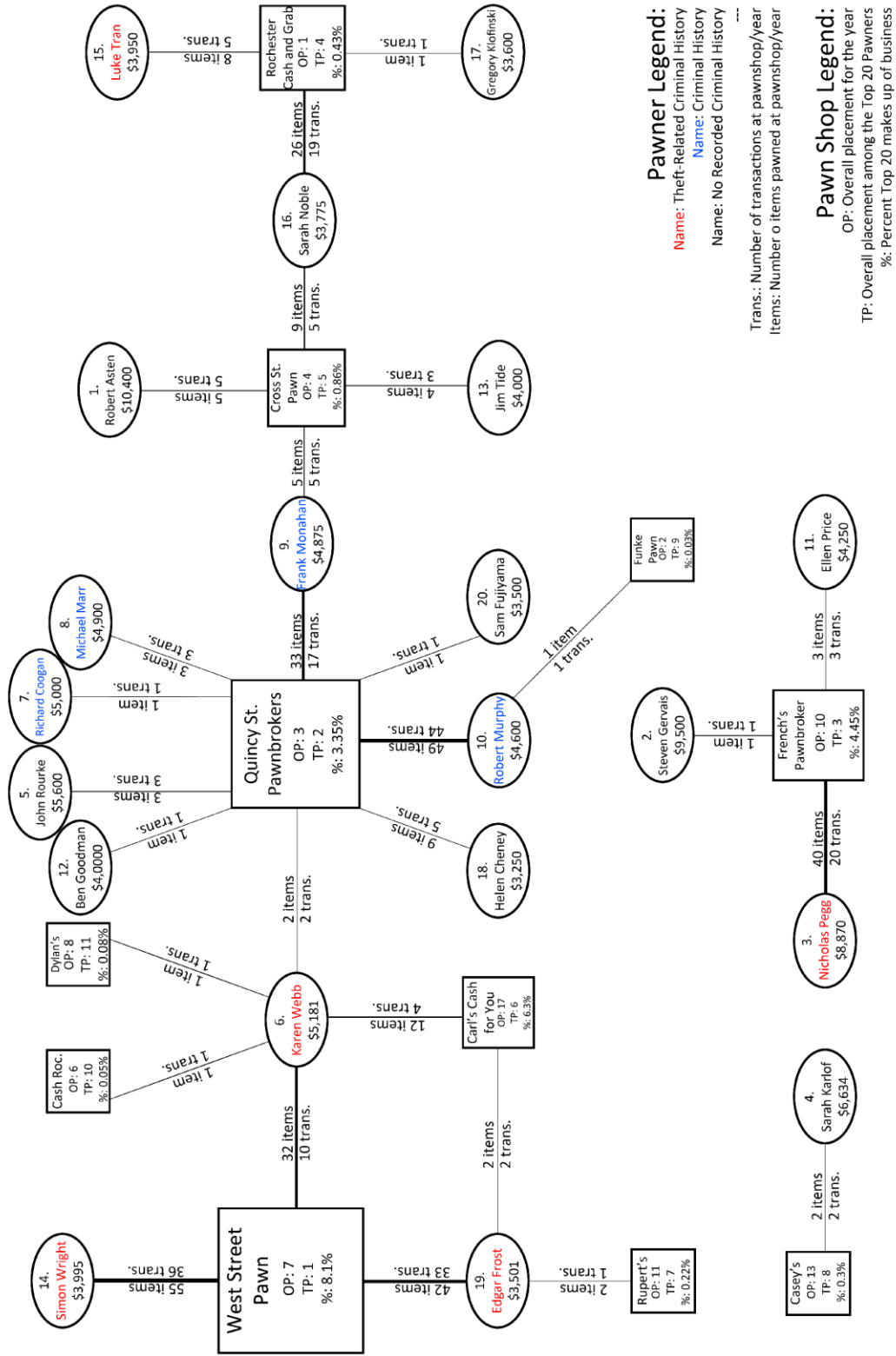
10. Where did Rochester's 20 most active pawners (by value) pawn in 2010?

Chart 10 displays the pawning habits of the top 20 pawners who pawned the highest worth of goods. Information on the chart is displayed in the same manner it was displayed on Chart 9. The pawners whose names are listed in red (3, 6, 14, 15, 19) all have theft-related criminal histories. Names in blue (7, 8, 9, 10) all have a criminal history of some kind. Names listed in black (1, 2, 3, 5, 11, 12, 13, 16, 17, 18, 20) had no recorded criminal histories.

The top 20 pawners (by value of goods received for the year) earned between \$10,400 and \$3,500 for the year. The majority of these pawners appeared to pawn one or two items of high value versus a large volume of goods at a lower value.

Chart 10: Where did Rochester's 20 most active pawners (by item value) pawn in 2010?

Where did Rochester's 20 most active pawners (by item value) pawn in 2010?



Conclusions: Implications for Policy and Practice

A great deal of information can be obtained through examining one year's worth of pawn shop transactions. This paper has provided information on the temporal patterns of pawners in Rochester, what shops they frequent, and what goods they pawn. Through this analysis we have identified a number of issues with the manner in which pawn shop transactions are currently recorded, which we describe below.

As all pawn shop transaction information was self-reported by pawn brokers then transcribed by a member of the RPD there are spelling errors that occur throughout the dataset in names, DOBs, and addresses; these errors result in a loss of fidelity in the data in that one individual could be counted as multiple unique cases. Such typographical errors could be reduced or removed by requiring pawn brokers to enter in information on their transactions online in a form that would be sent directly to the RPD. Furthermore, this form should require that pawn shop owners adhere to a consistent labeling system to ensure added accuracy in the identification of individuals.

Additionally, several changes could be implemented to enable a more effective analysis of future pawn shop data. When an individual pawns multiple of the same item the data should reflect this. However, current legislation allows multiple of the same item to be labeled as the item then number sold (e.g., "GPS, 6"). Instead of being counted as six separate GPS's it is counted as one single object and thus poses a great detriment to analysis.

There is also a lack of description in the labeling of certain items. For example, a mixer could either be a kitchen appliance or a piece of sound equipment. It would perhaps also benefit analysts if a series of categories were created under which pawn brokers could label products. Consistent labeling of all items in pawn shop transactions would allow analyses of the data to occur much more easily.

Finally, it may be beneficial to look into the feasibility of requiring pawn shop owners to photograph every individual who is selling an item with the item he or she is selling. Such measures, while likely having a minimal effect on the use of such shops as fences, may help in the identification of stolen property.

Additional pawn shop research underway

Additional analyses of the 2010 Rochester pawn shop data are currently underway. These projects will examine:

1. The difference in pawning habits between the twenty most active and the remaining 14,850 pawners.
2. The location of the top 20 pawners to where they pawn. That is, whether pawners go to the nearest shop or places where they believe they can sell items with fewer questions.

Future projects which we have yet to begin will include:

1. How well are pawn shops adhering to current legislation?
2. If all pawn shops within Rochester are reporting to the RPD and if pawn shops who report to Rochester report all goods they take in.
3. What is a pawn shop? Should stores who purchase 1-2 goods during the year technically be counted as pawn shops?
4. If there is utility in creating a taxonomy of pawn shops.
5. This analysis has done a bit to try to identify the relationship between pawn shops and the stolen goods market. Data indicates that there may be a relationship. A lot of these shops may be legitimate, but some might not be. If there is a relationship, we would want to see what could be done license- and enforcement-wise to reduce the probability of property entering into these shops