

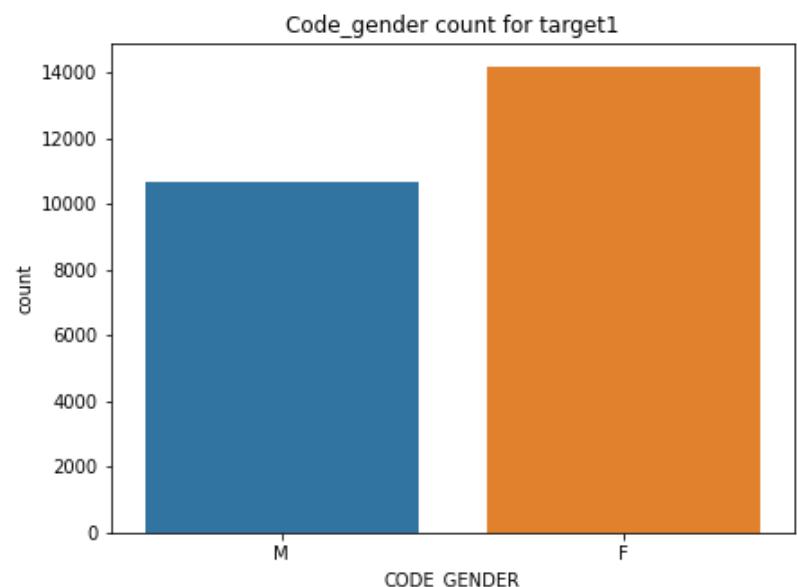
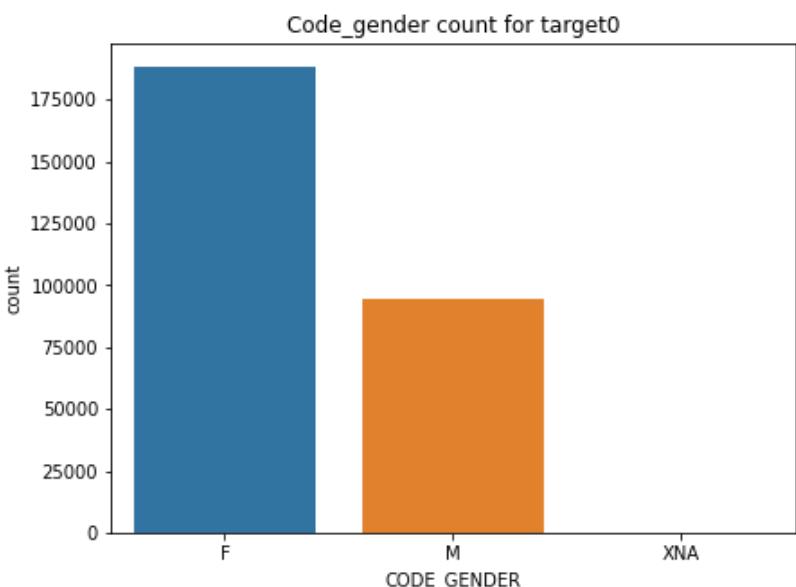
CREDIT EDA CASE STUDY

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Gender count

Points to be concluded from the graph on the right.

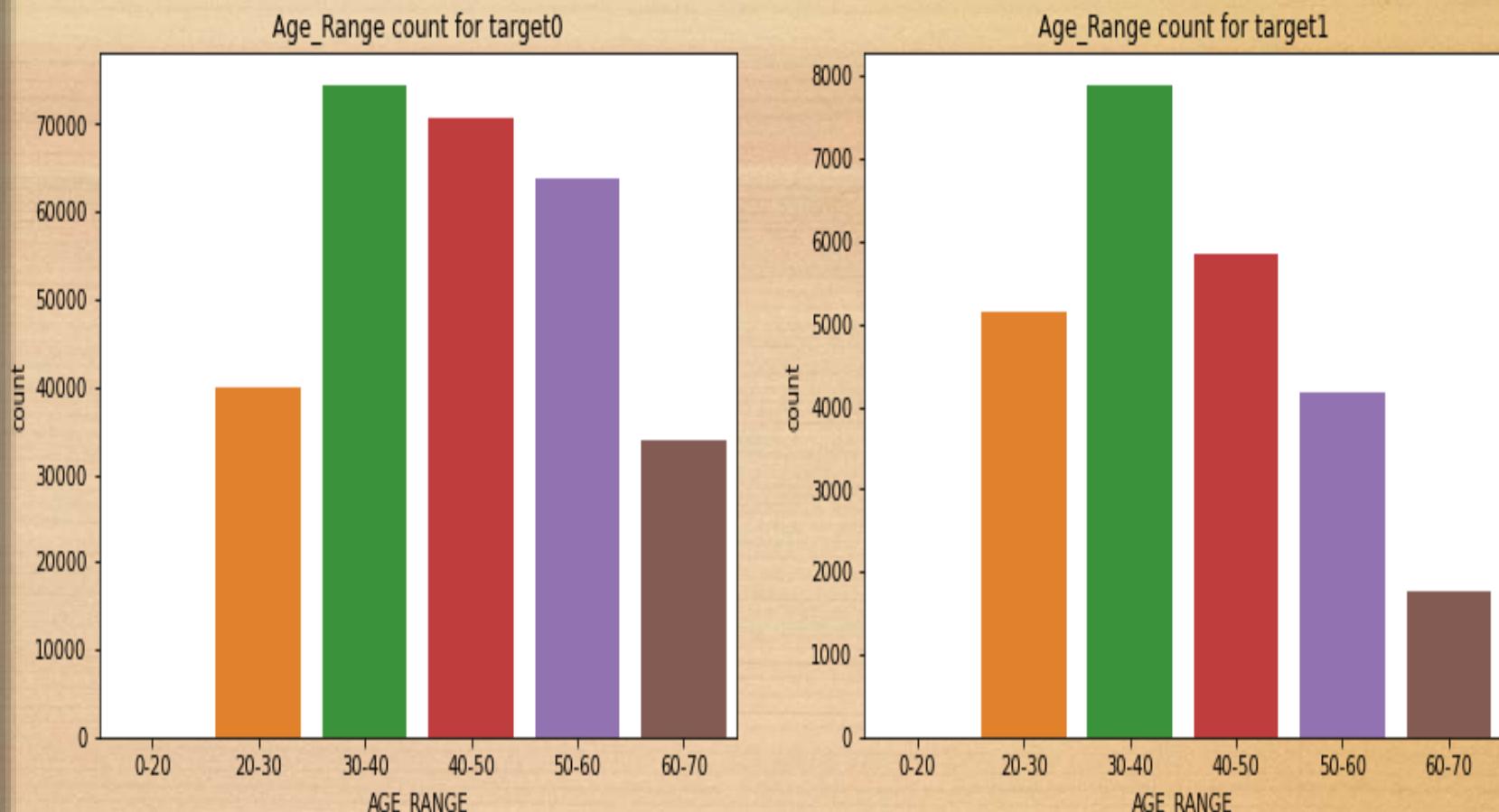
- In both target 0 and target 1 gender count of female is most likely higher
- In target0 we can see some significant value as XNA and so we can impute the anomaly of this variable by most popular value "Female" using app_data.CODE_GENDER.mode()



Age Range

Points to be concluded from the graph on the right.

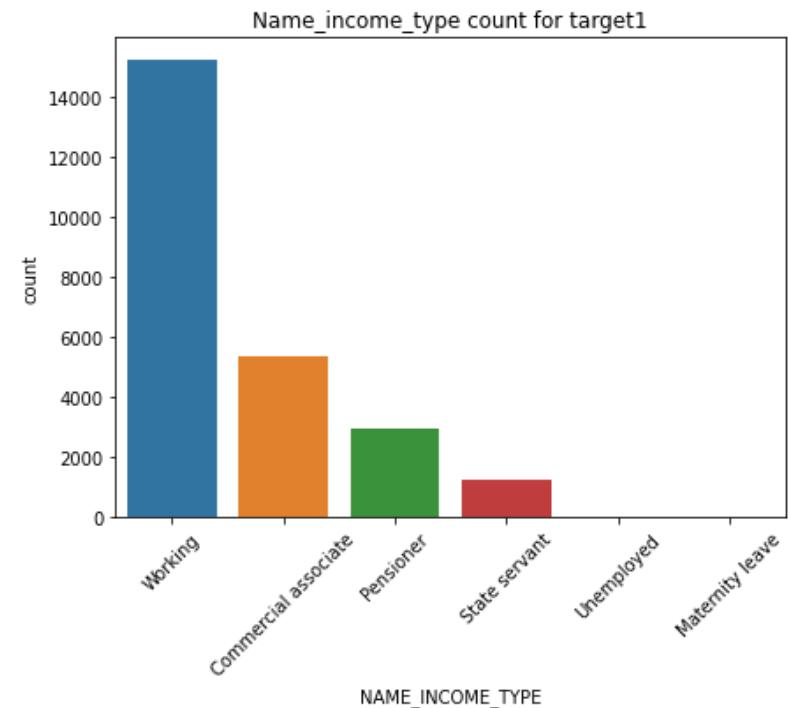
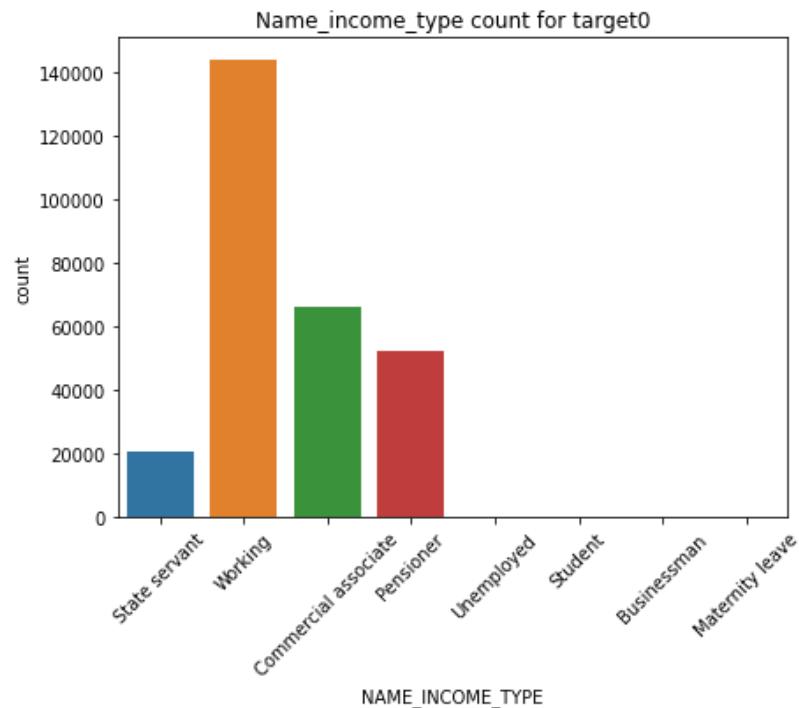
- In both target 0 and target 1 age range of 30-40 is of most likely higher
- The age range from 0-20 and 60+ are less likely to be applied for the loan or they don't need one



Distribution of name_income_type for target0 and target1

Points to be concluded from the graph on the right.

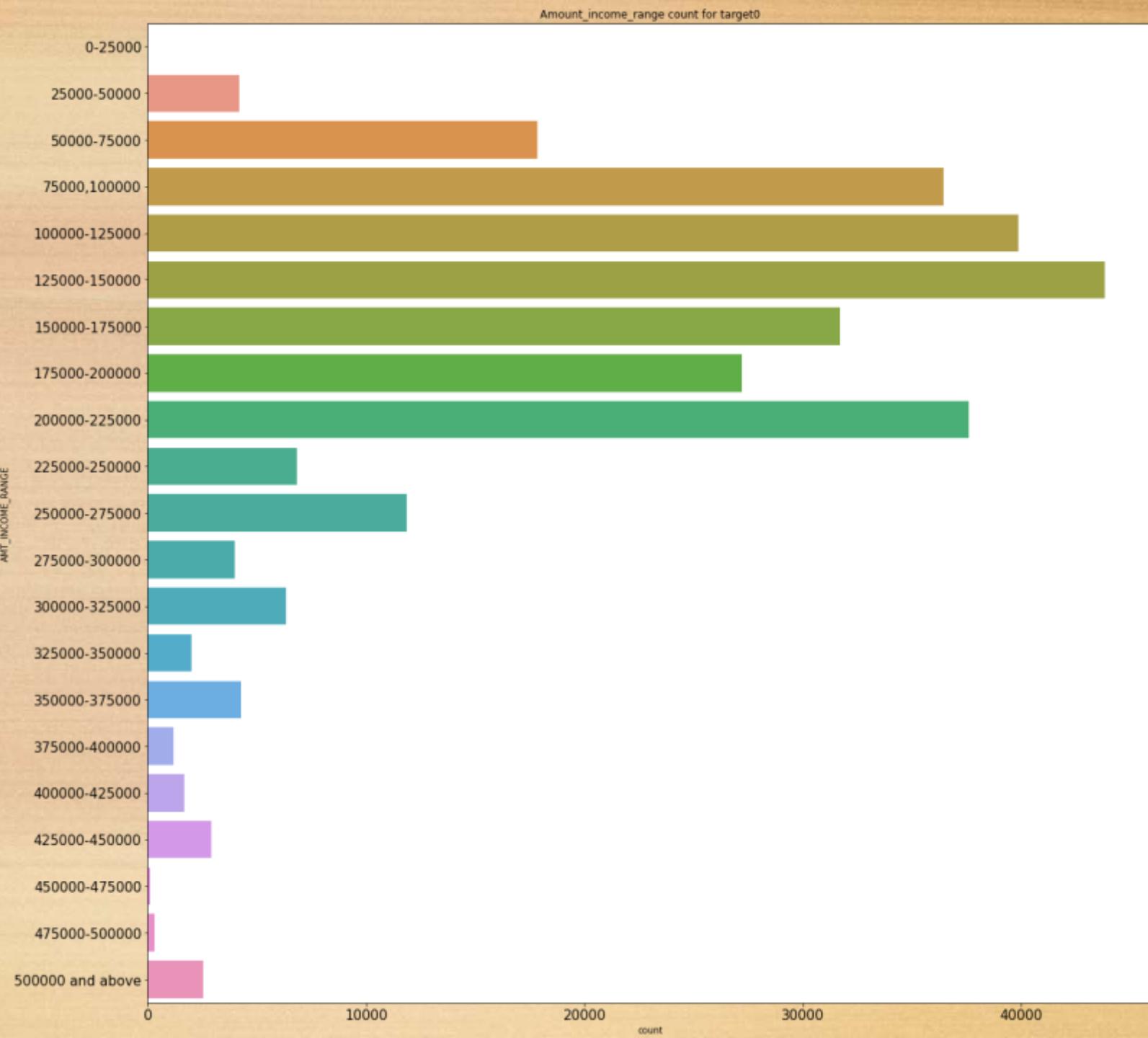
- For the category working stand out to be on top for the both target 0 and target 1
- Second best category is commercial associate for the both target 0 and target 1



Distribution of Income range

Points to be concluded from the graph on the right side.

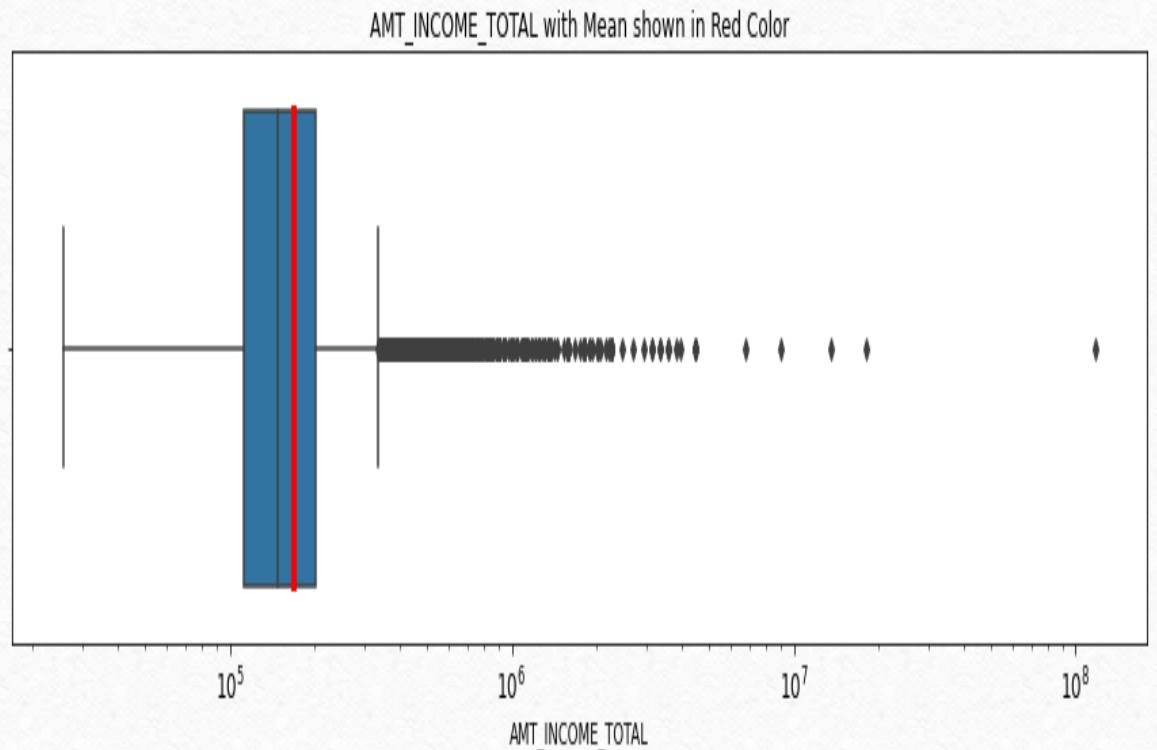
- Income range from 125000 to 150000 is having more number of credits.
- Very less count for income range 400000 and above.



Boxplot for income amount

Few points can be concluded from the graph.

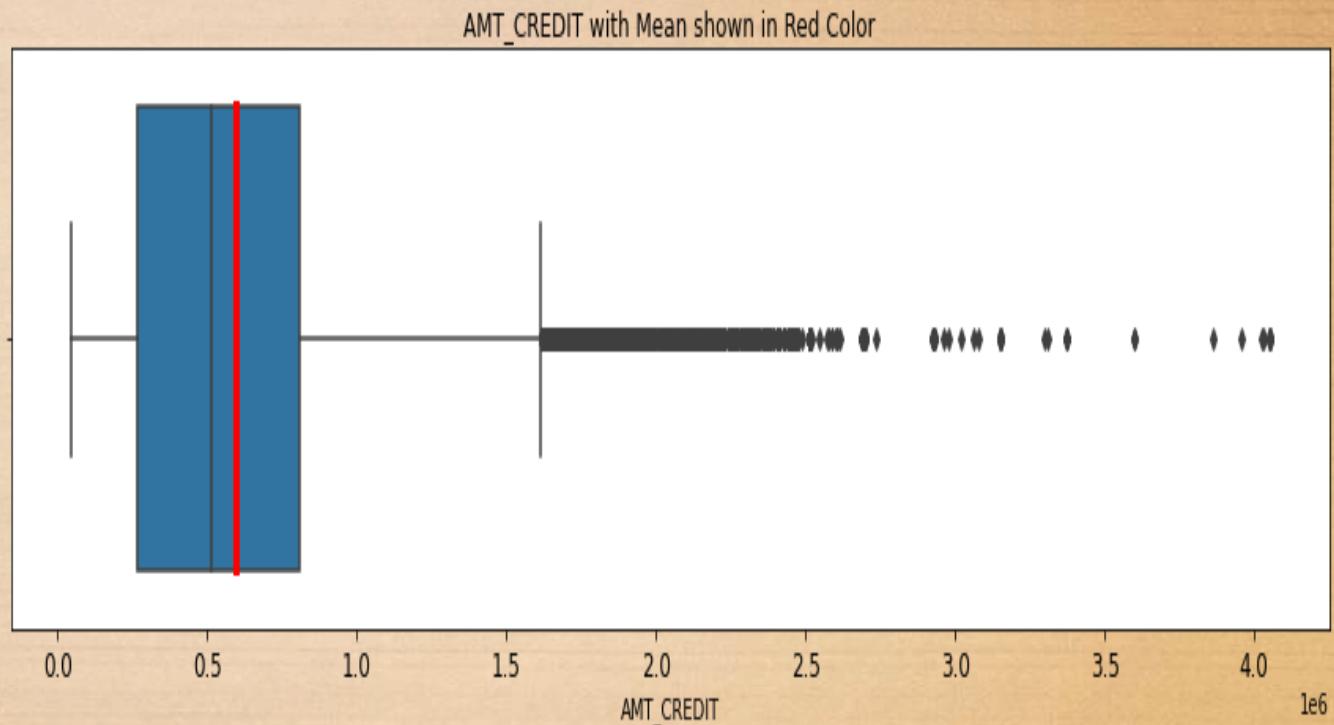
- Some outliers are noticed in income amount.
- The third quartiles is very slim for income amount.



Boxplot for credit amount

Few points can be concluded from the graph.

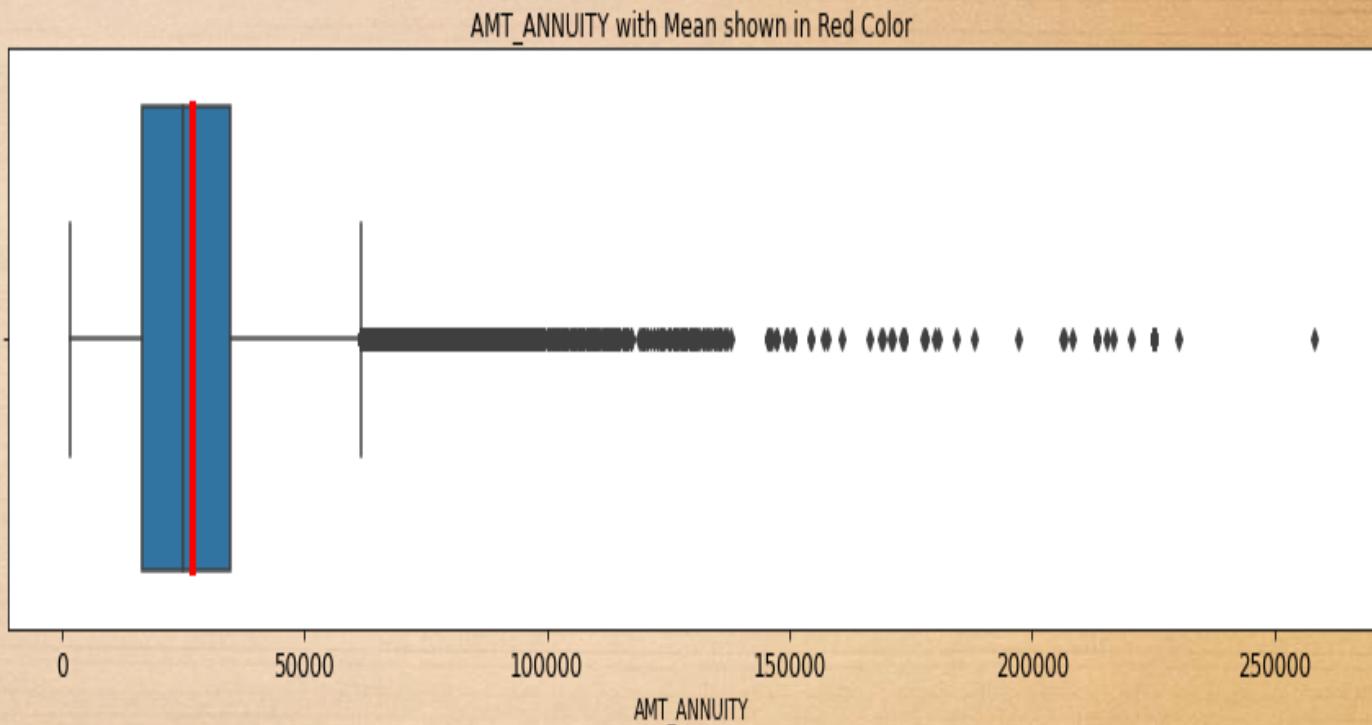
- Some outliers are noticed in credit amount.
- The first quartile is bigger than third quartile for credit amount which means most of the credits of clients are present in the first quartile.



Boxplot for annuity amount

Few points can be concluded from the graph.

- Some outliers are noticed in annuity amount.
- The first quartile is bigger than third quartile for annuity amount which means most of the annuity clients are from first quartile.

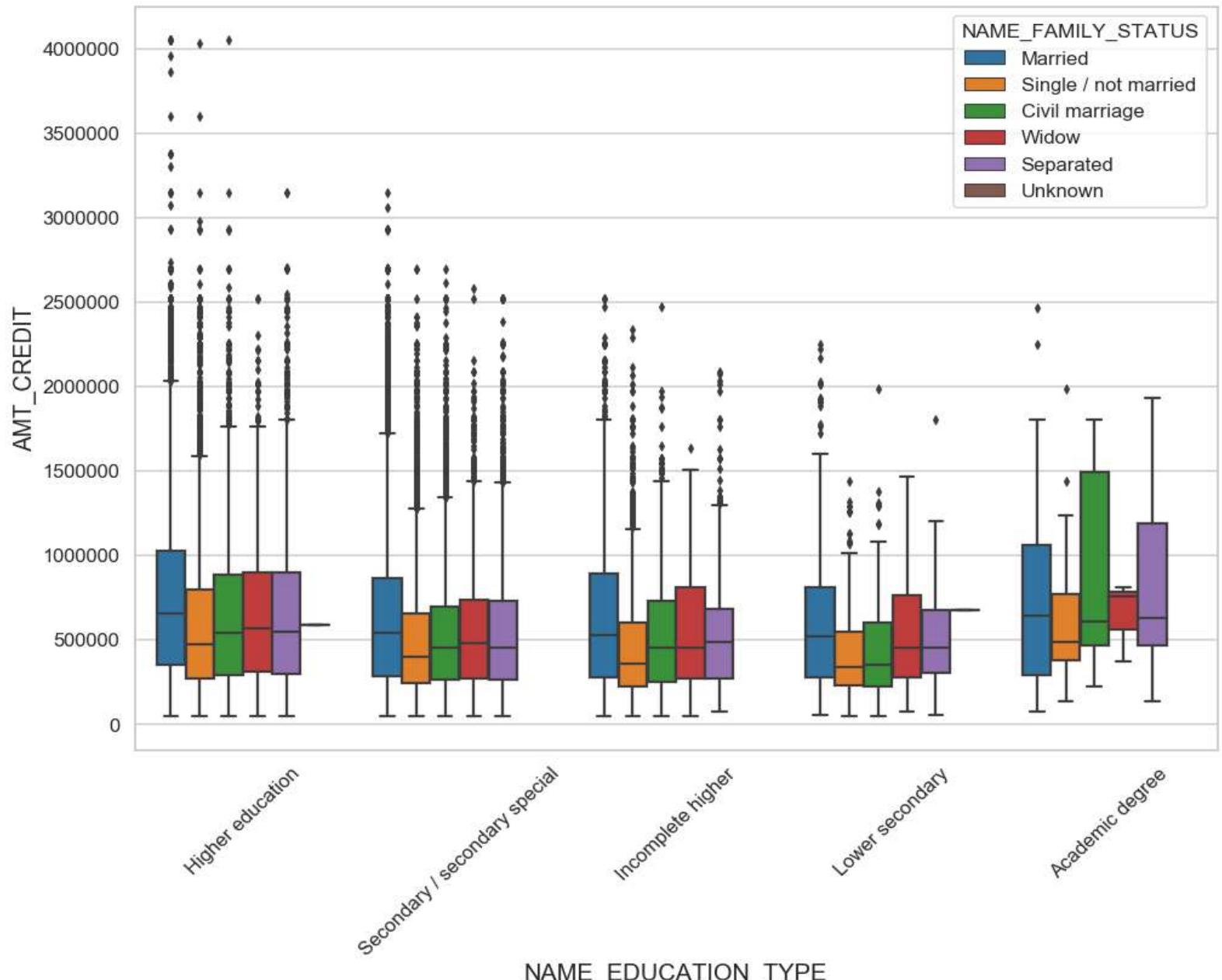


Credit amount vs Education Status

Few points can be concluded from the graph.

- Family status of 'civil marriage', 'marriage' and 'separated' of Academic degree education are having higher number of credits than others.
- Higher education of family status of 'marriage', 'single' and 'civil marriage' are having more outliers.
- Civil marriage for Academic degree is having most of the credits in the third quartile.

Credit amount vs Education Status

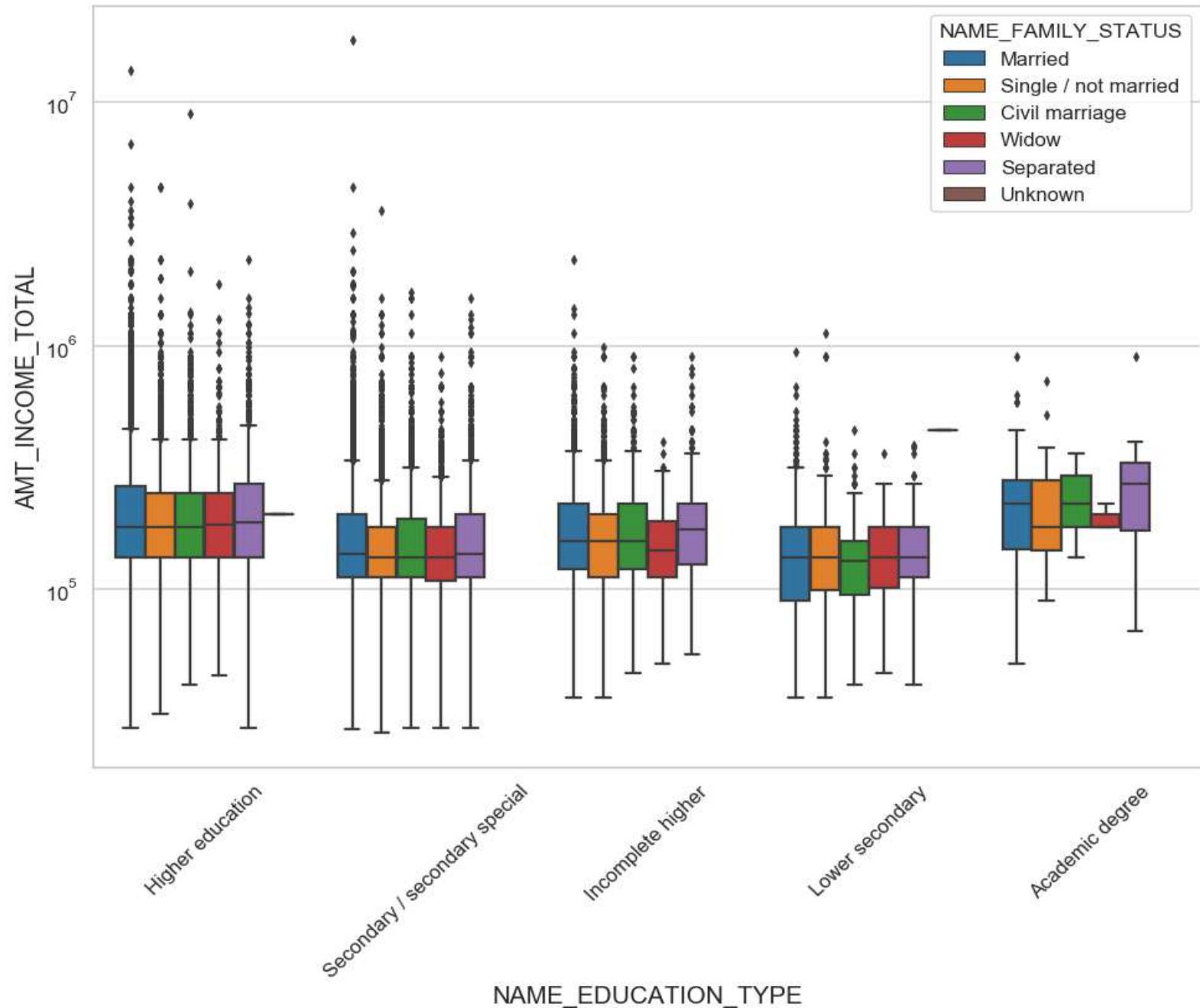


Income amount vs Education Status

Few points can be concluded from the graph.

- For Education type 'Higher education' the income amount mean is mostly equal with family status. It does contain many outliers.
- Less outlier are having for Academic degree but they are having the income amount is little higher than Higher education.
- Lower secondary of civil marriage family status are have less income amount than others.

Income amount vs Education Status

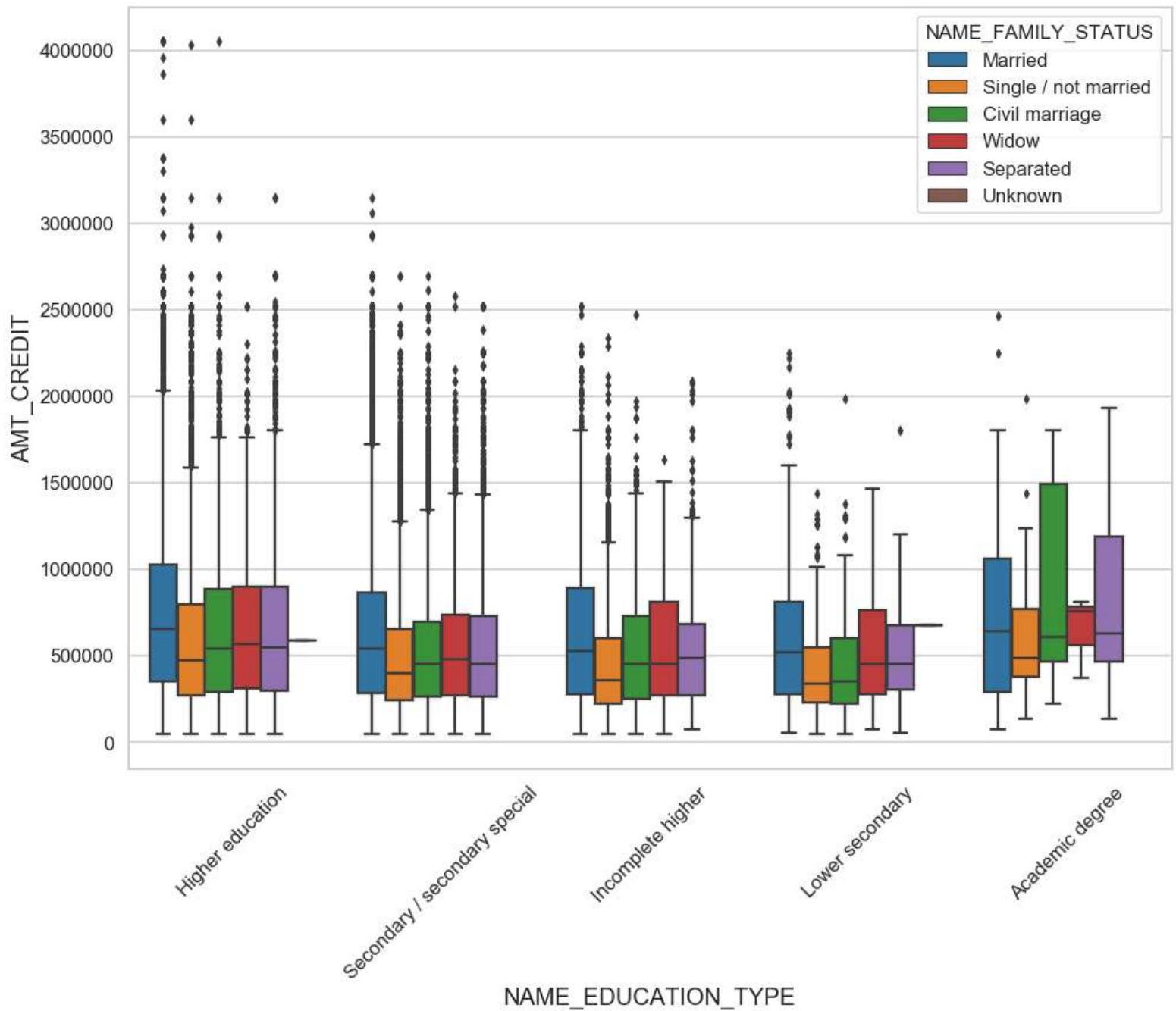


Credit amount vs Education Status

Few points can be concluded from the graph.

- we can say that Family status of 'civil marriage', 'marriage' and 'separated' of Academic degree education are having higher number of credits than others.
- Most of the outliers are from Education type 'Higher education' and 'Secondary'.
- Civil marriage for Academic degree is having most of the credits in the third quartile.

Credit Amount vs Education Status

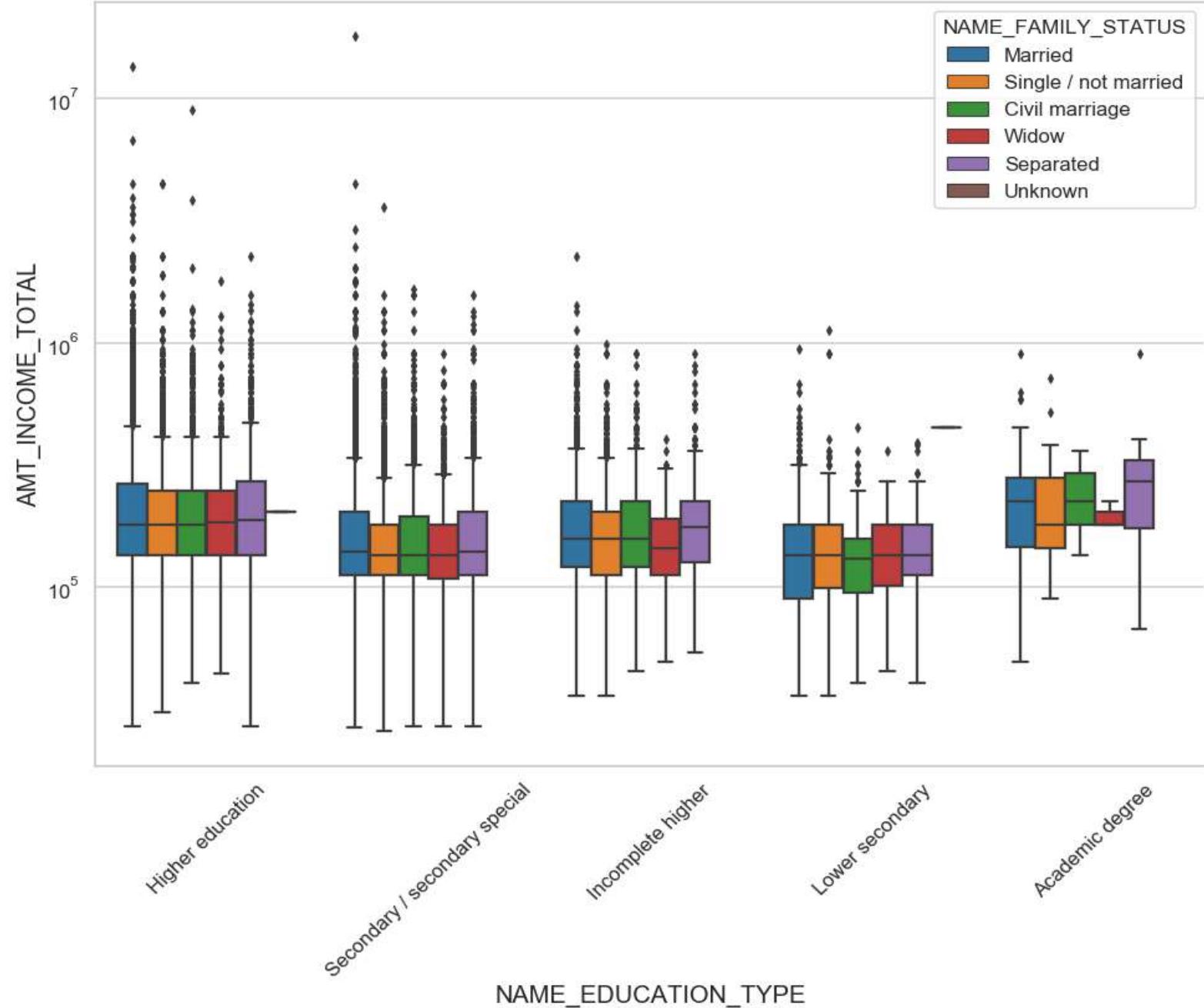


Income amount vs Education Status

Few points can be concluded from the graph.

- From the boxplot for Education type 'Higher education' the income amount is mostly equal with family status.
- Less outlier are having for Academic degree but there income amount is little higher than Higher education.
- Lower secondary are have less income amount than others.

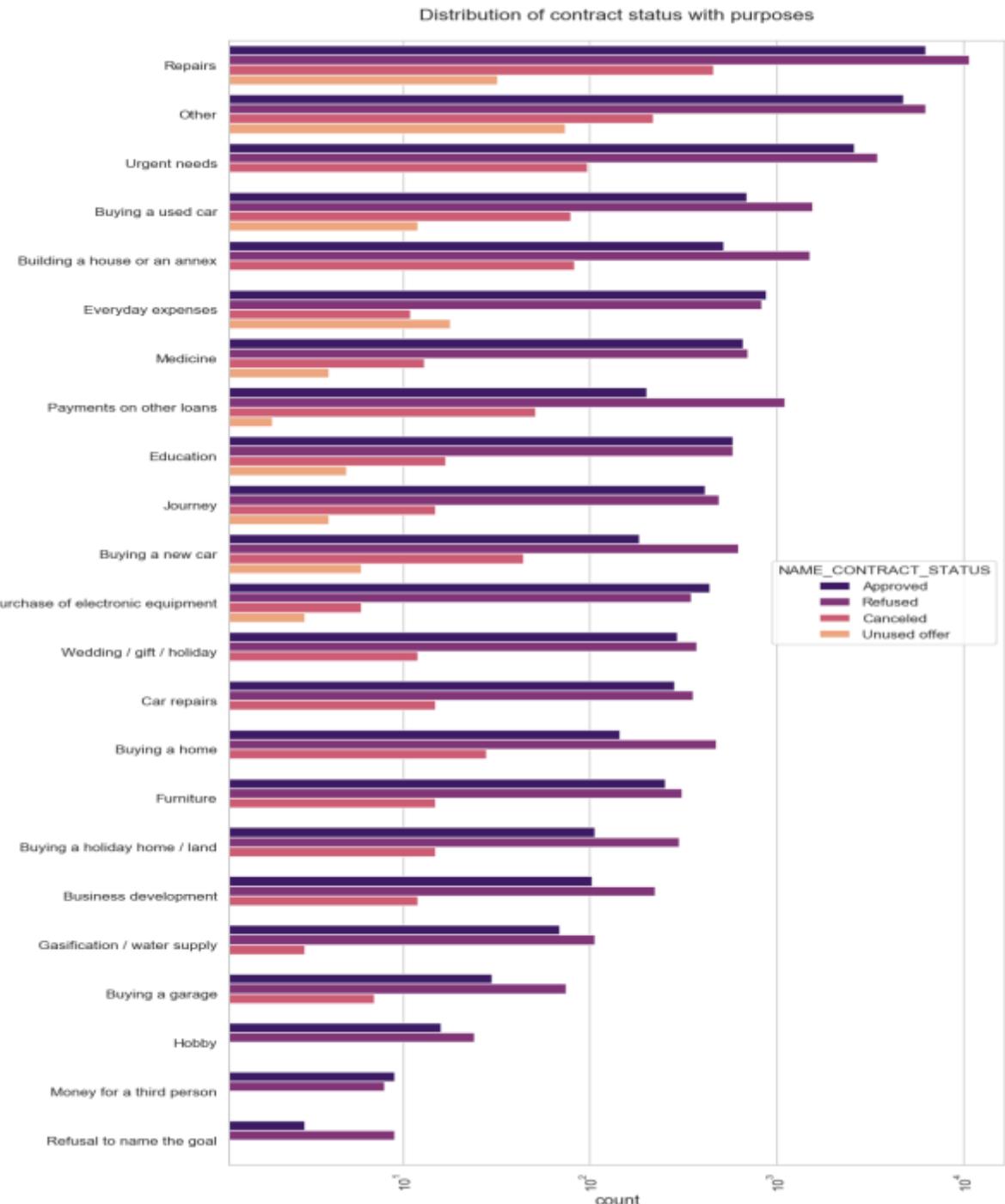
Income amount vs Education Status



Distribution of contract status with purposes

Few points can be concluded from the graph.

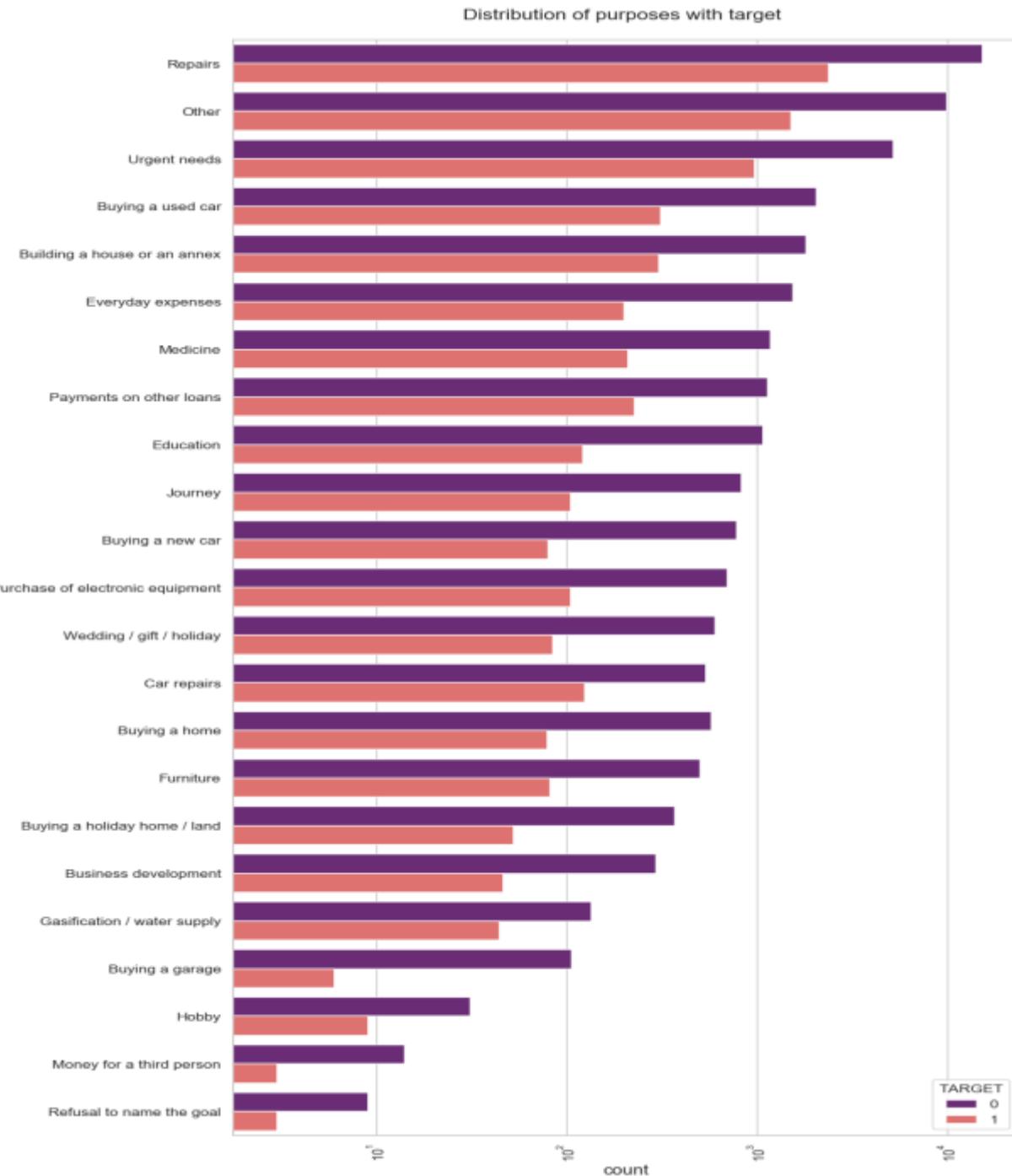
- Most rejection of loans came from purpose 'repairs'.
- For education and medicine purposes we have equal number of approves and rejection
- Paying other loans ,buying a used car, building a house is having significant higher rejection than approves.



Distribution of purposes with target

Few points can be concluded from the graph.

- Loan purposes with 'Repairs' are facing more difficulties in payment on time.
- There are few places where loan payment is significant higher than facing difficulties. They are 'Buying a garage', 'Hobby', 'Business Development', 'Buying land', 'Buying a new car' and 'Education'. Hence bank can focus on these purposes for which the client is having minimal payment difficulties.

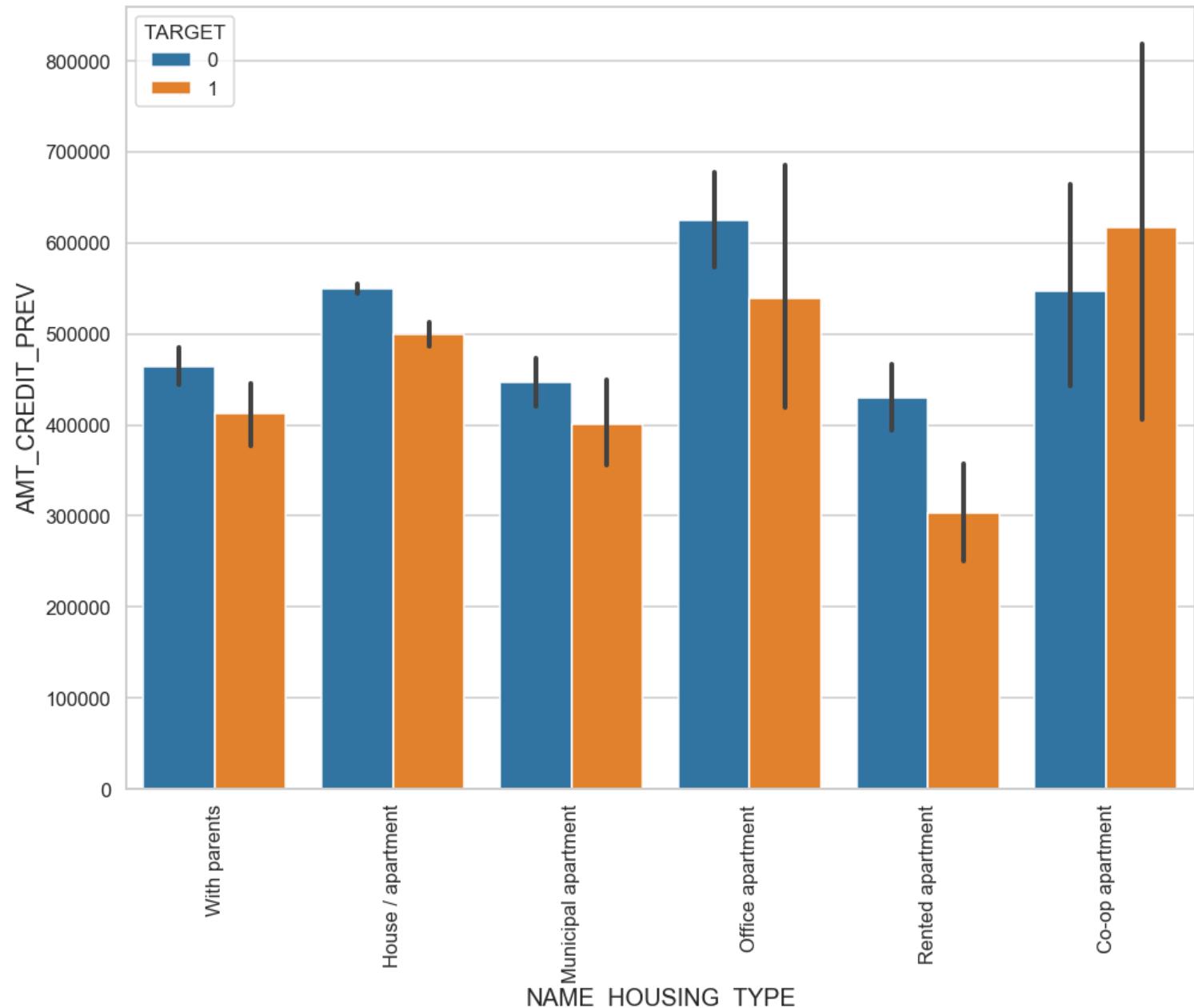


Prev Credit amount vs Housing type

Few points can be concluded from the graph.

- Here for Housing type, office apartment is having higher credit of target 0 and co-op apartment is having higher credit of target 1.
- So, we can conclude that bank should avoid giving loans to the housing type of co-op apartment as they are having difficulties in payment.
- Bank can focus mostly on housing type with parents or House\apartment or municipal apartment for successful payments.

Prev Credit amount vs Housing type



conclusion

- Banks should focus more on contract type ‘Student’ ,’pensioner’ and ‘Businessman’ with housing ‘type other than ‘Co-op apartment’ for successful payments.
- Banks should focus less on income type ‘Working’ as they are having most number of unsuccessful payments.
- Also with loan purpose ‘Repair’ is having higher number of unsuccessful payments on time.
- Get as much as clients from housing type ‘With parents’ as they are having least number of unsuccessful payments.

Thank you